

# A practical development tool to build your own web based statistical system

Francisco Louzada and Anderson Ara

## Index

Standalone replication of the Event Evaluation .....	2
Standalone replication of the PCA .....	27

## STANDALONE REPLICATION OF EVENT EVALUATION

### - EXAMPLE 1 -

In a Linux server with Apache, R, PHP, and MySQL installed, this standalone syntax procedure assumes that there is a MySQL account with the following user data:

MYSQL	User: user
	Password: passuser

For this user, this standalone syntax procedure assumes there is a database with the following structure:

MYSQL	Database: event_db
-------	--------------------

In order to replicate the Event Evaluation analysis example there are 7 important files (quest1.php, quest2.php, quest3.php, reports.php, report1.r, report2.php, report3.php, general.r, questions.r and bivariate.r) which interact with each other. Some files as report1.r, report2.php and report3.php call some other subfiles to plot the graphical figures. Other files as general.r, questions.r and bivariate.r are utilized to build the graphical figures.

This procedure assumes that there is a MySQL database (event\_db) which contains a table (quest) with the column variables: id, dstatistic, age, sex, location, degree, otherdegree, mdstatistic, q1, s1, q2, s2, q3, s3, q4, s4, q5, s5, day, hour and login. An example of this table is shown in PhpMyAdmin Interface in Figure 1.

← ↑ →	id	dstatistic	age	sex	location	degree	otherdegree	midstatistic	q1	s1	q2	s2	q3	s3	q4	s4	q5	s5	day	hour	login
<input type="checkbox"/>	9	1	22	2	AdS	Finishing Graduation		no	9	8	8	9	8	2012-05-02	22:05:55	mwstat					
<input type="checkbox"/>	10	1	29	2	AdS	Post Doctorate		yes	9	8	7	8	9	2012-05-02	23:05:17	mwstat					
<input type="checkbox"/>	11	1	24	2	AdN	Post Doctorate		yes	5	4	3	2	2	2012-05-08	01:05:32	mwstat					
<input type="checkbox"/>	12	2	40	1	AdS	Master degree		yes	3	2	2	2	2	2012-05-08	02:05:17	mwstat					
<input type="checkbox"/>	13	2	40	1	AdS	Master degree		yes	3	2	2	2	2	2012-05-08	02:05:21	mwstat					
<input type="checkbox"/>	14	2	40	1	AdS	Master degree		yes	3	2	2	2	2	2012-05-08	02:05:26	mwstat					
<input type="checkbox"/>	15	2	40	1	AdS	Finishing Graduation		yes	3	2	2	2	2	2012-05-08	02:05:29	mwstat					
<input type="checkbox"/>	16	1	24	2	AdN	Finishing Graduation		yes	5	4	3	2	2	2012-05-08	02:05:43	mwstat					
<input type="checkbox"/>	17	1	34	2	AS	Finishing Graduation		yes	4	2	2	2	2	2012-05-16	16:05:08	mwstat					

Figure 1. An example of quest table.

All the files are located in the same apache directory, for example, `/var/www/html/`, as in Ubuntu Linux. This interaction of these files is showed in Figure 2.

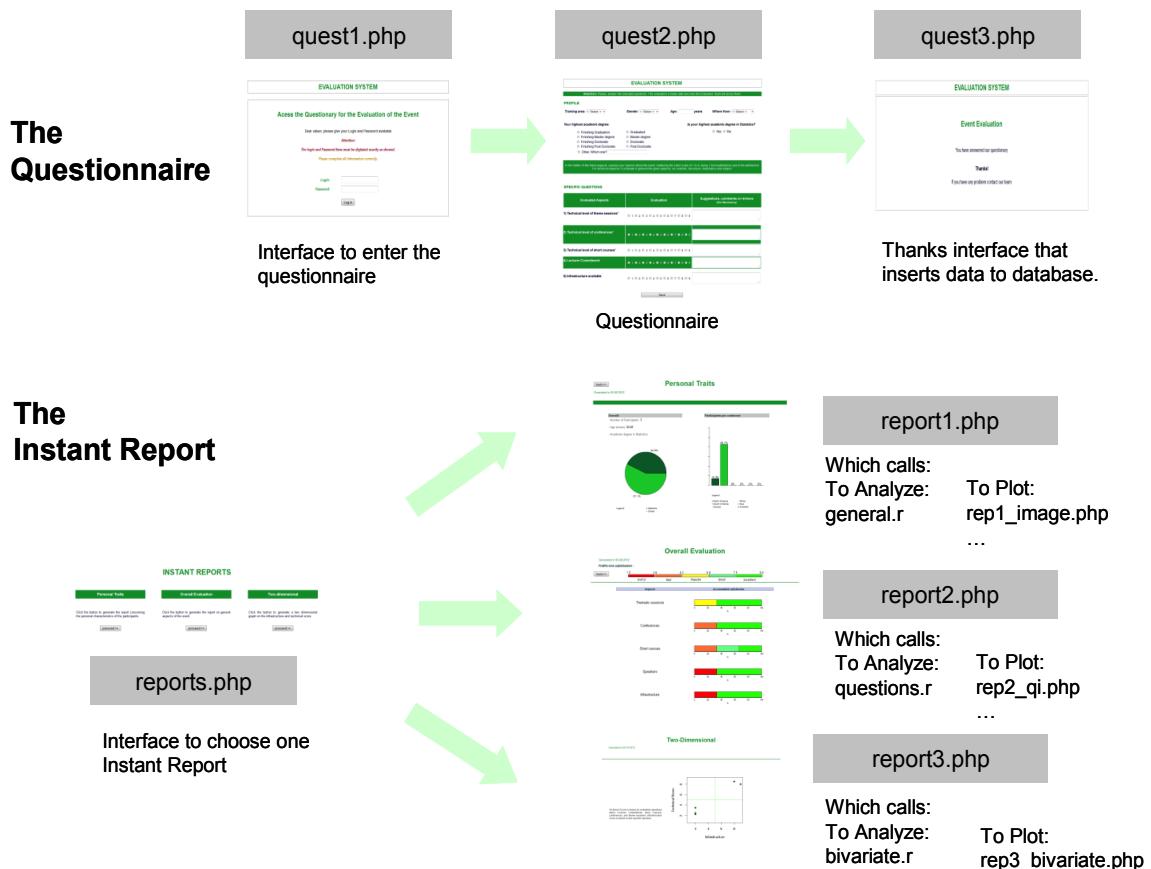


Figure 2. Files interaction

The codes of each file are exposed above and the syntax that calls each file is **red bolded**. Every R and PHP code should be kept as presented, because these languages are case sensitive. The HTML codes are just applied to pages design.

## quest1.php

```
<html>
<head>
<title>... Event Evaluation : WebStat ::.</title>
<meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1">
<style type="text/css">
<!--
.style8 {color: #990033}
.style12 {
    font-family: Arial, Helvetica, sans-serif;
    font-size: 14px;
}
.style13 {
    color: #009933;
    font-weight: bold;
}
.style16 {color: #009933}
-->
</style>
</head>

<body bgcolor="#FFFFFF" text="#000000">
<table width="878" border="1" align="center" bordercolor="#FFFFFF">
<tr>
    <td bordercolor="#006633">
        <table width="100%" border="0">
            <tr>
                <td>
                    <div align="center" class="style13"><font size="4"><font face="Arial, Helvetica, sans-serif" size="5">EVALUATION SYSTEM</font></font></div>
                    <div align="center"></div>
                    <div align="center"></div></td>
                </tr>
                </table>
            </td>
        </tr>
    </table>
<br>
<table width="878" border="1" align="center" bordercolor="#FFFFFF">
<tr>
    <td bordercolor="#006633">
        <table width="100%" border="0" bordercolor="#006699" align="center" height="326">
            <tr>
                <td bordercolor="#FFFFFF" colspan="3" height="395" align="center" valign="top">
                    <p align="center"><font size="6" face="Arial, Helvetica, sans-serif" color="#336633"><b><font size="5" color="#006633"><br>
                        </font></b></font><font size="6" face="Arial, Helvetica, sans-serif"><b><font size="5" color="#336633">Acess the Questionnaire for the Evaluation of the Event</span></font></b></font><font size="6" face="Arial, Helvetica, sans-serif" color="#336633"><b><font size="5" color="#006633"><br>
                        </font></b></font><br>
                    </p>
                    <p align="center"><span class="style12">Dear valuer, please give your Login and Password available</span></p>
                    <p align="center"><b><i><font face="Arial, Helvetica, sans-serif" size="2" color="#990000">Attention:</font><font face="Arial, Helvetica, sans-serif" size="2" color="#333333"><br>
                        <br>
                        <font face="Arial, Helvetica, sans-serif" size="2" style="color: #006633">The login and Password Itens must be digitated exactly as showed.</span></font></i></b></p>
                    <p align="center">
                        <br>
                    </p>
                    <form name="form1" method="post" action="quest2.php" target=_self >
                        <div align="center">
                            <table width="42%" border="0" align="center">
                                <tr>
                                    <td width="28%"><div align="right"><i><b><span class="style16"><font face="Arial, Helvetica, sans-serif" size="2">Login</font></span></b><span class="style16"><b><font face="Arial, Helvetica, sans-serif" size="2"></font></b></span><font color="#6699CC"><b><font face="Arial, Helvetica, sans-serif" size="2" color="#003300"><br>
                        </font></b></font></i></div></td>
                                    <td width="72%"><div align="center"><font size="3">
```

```

        <input type="text" name="login" size=22>
        </font></div></td>
    </tr>
    <tr>
        <td width="28%"></td>
        <td width="72%"></td>
    </tr>
</table>
<table width="42%" border="0" align="center">
    <tr>
        <td width="28%">
            <div align="right"><i><b><font face="Arial, Helvetica, sans-serif">
size="2"><span class="style16">Password</span></font></b><span class="style16"><b><font
face="Arial, Helvetica, sans-serif" size="2">:</font></b></span><b><font face="Arial,
Helvetica, sans-serif" size="2"></font></b><font color="#6699CC"><b><font face="Arial,
Helvetica, sans-serif" size="2" color="#003300"><br>
                </font></b></font></i></div>
            </td>
            <td width="72%">
                <div align="center"> <font size="3">
                    <input type="password" name="password" size=22>
                </font></div>
            </td>
        </tr>
        <tr>
            <td width="28%"></td>
            <td width="72%"></td>
        </tr>
    </table>
    <input type="hidden" name="id" value="<? echo $pass; ?>">
</div>
<p align="center">
    <input type="submit" name="Submit" value="Log in">
</p>
</form>
</td>
</tr>
</table>
</td>
</tr>
</table>
<p>&nbsp;</p>
<div align="center"> </div>
</body>
</html>

```

```

quest2.php
<?

$pass=$_POST['id'];

$host = "localhost";
$user = "user";
$pass = "passuser";
$dbname = "event_db";
//conecta ao banco de dados
mysql_connect($host, $user, $pass) or die("Connection Error");
//seleciona o banco de dados
mysql_select_db($dbname)or die("Connection Error");

$log = $_POST['login'];
$pass = $_POST['password'];

if ($password <> 'mwstat'){
    $var = '<SCRIPT LANGUAGE="JavaScript">
    document.form2.submit();
                                </script>';
    echo $var;
}

?>

```

```

<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">
<html>
<head>
<title>... Event Evaluation Questionnaire ::.</title>
<link href="default_botao.css" type="text/css" rel="stylesheet" />
<meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1">

<SCRIPT language=JavaScript>

function valButton(btn) {
var cnt = -1;
for (var i=btn.length-1; i > -1; i--) {
if (btn[i].checked) {
cnt = i;
i = -1;
}
}
if (cnt > -1)
return btn[cnt].value;
else return null;
}

function validate() {
var valido = true;

if(document.form1.dstatistic.value == 0) {
alert("You didn't answer the question about your training area");
valido = false;
}
if(document.form1.sex.value == 0) {
alert("You didn't answer the question about your gender");
valido = false;
}
if(document.form1.age.value == "") {
alert("You didn't answer the question about your age");
valido = false;
}
if(document.form1.location.value == 0) {
alert("You didn't answer the question about your location");
valido = false;
}
if( valButton(document.form1.degree) == null) {
alert("You didn't answer the question about your academic degree");
valido = false;
}
if( valButton(document.form1.mdstatistic) == null) {
alert("You didn't answer the question about your academic degree");
valido = false;
}
if(valButton(document.form1.q1) == null) {
alert("You didn't answer the question 1");
valido = false;
}
if(valButton(document.form1.q2) == null){
alert("You didn't answer the question 2");
valido = false;
}
if(valButton(document.form1.q3) == null){
alert("You didn't answer the question 3");
valido = false;
}
if(valButton(document.form1.q4) == null) {
alert("You didn't answer the question 4");
valido = false;
}
if(valButton(document.form1.q5) == null) {
alert("You didn't answer the question 5");
valido = false;
}

if (valido == true) {

```

```

        document.form1.submit();
    }
}
</SCRIPT>
<style type="text/css">
<!--
.style3 {color: #000033}
.style5 {color: #009933; font-weight: bold; }
.style6 {
    color: #FFFFFF;
    font-weight: bold;
}
.style8 {font-size: 14px}
.style9 {font-size: 14px; color: #FFFFFF; }
.style10 {color: #FFFFFF; }
-->
</style></head>

<body bgcolor="#FFFFFF">
<form name="form1" action="quest3.php" method="post">





```



```

        </label>
        <label></label>
    </em>
        <label>Finishing Graduation</label>
    </font></div>
        <font color="#000033" size="3" face="Arial, Helvetica, sans-serif"><span class="">
            <label> </label>
            </span> <span class=" ">
            <label> </label>
            </span></font></td>
        <td width="47%"><div align="left"><font color="#000033" size="3" face="Arial, Helvetica, sans-serif"><span class=" ">
            <label>
                <input name="degree" type="radio" value="Graduated">
                <span class="">Graduated</span></label>
            </span></font></div></td>
        </tr>
        <tr>
            <td width="53%"><div align="left"><font color="#000033" size="3" face="Arial, Helvetica, sans-serif"><span class=" "><span class="">
                <input name="degree" type="radio" value="Finishing Master degree">
                <span class="">
                <label> Finishing Master degree</label>
                </span></span></font></div></td>
            <td width="47%"><div align="left"><font color="#000033" size="3" face="Arial, Helvetica, sans-serif"><span class=" "><span class="">
                <label>
                    <input name="degree" type="radio" value="Master degree">
                    Master degree</label>
                <label></label>
                </span></span></font></div></td>
            </tr>
            <tr>
                <td width="53%"><div align="left"><font color="#000033" size="3" face="Arial, Helvetica, sans-serif"><span class=" "><span class="">
                    <label> </label>
                    <label>
                        <input name="degree" type="radio" value="Finishing Doctorate">
                        Finishing Doctorate</label>
                    </span></span></font></div></td>
                <td width="47%"><div align="left"><font color="#000033" size="3" face="Arial, Helvetica, sans-serif"><span class=" "><span class="">
                    <label>
                        <input name="degree" type="radio" value="Doctorate">
                        Doctorate</label>
                    <span></span></font></div></td>
                </tr>
                <tr>
                    <td width="53%" height="15"><div align="left"><font color="#000033" size="3" face="Arial, Helvetica, sans-serif"><span class=" "><span class="">
                        <label>
                            <input name="degree" type="radio" value="Finishing Post Doctorate">
                            Finishing Post Doctorate</label>
                        </span></span></font></div></td>
                    <td width="47%" height="15"><div align="left"><font color="#000033" size="3" face="Arial, Helvetica, sans-serif"><span class=" "><span class="">
                        <input name="degree" type="radio" value="pos-doutor">
                        Post Doctorate</span></span></font></div></td>
                    </tr>
                    <tr>
                        <td colspan="2"><table width="100%" border="0">
                            <tr>
                                <td><div align="left"><font color="#000033" size="3" face="Arial, Helvetica, sans-serif"><span class=" "><span class="">
                                    <label>
                                        <input name="degree" type="radio" value="other">
                                        Other.</label>
                                    <label> Which one?</label>
                                    </span>
                                    <label></label>
                                    <span class="">
                                    <label></label>
                                    </span></span><span class="">
                                    <label></label>
                                    <label></label>
                                </span>
                            </td>
                        </tr>
                    </table>
                </tr>
            </table>
        </div>
    </body>
</html>

```

```

                <input      name="otherdegree"      type="text"      value="" size="28">
                </label>
                <label></label>
                </span></font></div></td>
            </tr>
        </table></td>
    </tr>
</table>
</div>
</div>
<label></label>
<td width="400" valign="top"><div align="center">
    <p><font      face="Arial,      Helvetica,      sans-serif"><em><strong><b><i><span class="style3"><font      size="3"></font></span>Is      your      highest      academic      degree      in Statistics</i></b><font      color="#FFFFCC"><b><i><font      size="3" color="#000033">?</font></i></b></font></strong></em></font><br>
    </p>
</div>
<font color="#000033" face="Arial, Helvetica, sans-serif"><em><strong>
    <label> </label>
    <strong></em>
    <label> </label>
</font>
<p class="" align="center"><font color="#000033" face="Arial, Helvetica, sans-serif">
    <label>
    <input      name="mdstatistic" type="radio" value="yes">
    <font size="3">Yes</font></label>
    <font size="3">
    <label>
    <input      name="mdstatistic" type="radio" value="no">
    No</label>
    </font></font></p>
<p class=""><font size="3" face="Arial, Helvetica, sans-serif">
    <label></label>
    <font face="Arial, Helvetica, sans-serif">
        <label></label>
    </font></p></td>
</tr>
</table>
<br>
<table width="1000" border="0" align="center" bgcolor="#009933">
    <tr>
        <td valign="top" height="44">
            <div align="center">
                <p align="center" class="style8"><font color="#FFFFFF" face="Arial, Helvetica, sans-serif">In the matter of the follow aspects, express your opinion about the event, mattering the Likert scale of 1 to 9, being 1 full insatisfaction and 9 full satisfaction. For technical aspects (*) evaluate in general the given aspects, as contents, disclosure, importance and subject.</font></p>
            </div>
        </td>
    </tr>
</table>

<table width="1000" border="0" align="center" bgcolor="#FFFFFF" bordercolor="#FFFFFF">
    <tr>
        <td valign="middle" height="51" align="center"><div align="left">
            <p class="style5">&nbsp;</p>
            <p class="style5"><font face="Arial, Helvetica, sans-serif" size="5"><font size="4">SPECIFIC QUESTIONS </font></font>
            </p>
            </p>
        </div></td>
        <td valign="middle" height="51" align="center">&nbsp;</td>
        <td valign="middle" height="51" align="center">&nbsp;</td>
    </tr>
    <tr>
        <td width="338" height="51" align="center" valign="middle" bgcolor="#009933">
            <div align="center" class="style6"><font size="3"><font face="Arial, Helvetica, sans-serif">Evaluated Aspects</font></font></div>
        </td>
        <td width="364" height="51" align="center" valign="middle" bgcolor="#009933">
            <div align="center" class="style10">
                <p><font      size="2"      face="Arial,      Helvetica,      sans-serif"><b><font size="3">Evaluation</font></b></font></p>
            </div>
        </td>
    </tr>

```

```

<td width="317" height="51" align="center" valign="middle" bgcolor="#009933">
    <div align="center" class="style10">
        <p align="center"><font size="2" face="Arial, Helvetica, sans-serif"><strong><font size="3">Suggestions, comments or reviews <font size="2"><br>
            </font></font></strong></font><font size="3"><font face="Arial, Helvetica, sans-serif"><strong><font size="2">(Not Mandatory)</font></strong></font></font></p>
        </div>      </td>
    </tr>
    <tr>
        <td valign="middle" bgcolor="#FFFFFF" width="338">
            <h4 align="left"><font face="Arial, Helvetica, sans-serif" color="#000033" size="4"><font size="3">1)
                Technical level of theme sessions* </font></font></h4>           </td>
        <td valign="middle" bgcolor="#FFFFFF" width="364">
            <div align="center">
                <p><font size="2" face="Arial, Helvetica, sans-serif">
                    <input type="radio" name="q1" value="1">
                    1
                    <input type="radio" name="q1" value="2">
                    2
                    <input type="radio" name="q1" value="3">
                    3
                    <input type="radio" name="q1" value="4">
                    4
                    <input type="radio" name="q1" value="5">
                    5
                    <input type="radio" name="q1" value="6">
                    6
                    <input type="radio" name="q1" value="7">
                    7
                    <input type="radio" name="q1" value="8">
                    8
                    <input type="radio" name="q1" value="9">
                    9</font></p>
                </div>      </td>
        <td valign="top" bgcolor="#FFFFFF" width="317">
            <div align="center">
                <p><font color="#000000" size="2" face="Arial, Helvetica, sans-serif"><strong>
                    <textarea rows="2" name="s1" cols="40" ></textarea>
                    </strong></font></font></p>
                </div>      </td>
            </tr>
            <tr>
                <td valign="middle" bgcolor="#009933" width="338">
                    <h4 class="style10"><font face="Arial, Helvetica, sans-serif" size="4"><font size="3">2)
                        Technical level of conferences*</font></font></h4>           </td>
                <td width="364" valign="middle" bgcolor="#009933">
                    <div align="center" class="style10">
                        <p><font size="2" face="Arial, Helvetica, sans-serif">
                            <input type="radio" name="q2" value="1">
                            1
                            <input type="radio" name="q2" value="2">
                            2
                            <input type="radio" name="q2" value="3">
                            3
                            <input type="radio" name="q2" value="4">
                            4
                            <input type="radio" name="q2" value="5">
                            5
                            <input type="radio" name="q2" value="6">
                            6
                            <input type="radio" name="q2" value="7">
                            7
                            <input type="radio" name="q2" value="8">
                            8
                            <input type="radio" name="q2" value="9">
                            9</font></p>
                        </div>      </td>
                <td width="317" valign="top" bgcolor="#009933">
                    <div align="center" class="style10">
                        <p><font size="2" face="Arial, Helvetica, sans-serif"><strong>
                            <textarea rows="2" name="s2" cols="40" ></textarea>
                            </strong></font></font></p>
                    </div>      </td>
                </tr>
            </table>
        
```

```

</tr>
<tr>
    <td height="0" valign="middle" bgcolor="#FFFFFF" width="338"><strong><font color="#000033" size="3" face="Arial, Helvetica, sans-serif">3</font></strong><b><font face="Arial, Helvetica, sans-serif" size="2"><strong><font color="#000033"><font size="3"><font color="#000033">
        Technical level of short courses*</font></font></font></strong></font></b></td>
    <td width="364" height="0" valign="middle" bgcolor="#FFFFFF">
        <div align="center">
            <p> <font size="2" face="Arial, Helvetica, sans-serif">
                <input type="radio" name="q3" value="1">
                1
                <input type="radio" name="q3" value="2">
                2
                <input type="radio" name="q3" value="3">
                3
                <input type="radio" name="q3" value="4">
                4
                <input type="radio" name="q3" value="5">
                5
                <input type="radio" name="q3" value="6">
                6
                <input type="radio" name="q3" value="7">
                7
                <input type="radio" name="q3" value="8">
                8
                <input type="radio" name="q3" value="9">
                9</font></p>
            </div> </td>
        <td width="317" height="0" valign="top" bgcolor="#FFFFFF">
            <div align="center"> <font color="#000000"><font size="2" face="Arial, Helvetica, sans-serif"><strong>
                <textarearows="2" name="s3" cols="40" ></textarear>
            </strong></font></font></div> </td>
        </tr>
        <tr bgcolor="#ABB0DA">
            <td width="338" height="0" valign="middle" bgcolor="#009933">
                <h3 class="style10"><font face="Arial, Helvetica, sans-serif" size="2"><strong><font size="3">4
                    </font></strong></font></strong></font></font><font face="Arial, Helvetica, sans-serif" size="3"><strong><strong>Lecturer Commitment</strong></strong></font></h3> </td>
                <td width="364" height="0" valign="middle" bgcolor="#009933">
                    <div align="center" class="style10"><font size="2" face="Arial, Helvetica, sans-serif">
                        <input type="radio" name="q4" value="1">
                        1
                        <input type="radio" name="q4" value="2">
                        2
                        <input type="radio" name="q4" value="3">
                        3
                        <input type="radio" name="q4" value="4">
                        4
                        <input type="radio" name="q4" value="5">
                        5
                        <input type="radio" name="q4" value="6">
                        6
                        <input type="radio" name="q4" value="7">
                        7
                        <input type="radio" name="q4" value="8">
                        8
                        <input type="radio" name="q4" value="9">
                        9</font></div> </td>
                    <td width="317" height="0" valign="top" bgcolor="#009933">
                        <div align="center" class="style10"><font size="2" face="Arial, Helvetica, sans-serif"><strong>
                            <textarearows="2" name="s4" cols="40" ></textarear>
                        </strong></font></div> </td>
                    </tr>
                    <tr>
                        <td height="0" valign="middle" bgcolor="#FFFFFF" width="338">
                            <h3><b><font face="Arial, Helvetica, sans-serif" size="2"><strong><font color="#000033" size="3"><font size="3">5<font color="#000033">
                                Infrastructure available</font>
                            </font></font></strong></b></h3> </td>
                        <td width="364" height="0" valign="middle" bgcolor="#FFFFFF">

```

```

<div align="center">
    <p><font size="2" face="Arial, Helvetica, sans-serif">
        <input type="radio" name="q5" value="1">
        1
        <input type="radio" name="q5" value="2">
        2
        <input type="radio" name="q5" value="3">
        3
        <input type="radio" name="q5" value="4">
        4
        <input type="radio" name="q5" value="5">
        5
        <input type="radio" name="q5" value="6">
        6
        <input type="radio" name="q5" value="7">
        7
        <input type="radio" name="q5" value="8">
        8
        <input type="radio" name="q5" value="9">
        9
    </font></p>
</div>          </td>
<td width="317" height="0" valign="top" bgcolor="#FFFFFF">
    <div align="center">
        <p><font color="#000000"><font size="2" face="Arial, Helvetica, sans-serif"><strong>
            <textarea rows="2" name="s5" cols="40" ></textarea>
            </strong></font></font></p>
    </div>          </td>
</tr>
</table>

```

<p align="center"> <input name="b1" onclick="return validate()" style="CURSOR: hand" type="button" value="Send"/> <input name="login" type="hidden" value="&lt;? echo \$log; ?&gt;"/> </p>
--

&ampnbsp

```

quest3.php
<?php

$log=$_POST['login'];
if ($log == null){
    die("Please make the login on the home page.");
}

$day =date("Y-m-d");

$vttime = strftime('%H:%m:%S');
$vdstatistic=$_POST['dstatistic'];
$vssex=$_POST['sex'];
$vage=$_POST['age'];
$vllocation=$_POST['location'];

$vdegree=$_POST['degree'];
$odegreet=$_POST['otherdegree'];
$mdstatistic=$_POST['mdstatistic'];

$q1=$_POST['q1'];
$s1=$_POST['s1'];

$q2=$_POST['q2'];
$s2=$_POST['s2'];

$q3=$_POST['q3'];
$s3=$_POST['s3'];

```

```

$q4=$_POST['q4'];
$s4=$_POST['s4'];

$q5=$_POST['q5'];
$s5=$_POST['s5'];

$con=mysql_connect("localhost","user","passuser") or die("Connection Error");
mysql_select_db("event_db",$con)or die("Connection Error");

$sqlinsert = "INSERT INTO quest (id, dstatistic, age, sex, location, degree,
otherdegree, mdstatistic, q1, s1, q2, s2, q3, s3, q4, s4, q5, s5, day, hour, login)
VALUES (' ','$vdstatistic','$vage','$vssex', '$vlocation','$vdegree', '$odegree',
'$mdstatistic', '$q1', '$s1', '$q2', '$s2', '$q3', '$s3', '$q4', '$s4', '$q5', '$s5',
'$day','$time','$log')";

mysql_query($sqlinsert) or die(mysql_error());

?>
<html>

<head><title>.: Thanks! .:</title></head>
<body>
<table width="1000" border="1" align="center" bordercolor="#FFFFFF">
<tr>
<td bordercolor="#006633">
<table width="100%" border="0">
<tr>
<td width="44%">
<div align="center"><font size="4"><b><font color="#009933" face="Arial, Helvetica, sans-serif" size="5">EVALUATION SYSTEM</font></b></font></div>
</tr>
</table>
</td>
</tr>
</table>
<table width="1000" border="1" align="center" bordercolor="#FFFFFF">
<tr>
<td bordercolor="#006633" height="239">
<table width="100%" border="0" bordercolor="#006699" align="center" height="326">
<tr>
<td bordercolor="#FFFFFF" colspan="3" height="284" align="center" valign="top">
<p align="center"><font size="6" face="Arial, Helvetica, sans-serif" color="#336633"><b><font size="5" color="#006633"><br>
<br>
<font color="#009933">Event Evaluation</font></b></font></p>
<p align="center">&ampnbsp</p>
<p align="center"><font color="#000033" size="3" face="Arial, Helvetica, sans-serif">You have answered our questionnaire<br/>
<br/>
</font></p>
<p align="center"><font color="#000033" size="3" face="Arial, Helvetica, sans-serif">
<strong>Thanks!</strong><br />
<br />
If you have any problem contact our team</font></p>
</td>
</tr>
</table>
</td>
</tr>
</table>
</body>
</html>

```

## reports.php

```

<html>
<head>
<title>.: Instant Reports .:</title>
<meta http-equiv='Content-Type' content='text/html; charset=iso-8859-1'>
<style type="text/css">

```

```

<!--
.style1 {
    color: #FF3300;
    font-weight: bold;
}
.style5 {
    color: #009933;
    font-weight: bold;
}
.style12 {color: #FFFFFF; font-weight: bold; }
-->
</style>
</head>
<?
$logo=$_POST['id'];
if ($logo==null) {
die("Please, reconnect to our page.");
}

?>
<body >
<p align="center"><font face="Arial, Helvetica, sans-serif"
    size=2><b><span
        class=style1><font
            color="#145386"
size=6><br></font></span></b></font></p>
<table width="1000" height="0" border="0" align="center" bordercolor="#009933">
    <tr>
        <td colspan="3" bordercolor="#FFFFFF">
<div align="center">
    <p><span class="style5"><font size="6" face="Arial, Helvetica, sans-serif">
        INSTANT REPORTS</font></span></p>
    <p><br>
    </p>
</div></td>
    </tr>
    <tr>
        <td width="334" bordercolor="#FFFFFF"><table width="300" height="35" border="0"
align="center" cellspacing="0" bgcolor="#009933">
            <tr>
                <td width="298"><div align="center"><span class="style12"><font face="Arial,
Helvetica, sans-serif"><font face="Arial, Helvetica, sans-serif"> <span id="result_box"
lang="en">Personal Traits</span></font></font></span></div></td>
            </tr>
        </table></td>
        <td width="319" bordercolor="#FFFFFF"><table width="300" height="35" border="0"
align="center" cellspacing="0" bgcolor="#009933">
            <tr>
                <td align="center"><span class="style12"><font face="Arial, Helvetica,
sans-serif"><span
                    id="result_box"
                    lang="en">Overall
Evaluation</span></font></span></div></td>
            </tr>
        </table></td>
        <td width="333" bordercolor="#FFFFFF"><table width="300" height="35" border="0"
align="center" cellspacing="0" bgcolor="#009933">
            <tr>
                <td width="298"><div align="center"><span class="style12"><font face="Arial,
Helvetica, sans-serif"> T<span
                    id="result_box"
                    lang="en">wo-
dimensional</span></font></span></div></td>
            </tr>
        </table></td>
    </tr>
    <tr>
        <td bordercolor="#FFFFFF"><table border="0" align="center" cellspacing="0"
height="70%" width="430">
            <tr>
                <td width="428"><br>
                    <div align="center"><br>
                        <table width='300' border='0' bordercolor='#CCCCCC'>
                            <tr bordercolor='#FFFFFF'>
                                <td
                                    height="60"
                                    align="center"
                                    valign="top"><div
align="justify"><font face="Arial, Helvetica, sans-serif" size="2" color="#000033"><span
id="result_box"
lang="en">Click the button to generate the report concerning the
personal characteristics of the participants</span>.</font></div></td>
                            </tr>
                            <tr bordercolor='#FFFFFF'>
                                <td
                                    align="center"
                                    valign="middle"><form
action="report1.php"
method="post" name="form3" target="_blank" id="form3">
                                    <label>

```

```

        <input type="submit" name="b1" value='proceed &gt;&gt;' />
    </label>
    <input name="id" type="hidden" value=<? echo $logo; ?>" />
</form></td>
</tr>
</table></td>
<td bordercolor="#FFFFFF"><table border="0" align="center" cellspacing="0" width="300">
<tr>
<td align="center"><br>
</div>
<br>
<div align="center">
<table width='100%' border='0' bordercolor='#CCCCCC'>
<tr bordercolor='#FFFFFF'>
<td height="60" align="center" valign="top"><div align="justify"><font color="#000033" size="2" face="Arial, Helvetica, sans-serif"><span id="result_box" lang="en">Click the button to generate the report on general aspects of the event.</span></font></div></td>
</tr>
<tr bordercolor='#FFFFFF'>
<td align="center" valign="middle"><form action="report2.php" method="post" name="form2" target="_blank" id="form2">
<label>
<input type="submit" name="b2" value='proceed &gt;&gt;' />
</label>
<input name="id" type="hidden" value=<? echo $logo; ?>" />
</form></td>
</tr>
</table>
</div></td>
</tr>
</table></td>
<td bordercolor="#FFFFFF"><table border="0" align="center" cellspacing="0" width="434">
<tr>
<td align="center"><br>
<div align="center"><br>
<table width='300' border='0' bordercolor='#CCCCCC'>
<tr bordercolor='#FFFFFF'>
<td height="60" align="center" valign="top"><div align="justify"><font face="Arial, Helvetica, sans-serif" size="2" color="#000033"><span id="result_box" lang="en">Click the button to generate a two dimensional graph on the infrastructure and technical score.</span>.</font></div></td>
</tr>
<tr bordercolor='#FFFFFF'>
<td align="center" valign="middle"><form action="report3.php" method="post" name="form3" target="_blank" id="form3">
<label></label>
<input type="submit" name="b3" value='proceed &gt;&gt;' />
<input name="id" type="hidden" value=<? echo $logo; ?>" />
</form></td>
</tr>
</table>
</div></td>
</tr>
</table></td>
</tr>
</table></p>
</body>
</html>
```

### report1.php

```

<html>
<head>
<title>Instant Report</title>
<META HTTP-EQUIV="Pragma" CONTENT="no-cache">
<META HTTP-EQUIV="Expires" CONTENT="-1">
<style type="text/css">
<!--
.style2 {color: #FF6600}
.style15 {
```

```

        color: #666666;
font-family: Arial, Helvetica, sans-serif;
font-size: 12px;
}
.style20 {
    color: #FFFFFF;
font-family: Arial, Helvetica, sans-serif;
font-size: 14px;
}
.style22 {color: #323EA2}
.style23 {color: #666666}
.style24 {color: #FF0000}
.style25 {color: #FF6666}
.style26 {color: #009933}
.style29 {font-size: 9px}
.style30 {color: #003366}
-->
</style>
</head>
<?

$day = date('m-d-Y');

$logado=$_POST['id'];
if ($logado == null){
    die("Please, reconnect to our page.");
}

//Calling R program
$code= "echo 'argv <- \\\"general.r\\\"; source(argv)' | " . "/usr/bin/R --vanilla --slave";
$aux1 = exec($code);
$aux2= explode(' ', $aux1);
$n = $aux2[0];
$age = $aux2[1];

?>
<body bgcolor="#FFFFFF" text="#000000">
<table width="900" border="0" align="center" bordercolor="#006699">
<tr>
    <td height="50" colspan="3" bordercolor="#FFFFFF"><div align="center" class="style42 style26"><strong><font size="6" face="Arial, Helvetica, sans-serif">Personal Traits</font></strong></div>    </td>
</tr>
<tr>
    <td width="211" height="27" bordercolor="#FFFFFF"><span class="style22"><font size='2' face='Arial, Helvetica, sans-serif'><span class="style26">Generated in <font size='2' face='Arial, Helvetica, sans-serif'><? echo $day; ?></font></font></span><br>
</font></span></td>
    <td width="392" height="27" bordercolor="#FFFFFF">&ampnbsp</td>
    <td width="266" height="27" bordercolor="#FFFFFF"><div align='center' class='style2'>
        <label></label>
    </div></td>
</tr>
</table>
<table width="900" height="56" border="0" align="center" cellspacing="0">

<tr align="center" valign="middle">
    <td>&ampnbsp</td>
</tr>
<tr align="center" valign="middle" bgcolor="#323EA2">
    <td bgcolor="#009933"><div align="left" class="style20">&ampnbsp&ampnbsp</div></td>
</tr>
<tr align="center" valign="middle">
    <td><p>&ampnbsp</p>
        <table width="852" border="0" cellspacing="0">
            <tr>
                <td width="435" valign="top"><table width='80%' border='0' align='center'>
                    <tr bgcolor="#CCD0E9">
                        <td bgcolor="#CCCCCC"><p><b><font color='#003333' face='Arial, Helvetica, sans-serif' size='2'>Overall:</font></b></p></td>
                    </tr>
                    <tr>
                        <td bgcolor="#FFFFFF"><p><font size='3' face='Arial, Helvetica, sans-serif'><b></b></font><span class="style23"><font face='Arial, Helvetica, sans-serif' size='2'>-</font></span></b></font></p></td>
                    </tr>
                </table>
            </td>
        </tr>
    </td>
</tr>

```

```

Number of <span id="result_box" lang="en">Participants</span></font><font size='2' face='Arial, Helvetica, sans-serif'><b> <? echo $n; ?> </b></font></p>
<p><font size='3' face='Arial, Helvetica, sans-serif'><font face='Arial, Helvetica, sans-serif' color='#000000'><font size='2' color='#666666'>-
Age (mean): </font><font size='2' face='Arial, Helvetica, sans-serif' color='#000000'><b> <? echo $age; ?></b></font></font></font> </p>
<p><font face='Arial, Helvetica, sans-serif' size='2' color='#666666'>-
Academic degree in Statistics: </font></p>
<p align="center">
<iframe src ='rep1\_dstatistic.php' width='300' height='300' scrolling='no' frameborder='0'></iframe>
<table width='80%' border='0' align='center'>
<tr>
<td width='51%' valign='top'><font size='1' face='Arial, Helvetica, sans-serif'>Legend:</font></td>
<td width='49%'><font size='1' face='Arial, Helvetica, sans-serif' color='#006633'>&diam;</font><font size='1' face='Arial, Helvetica, sans-serif'>
Statistics <br>
<font color='#00CC33'>&diam;</font> Others </font></td>
</tr>
</table>
<p><font face='Arial, Helvetica, sans-serif' size='2' color='#666666'>-
Gender of <span id="result_box" lang="en">Participants</span></font></p>
<p align="center">
<iframe src ='rep1\_sex.php' width='300' height='300' scrolling='no' frameborder='0'></iframe>
<table width='80%' border='0' align='center'>
<tr>
<td width='51%' valign='top'><font size='1' face='Arial, Helvetica, sans-serif'>Legend:</font></td>
<td width='49%'><font size='1' face='Arial, Helvetica, sans-serif' color='#006633'>&diam;</font><font size='1' face='Arial, Helvetica, sans-serif'> Female
<br>
<font color='#00CC33'>&diam;</font> Male </font></td>
</tr>
</table> </td>
</tr>
</table>
<p>&ampnbsp</p></td>
<td width="413" valign="top"><table height="435" border='0' align='center'>
<tr bgcolor="#CCD0E9">
<td bgcolor="#CCCCCC"><p><b><font color='#003333' face='Arial, Helvetica, sans-serif' size='2'><span id="result_box" lang="en">Participants per continent</span></font></b></p></td>
</tr>
<tr>
<td bgcolor="#FFFFFF"><p><font size='3' face='Arial, Helvetica, sans-serif'><b><font color='#00CC00'>&diam;</font></b></font><br>
<iframe src ='rep1\_location.php' width='300' height='300' scrolling='no' frameborder='0'></iframe>
</p>
<table width='80%' border='0' align='center'>
<tr>
<td width='51%' valign='top'><p><font size='1' face='Arial, Helvetica, sans-serif'>Legend:</font><font size='1' face='Arial, Helvetica, sans-serif' color='#006633'><br>
<br>
&diam;</font><font size='1' face='Arial, Helvetica, sans-serif'> North America <br>
<font color='#00CC00'>&diam;</font> South America <br>
</font><font size='1' face='Arial, Helvetica, sans-serif' color='#99FF99'>&diam;</font><font size='1' face='Arial, Helvetica, sans-serif'> Europe</font></p></td>
<td width='49%' valign='top'><p><font size='1' face='Arial, Helvetica, sans-serif'><font color='#FFFF00'>&br>
<br>
&diam;</font> Africa</font> <br>
<font size='1' face='Arial, Helvetica, sans-serif'><font color='#0099FF'>
&diam;</font> Asia</font>
<font size='1' face='Arial, Helvetica, sans-serif'><font color='#0099FF'>
<br>
</font><span class="style30">&diam;</span> Australia</font></p>
</td>
</tr>
</table> </td>
</tr>
</table>

```

```

<p>&nbsp;</p>
<table width='80%' border='0' align='center'>
  <tr bgcolor="#CCD0E9">
    <td bgcolor="#CCCCCC"><p><b><font color="#003333" size="2" face="Arial, Helvetica, sans-serif">The highest academic degree in Statistics:</font></b></p></td>
  </tr>
  <tr>
    <td bgcolor="#FFFFFF"><p>&nbsp;</p>
      <p align="center">
        <iframe src ='rep1_mdstatistic.php' width='300' height='300' scrolling='no' frameborder='0'></iframe>
        <table width='80%' border='0' align='center'>
          <tr>
            <td width='51%' valign='top'><font size='1' face='Arial, Helvetica, sans-serif'>Legenda:</font></td>
              <td width='49%'><font size='1' face='Arial, Helvetica, sans-serif' color='#006633'>&diam;</font><font size='1' face='Arial, Helvetica, sans-serif'> Yes <br>
                <font color='#00CC33'>&diam;</font> No </font></td>
            </tr>
          </table></td>
        </tr>
      </table>
      <p>&nbsp;</p></td>
    </tr>
    <tr>
      <td valign="top"><table width='80%' border='0' align='center'>
        <tr bgcolor="#CCD0E9">
          <td bgcolor="#CCCCCC"><p><b><font color="#003333" size="2" face="Arial, Helvetica, sans-serif">Academic degree: </font></b></p></td>
        </tr>
        <tr>
          <td bgcolor="#FFFFFF"><p>&nbsp;</p>
            <p align="center">
              <iframe src ='rep1_degree.php' width='300' height='300' scrolling='no' frameborder='0'></iframe>
              <table width='80%' border='0' align='center'>
                <tr>
                  <td width='51%' valign='top'><p><font size='1' face='Arial, Helvetica, sans-serif'>Legend:</font><font size='1' face='Arial, Helvetica, sans-serif' color='#006633'>&diam;</font><br>
                    <font color='#00CC00'>&diam;</font><font color='#000033' face="Arial, Helvetica, sans-serif">Finishing Graduation</font><font face='Arial, Helvetica, sans-serif'><br>
                    <font color='#00CC00'>&diam;</font><font color='#000033' face="Arial, Helvetica, sans-serif">Graduated</font>
                    <font color='#000033' face="Arial, Helvetica, sans-serif">&diam;</font><br>
                    <font color='#000033' face="Arial, Helvetica, sans-serif" color='#99FF99'>&diam;</font><font color='#000033' face="Arial, Helvetica, sans-serif" color='#000033'>Finishing Master degree</font>
                    <font color='#FFFF00'>&diam;</font><font color='#000033' face="Arial, Helvetica, sans-serif">Master degree</font>
                    <font color='#0099FF'>&diam;</font><font color='#000033' face="Arial, Helvetica, sans-serif">Finishing Doctorate</font>
                    <font color='#000033' size="3" face="Arial, Helvetica, sans-serif"><span class="">
                    <label></label>
                    </span></span></font></td>
                  <td width='49%' valign='top'>
                    <p><font size='1' face='Arial, Helvetica, sans-serif'><br>
                      <font face='Arial, Helvetica, sans-serif'><span class="style29"><font color='#003366'>&diam;</font></span></font><span class="style29"><font color='#000033' face="Arial, Helvetica, sans-serif">
                        <label>Doctorate</label>
                      </font><br>
                      <font face='Arial, Helvetica, sans-serif'><span class="style24">&diam;</span></font><font color='#000033' face="Arial, Helvetica, sans-serif">
                        <label>Finishing Post Doctorate</label>
                      </font><br>
                    </p>
                  </td>
                </tr>
              </table>
            </p>
          </td>
        </tr>
      </table>
    </tr>
  </table>

```

```

<font face='Arial, Helvetica, sans-serif'><span class="style2">&diams;
</span></font><font color="#000033" face="Arial, Helvetica, sans-serif">Post
Doctorate</font><br>
<font face='Arial, Helvetica, sans-serif'><span class="style25">&diams;
</span>Others</font></span></p>
</td>
</tr>
</table> </td>
</tr>
</table></td>
<td valign="top">&nbsp;</td>
</tr>
</table>
<p align="center" class="style15"></p> </td>
</tr>
</table>
<p align='center'>&nbsp;</p>
</body>
</html>

```

### general.r

```

setwd("/var/www/html/")
library(RMySQL)

con <- dbConnect(dbDriver('MySQL'), user='user', password='passuser', dbname =
'event_db')

dbListTables(con)
database=dbGetQuery(con,paste('select * from quest'))

attach(database)
age=round(mean(age),2)

n=length(sex)
x=c(age,n)

dev.off.wrap <- function(){
  dev.off()
  invisible()
}

vcolor=c('#006633','#00CC33','#99FF99','#FFFF00','#0099FF','#003366','#FF0000','#FF6600',
 '#FF6666')

bitmap(file = 'dstatistic.png', type='png256',width=4,height=4)
par(cex=2,mar=c(1, 1,1,1))
aux=table(factor(dstatistic,levels=c(1,2)))
porc=round(aux/sum(aux)*100,digits=1)
pie(aux,labels=paste(porc,'%',sep=''), col=vcolor, cex.main=1.1)
dev.off.wrap()

bitmap(file = 'sex.png', type='png256',width=4,height=4)
par(cex=2,mar=c(1, 1,1,1))
aux=table(factor(sex,levels=c(1,2)))
porc=round(aux/sum(aux)*100,digits=1)
pie(aux,labels=paste(porc,'%',sep=''), col=vcolor, cex.main=1.1)
dev.off.wrap()

bitmap(file = 'location.png', type='png256',width=4,height=4)
par(cex=2,mar=c(1, 1, 1, 1))
tab=table(factor(location,levels=c("AdN","AdS","EU","AF","AS","AU")))
prop<-tab/sum(tab,na.rm=T)
pos<-barplot(prop,plot=F)
barplot(prop,ylim=c(0,1.2),col=vcolor,names.arg=FALSE,main=" ",cex.main=1.1)
text(pos,prop+0.03,paste(round(prop*100,digits=1),'%',sep=''))
dev.off.wrap()

bitmap(file = 'degree.png', type='png256',width=4,height=4)
par(cex=2,mar=c(1, 1, 1, 1))
tab=table(factor(degree,levels=c("Finishing Graduation","Graduated","Finishing Master
 degree","Master degree","Finishing Doctorate","Doctorate","Finishing Post
 Doctorate","Post Doctorate","otherdegree")))

```

```

prop<-tab/sum(tab,na.rm=T)
pos<-barplot(prop,plot=F)
barplot(prop,ylim=c(0,0.7),col=vcolor,names.arg=FALSE,main=" ",cex.main=1.1)
text(pos,pos+0.03,paste(round(prop*100,digits=1),'%',sep=''))
dev.off.wrap()

bitmap(file = 'mdstatistic.png', type='png256',width=4,height=4)
par(cex=2,mar=c(1, 1,1,1))
aux=table(factor(mdstatistic,levels=c("yes","no")))
rate=round(aux/sum(aux)*100,digits=1)
pie(aux,labels=paste(rate,'%',sep=''), col=vcolor, cex.main=1.1)
dev.off.wrap()

cat(encodeString(x), "\n", sep=" ")

```

### rep1\_dstatistic.php (the same procedure with other files that calls graphical figures)

```

<html>
<head>
<title>Untitled Document</title>
<META http-equiv=Content-Type content="text/html; charset=iso-8859-1">
<script>
if(window.name!="first")
    window.location.reload();
window.name = "first";
</script>
</head>
<body bgcolor="#FFFFFF" text="#000000">
    <p><font size='3' face='Arial, Helvetica, sans-serif'>
<img src='dstatistic.png'>
</font>
    </p>
</body>
</html>

```

### report2.php

```

<html>
<head>
<title>Overall Evaluation</title>
<META HTTP-EQUIV="Pragma" CONTENT="no-cache">
<META HTTP-EQUIV="Expires" CONTENT="-1">

<style type="text/css">
<!--
.style2 {color: #FF6600}
.style20 {
    color: #FFFFFF;
font-family: Arial, Helvetica, sans-serif;
font-size: 14px;
}
.style22 {color: #323EA2}
.style26 {
    font-family: Arial, Helvetica, sans-serif;
font-weight: bold;
font-size: 12px;
}
.style30 {font-family: Arial, Helvetica, sans-serif; font-weight: bold; font-size: 12px;
color: #003333; }
.style32 {
    font-family: Arial, Helvetica, sans-serif;
font-size: 12px;
color: #003333;
}
.style34 {font-family: Arial, Helvetica, sans-serif; font-weight: bold; font-size: 14px;
color: #003333; }
.style39 {font-size: 10}
.style42 {
    color: #009933;
}
-->
</style>
<body>
<table border="1" style="width: 100%; border-collapse: collapse;">
|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |  |  |

```

```

        font-weight: bold;
    }
    .style43 {color: #009933}
-->
</style>
</head>
<?

$day = date('m-d-Y');

$logado=$_POST['id'];
if ($logado == null){
    die("Please, reconnect to our page.");
}

//Calling R program
$code= "echo 'argv <- \\"questions.r\"; source(argv)' | " . "/usr/bin/R --vanilla --slave";
$aux1 = exec($code);

?>
<body bgcolor="#FFFFFF" text="#000000">
<div align="center">
    <table width="900" border="0" align="center" bordercolor="#006699">
        <tr>
            <td height="50" colspan="3" bordercolor="#FFFFFF"><div align="center" class="style42 style26"><strong><font size="6" face="Arial, Helvetica, sans-serif">Overall Evaluation </font></strong></div></td>
        </tr>
        <tr>
            <td width="211" height="27" bordercolor="#FFFFFF"><span class="style22"><font size='2' face='Arial, Helvetica, sans-serif'><span class="style43">Generated in <font size='2' face='Arial, Helvetica, sans-serif'><font size='2' face='Arial, Helvetica, sans-serif'><? echo $V5fc73231; ?></font></font></span><br>
                </font></span></td>
            <td width="392" height="27" bordercolor="#FFFFFF">&ampnbsp</td>
            <td width="266" height="27" bordercolor="#FFFFFF"><div align='center' class='style2'>
                <label></label>
            </div></td>
        </tr>
    </table>
    <table width="967" height="56" border="0" align="center" cellspacing="0">
        <tr align="center" valign="middle">
            <td width="965"><table width="902" border="0" cellspacing="0">
                <tr>
                    <td width="190" class="style34"><em>Traffic-line satisfaction </em>:</td>
                    <td width="708">&ampnbsp</td>
                </tr>
            </table></td>
        </tr>
        <tr align="center" valign="middle">
            <td></td>
        </tr>
        <tr align="center" valign="middle" bgcolor="#336633">
            <td bgcolor="#009933"><div align="left" class="style20"></div></td>
        </tr>
        <tr align="center" valign="middle">
            <td><table width="895" border="0" cellspacing="0">
                <tr>
                    <td width="893"><br>
                        <table width='82%' border='0' align='center' cellspacing="0" bgcolor="#005687">
                            <tr bgcolor="#CCD0E9">
                                <td width="43%">
                                    <p align="center" class="style26"><font color='#003333'>Aspects</font></p>
                            </td>
                            <td width="57%" class="style30">
                                <div align="center"><span class="style32"></span>Accumulated satisfaction</div>
                            </td>
                        </tr>
                    <tr>
                        <td height="20" bgcolor="#FFFFFF">
                            <div align="center"><font face="Arial, Helvetica, sans-serif" size="3">T<span id="result_box" lang="en">hemetic sessions</span></font></div> </td>
                        <td bgcolor="#FFFFFF" height="20">
                            <div align="center"><span class="style39"></span><span class="style39">

```

```

<tr>
    <td bgcolor="#FFFFFF">
        <div align="center"><font face="Arial, Helvetica, sans-serif" size="3">C<span id="result_box" lang="en">onferences</span></font></div> </td>
    <td bgcolor="#FFFFFF">
        <div align="center"><span > </span><span class="style39">
            <iframe src ='rep2_q2.php' width='400' height='100' scrolling='no' frameborder='0'> </iframe> </span></div> </td>
        </tr>
        <tr>
            <td bgcolor="#FFFFFF">
                <div align="center"><font face="Arial, Helvetica, sans-serif" size="3">S<span id="result_box" lang="en">hort courses</span></font></div> </td>
            <td bgcolor="#FFFFFF">
                <div align="center"><span > </span><span class="style39">
                    <iframe src ='rep2_q3.php' width='400' height='100' scrolling='no' frameborder='0'> </iframe> </span></div> </td>
            </tr>
            <tr>
                <td bgcolor="#FFFFFF">
                    <div align="center"><font face="Arial, Helvetica, sans-serif" size="3">S<span id="result_box" lang="en">Speakers</span></font></div> </td>
                <td bgcolor="#FFFFFF">
                    <div align="center"><span > </span><span class="style39"> <iframe src ='rep2_q4.php' width='400' height='100' scrolling='no' frameborder='0'> </iframe> </span></div> </td>
                </tr>
                <tr>
                    <td bgcolor="#FFFFFF">
                        <div align="center"><font face="Arial, Helvetica, sans-serif" size="3">I<span id="result_box" lang="en">nfrastructure</span></font></div> </td>
                    <td bgcolor="#FFFFFF">
                        <div align="center"><span > </span><span class="style39"> <iframe src ='rep2_q5.php' width='400' height='100' scrolling='no' frameborder='0'> </iframe> </span></div> </td>
                    </tr>
                    </table> </td></tr>
                </table>
                <p align="center"></p> </td>
            </tr>
            </table>
        </div>
        <p align='center'>&nbsp;</p>
    </body>
</html>

```

### questions.r

```

setwd("/var/www/html/");
library(RMySQL)

con <- dbConnect(dbDriver('MySQL'), user='user', password='passuser', dbname =
'event_db')

dbListTables(con)
database=dbGetQuery(con,paste('select * from quest'))

attach(database)

color=c('#FF0000','#FF8040','#FFFF00','#6CF92','#00FF00')

dev.off.wrap <- function(){
  dev.off()
  invisible()
}

y1=cbind(table(factor(q1,(1:9))))
y2=cbind(table(factor(q2,(1:9))))
y3=cbind(table(factor(q3,(1:9))))
y4=cbind(table(factor(q4,(1:9))))
y5=cbind(table(factor(q5,(1:9))))

bitmap(file = 'q1.png', type='png256',width=5,height=1.3);yy=y1

```

```

aux=rbind(yy[1]+yy[2],yy[3]+yy[4],yy[5],yy[6]+yy[7],yy[8]+yy[9])
barplot(aux/sum(aux)*100,horiz=T,col=color,xlab="%",cex.axis=1.5,cex.lab=1.5)
dev.off.wrap()

bitmap(file = 'q2.png', type='png256',width=5,height=1.3);yy=y2
aux=rbind(yy[1]+yy[2],yy[3]+yy[4],yy[5],yy[6]+yy[7],yy[8]+yy[9])
barplot(aux/sum(aux)*100,horiz=T,col=color,xlab="%",cex.axis=1.5,cex.lab=1.5)
dev.off.wrap()

bitmap(file = 'q3.png', type='png256',width=5,height=1.3);yy=y3
aux=rbind(yy[1]+yy[2],yy[3]+yy[4],yy[5],yy[6]+yy[7],yy[8]+yy[9])
barplot(aux/sum(aux)*100,horiz=T,col=color,xlab="%",cex.axis=1.5,cex.lab=1.5)
dev.off.wrap()

bitmap(file = 'q4.png', type='png256',width=5,height=1.3);yy=y4
aux=rbind(yy[1]+yy[2],yy[3]+yy[4],yy[5],yy[6]+yy[7],yy[8]+yy[9])
barplot(aux/sum(aux)*100,horiz=T,col=color,xlab="%",cex.axis=1.5,cex.lab=1.5)
dev.off.wrap()

bitmap(file = 'q5.png', type='png256',width=5,height=1.3);yy=y5
aux=rbind(yy[1]+yy[2],yy[3]+yy[4],yy[5],yy[6]+yy[7],yy[8]+yy[9])
barplot(aux/sum(aux)*100,horiz=T,col=color,xlab="%",cex.axis=1.5,cex.lab=1.5)
dev.off.wrap()

```

### report3.php

```

<html>
<head>
<title>Two-dimensional</title>
<META HTTP-EQUIV="Pragma" CONTENT="no-cache">
<META HTTP-EQUIV="Expires" CONTENT="-1">

</script>
<style type="text/css">
<!--
.style2 {color: #FF6600}
.style15 {
    color: #666666;
font-family: Arial, Helvetica, sans-serif;
font-size: 12px;
}
.style20 {
    color: #FFFFFF;
font-family: Arial, Helvetica, sans-serif;
font-size: 14px;
}
.style22 {color: #323EA2}
.style26 {    font-family: Arial, Helvetica, sans-serif;
font-weight: bold;
font-size: 12px;
}
.style42 {    color: #009933;
    font-weight: bold;
}
.style43 {color: #009933}
-->
</style>
</head>
<?
$day = date('m-d-Y');

$logado=$_POST['id'];
if ($logado == null){
    die("Please, reconnect to our page.");
}

//Calling R program
$code= "echo '$argv <- \\\"bivariate.r\\\"; source(argv)' | " . "/usr/bin/R --vanilla --
slave";
$aux1 = exec($code);

?>

```

```

<body bgcolor="#FFFFFF" text="#000000">
<div align="center">
  <table width="900" border="0" align="center" bordercolor="#006699">
    <tr>
      <td height="50" colspan="3" bordercolor="#FFFFFF"><div align="center" class="style42 style26"><strong><font size="6" face="Arial, Helvetica, sans-serif"> Two-Dimensional </font></strong></div></td>
    </tr>
    <tr>
      <td width="211" height="27" bordercolor="#FFFFFF"><span class="style22"><font size='2' face='Arial, Helvetica, sans-serif'><span class="style43">Generated in <font size='2' face='Arial, Helvetica, sans-serif'><font size='2' face='Arial, Helvetica, sans-serif'><? echo $day; ?></font></font></span><br></font></span></td>
      <td width="392" height="27" bordercolor="#FFFFFF">&ampnbsp</td>
      <td width="266" height="27" bordercolor="#FFFFFF"><div align='center' class='style2'>
        <label></label>
      </div></td>
    </tr>
  </table>
  <table width="967" height="56" border="0" align="center" cellspacing="0">
    <tr align="center" valign="middle">
      <td colspan="2">&ampnbsp</td>
    </tr>
    <tr align="center" valign="middle">
      <td colspan="2">&ampnbsp</td>
    </tr>
    <tr align="center" valign="middle" bgcolor="#336633">
      <td colspan="2" bgcolor="#009933">
        <div align="left" ></div> </td>
    </tr>
    <tr align="center" valign="middle">
      <td>
        <table width="80%" border="0">
          <tr>
            <th scope="col"><div align="justify"><span class="style15">Technical Score is based on evaluation questions about Lecturer Commitment, short courses, conferences, and theme sessions. Infrastructure Score is based on this specific question.</span></div></th>
          </tr>
        </table>
        <p align="justify">&ampnbsp</p>
      </td>
      <td><p align="justify" ></p>
        <div align="center">
          <iframe src ='rep3_bivariate.php' width='600' height='600' scrolling='no' frameborder='0'> </iframe>
        </div></td>
      </tr>
    </table>
  </div>
  <p align='center'>&ampnbsp</p>
</body>
</html>

```

### bivariate.r

```

setwd("/var/www/html/");
library(RMySQL)

con <- dbConnect(dbDriver('MySQL'), user='user', password='passuser', dbname =
'event_db')

dbListTables(con)
database=dbGetQuery(con,paste('select * from quest'))

n=nrow(database)

dev.off.wrap <- function(){
  dev.off()
  invisible()
}

attach(database)

SUM=numeric(0)
score=numeric(0)
for(i in 1:n){

```

```
    score[i]=sum(q1[i],q2[i],q3[i],q4[i])/4
}

bitmap(file = 'bivariate.png', type='png256',width=6,height=6)
par(cex=2,mar=c(5, 4, 4, 2))
plot(q5,score,ylim=c(1,9),xlim=c(1,9),type='p',xlab='Infrastructure', ylab='Technical
Score',pch=19,col='darkgreen')
abline(v=5, col='green')
abline(h=5, col='green')
dev.off.wrap()
```

THE END OF THE STANDALONE REPLICATION OF EVENT EVALUATION - EXAMPLE 1.

## STANDALONE REPLICATION OF PCA EXAMPLE

### - EXAMPLE 3 -

In the same way as to Example 1, Linux server with Apache, R, PHP, and MySQL must be installed and this standalone syntax procedure assumes that there is a MySQL account with the following user data:

MYSQL	User: user
	Password: passuser

For this user, this standalone syntax procedure assumes there is a database with the following structure:

MYSQL	Database: article
-------	-------------------

In order to replicate the PCA analysis example there are 8 important files (`pca_1.php`, `pca1_default.php`, `pca_2.php`, `pca_3.php`, `pca.r`, `biplot.php`) which interact with each other. They are located in the same apache directory, for example, `/var/www/html/`, as in Ubuntu Linux. This interaction of these files is showed in Figure 1.

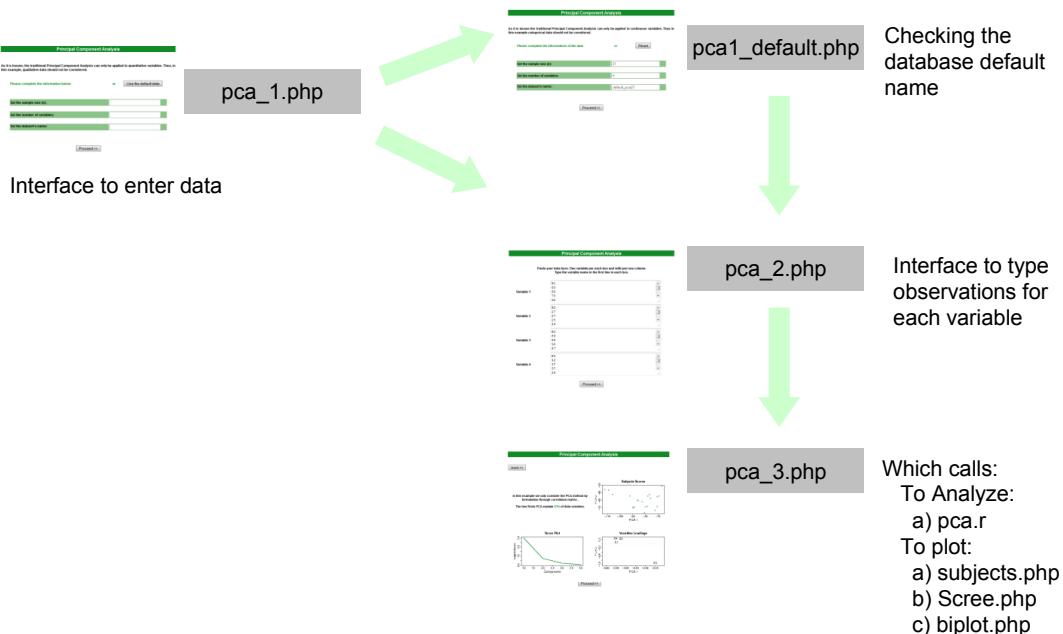


Figure 1. Files interaction

The codes of each file are exposed above and the syntax that calls each file is **red bolded**. Every R and PHP code should be kept as presented, because these languages are case sensitive. The HTML codes are just applied to pages design.

### pca\_1.php

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">

<html>
<head>
    <title>Examples in Article</title>

<meta NAME="description" CONTENT="Insert Description Here">
<meta NAME="keywords" CONTENT="Insert Keywords Here">

<style>
#div1,#div2,#bdiv1,#bdiv2 {visibility:hidden;}
</style>

<style type="text/css">
<!--
a:link, a:active, a:visited {
color: #CBAC57;
text-decoration: underline}

a:hover {
color: #B28816;
text-decoration: none}

BODY {
    scrollbar-face-color: #000000;
    scrollbar-shadow-color: #CBAC57;
    scrollbar-highlight-color: #CBAC57;
    scrollbar-3dlight-color: #000000;
    scrollbar-darkshadow-color: #000000;
    scrollbar-track-color: #000000;
    scrollbar-arrow-color: #CBAC57;
    overflow: hidden;
}
//.style1 {color: #FFFFFF}
.style12 {
    font-family: "Times New Roman", Times, serif;
    font-size: 16px;
    color: #000000;
}
.style16 {font-family: Arial, Helvetica, sans-serif; color: #FFFFFF; font-size: 16; }
.style21 {
    font-family: Arial, Helvetica, sans-serif;
    font-size: 12px;
}
.style23 {
    font-family: Arial, Helvetica, sans-serif;
    font-size: 12px;
    font-weight: bold;
    color: #009933;
}
.style33 {font-family: Arial, Helvetica, sans-serif; font-weight: bold; font-size: 12;
color: #000000; }
.style39 {
    color: #000000;
    font-weight: bold;
}
.style40 {    color: #666666;
    font-family: Arial, Helvetica, sans-serif;
    font-size: 14px;
}
-->
</style>
<Script type="text/javascript">

function validate() {
    var valido = true;

    if(document.form1.n.value == "") {
        alert("You did not fill the sample size.");
    }
}
```

```

    valido = false;
}
if(document.form1.p.value == "") {
    alert("You did not fill the number of variables.");
    valido = false;
}
if(document.form1.name.value == "") {
    alert("You did not fill the dataset's name.");
    valido = false;
}

if (valido == true) {
    document.form1.submit();
}
}

function swY(){
t=document.getElementById('div1').style
t.visibility=('on'=='on')?'visible':'hidden'
t=document.getElementById('bdiv1').style
t.visibility=('on'=='on')?'visible':'hidden'
t=document.getElementById('div2').style
t.visibility=('off'=='on')?'visible':'hidden'
t=document.getElementById('bdiv2').style
t.visibility=('off'=='on')?'visible':'hidden'
}

function swN(){
t=document.getElementById('div1').style
t.visibility=('off'=='on')?'visible':'hidden'
t=document.getElementById('bdiv1').style
t.visibility=('off'=='on')?'visible':'hidden'
t=document.getElementById('div2').style
t.visibility=('on'=='on')?'visible':'hidden'
t=document.getElementById('bdiv2').style
t.visibility=('on'=='on')?'visible':'hidden'
}

function numbersonly(myfield, e, dec)
{
var key;
var keychar;

if (window.event)
    key = window.event.keyCode;
else if (e)
    key = e.which;
else
    return true;
keychar = String.fromCharCode(key);

// control keys
if ((key==null) || (key==0) || (key==8) ||
    (key==9) || (key==13) || (key==27) )
    return true;

// numbers
else if (((0123456789).indexOf(keychar) > -1))
    return true;

// decimal point jump
else if (dec && (keychar == "."))
{
    myfield.form.elements[dec].focus();
    return false;
}
else
    return false;
}

function numbersonly2(myfield, e, dec)
{
var key;
var keychar;

if (window.event)

```

```

        key = window.event.keyCode;
    else if (e)
        key = e.which;
    else
        return true;
    keychar = String.fromCharCode(key);

    // control keys
    if ((key==null) || (key==0) || (key==8) ||
        (key==9) || (key==13) || (key==27) )
        return true;

    // numbers
    else if (((("2345678910").indexOf(keychar) > -1))
        return true;

    // decimal point jump
    else if (dec && (keychar == "."))
    {
        myfield.form.elements[dec].focus();
        return false;
    }
    else
        return false;
}

</script>

<meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1"></head>

<body marginwidth="0" marginheight="0" leftmargin="0" topmargin="0">

<p>&nbsp;</p>
<table width="800" border="0" align="center" cellpadding="0" cellspacing="0">
<tr>
<td>

<table width="80%" border="0" align="center">
    <tr>
        <th colspan="3" bgcolor="#009933" scope="col"><p align="center"
class="style12"><span class="style16">Principal Component Analysis </span></p></th>
    </tr>
    <tr>
        <th width="46%" scope="col">&nbsp;</th>
        <th width="8%" scope="col">&nbsp;</th>
        <th width="46%" scope="col">&nbsp;</th>
    </tr>
    <tr>
        <th colspan="3" class="style21" scope="col"><div align="justify"><br>
            As it is known, the traditional
            Principal Component Analysis can only be applied to quantitative variables.
            Thus, in this example, <span id="result_box" lang="en">qualitative data should not be
            considered.</span></div></th>
    </tr>
    <tr>
        <th colspan="3" scope="col">&nbsp;</th>
    </tr>
    <tr>
        <th colspan="3" scope="col"><form name="form2" method="post"
action="pca1_default.php">
            <table width="575" border="0" align="center" bordercolor="#FFFFFF">
                <tr>
                    <td width="358" bordercolor="#FFFFFF"><span class="style23">Please
complete the information below</span></td>
                    <td width="32" bordercolor="#FFFFFF"><div align="center"><span
class="style23">or
                        <label></label>
                        <label> </label>
                        <label></label>
                    </span></div></td>
                <td width="171" bordercolor="#FFFFFF"><div align="center">
                    <input type="hidden" name="id" value='<? echo $pass; ?>'>
                    <input name="submit" type="submit" value="Use the default data">
                </div></td>
            </table>
        </form>
    </th>

```

```

        </div></td>
    </tr>
</table>
</form>
<form name="form1" method="post" action="pca_2.php">
<table width="575" border="0" align="center" bordercolor="#FFFFFF">
<tr>
    <td colspan="3" bordercolor="#FFFFFF"><p align="left" >&nbsp;</p></td>
</tr>
<tr>
    <td width="358" bgcolor="#99CC99" class="style23"><span
class="style33">Set the sample size (n):</span></td>
    <td width="203" colspan="2" bgcolor="#99CC99" class="style23"><span
class="style33">
        <label>
            <input name="n" type="text" style="cursor:text" onKeyPress="return
numbersonly(this, event)" size="26"/>
        </label>
    </span></td>
</tr>
<tr>
    <td bordercolor="#FFFFFF" class="style23">&nbsp;</td>
    <td colspan="2" bordercolor="#FFFFFF" class="style23">&nbsp;</td>
</tr>
<tr>
    <td bordercolor="#FFFFFF" bgcolor="#99CC99" class="style23"><span
class="style33">Set the number of variables:</span></td>
    <td colspan="2" bordercolor="#FFFFFF" bgcolor="#99CC99"
class="style23"><span class="style33">
        <label>
            <input name="p" type="text" style="cursor:text" onKeyPress="return
numbersonly(this, event)" size="26" maxlength="2"/>
        </label>
    </span></td>
</tr>
<tr>
    <td valign="top" bordercolor="#FFFFFF" class="style23">&nbsp;</td>
    <td colspan="2" bordercolor="#FFFFFF" class="style23">&nbsp;</td>
</tr>
<tr>
    <td valign="top" bordercolor="#FFFFFF" bgcolor="#99CC99"
class="style23"><span class="style33">Set the dataset's name:</span></td>
    <td colspan="2" bordercolor="#FFFFFF" bgcolor="#99CC99"
class="style23"><span class="style33">
        <label>
            <input name="name" type="text" id="name" style="cursor:text"
size="26"/>
        </label>
    </span></td>
</tr>
</table>
<p>&nbsp;</p>
<p>
    <input type="hidden" name="id" value='<? echo $pass; ?>'>
    <input name="submit2" type="button" value="Proceed &gt;&gt;">
</p>
onClick="return validate()" style="cursor:hand" >
</p>
</form>           </th>
</tr>
</table>
</td>
</tr>
</table>
</body>
</html>

```

### pca1\_default.php

```

<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">
<html>

```

```

<head>
    <title>Examples in Article</title>

<meta NAME="description" CONTENT="Insert Description Here">
<meta NAME="keywords" CONTENT="Insert Keywords Here">

<style>
#div1,#div2,#bdiv1,#bdiv2 {visibility:hidden;}
</style>

<style type="text/css">
<!--
a:link, a:active, a:visited {
color: #CBAC57;
text-decoration: underline}

a:hover {
color: #B28816;
text-decoration: none}

BODY {
    scrollbar-face-color: #000000;
    scrollbar-shadow-color: #CBAC57;
    scrollbar-highlight-color: #CBAC57;
    scrollbar-3dlight-color: #000000;
    scrollbar-darkshadow-color: #000000;
    scrollbar-track-color: #000000;
    scrollbar-arrow-color: #CBAC57;
    overflow: hidden;
}
//.style1 {color: #FFFFFF}
.style12 {
    font-family: "Times New Roman", Times, serif;
    font-size: 16px;
    color: #000000;
}
.style16 {font-family: Arial, Helvetica, sans-serif; color: #FFFFFF; font-size: 16; }
.style21 {
    font-family: Arial, Helvetica, sans-serif;
    font-size: 12px;
}
.style23 {
    font-family: Arial, Helvetica, sans-serif;
    font-size: 12px;
    font-weight: bold;
    color: #009933;
}
.style33 {font-family: Arial, Helvetica, sans-serif; font-weight: bold; font-size: 12;
color: #000000; }
.style39 {
    color: #000000;
    font-weight: bold;
}
.style40 {    color: #666666;
    font-family: Arial, Helvetica, sans-serif;
    font-size: 14px;
}
-->
</style>
<Script type="text/javascript">

function validate() {
    var valido = true;

    if(document.form1.n.value == "") {
        alert("You did not fill the sample size.");
        valido = false;
    }
    if(document.form1.p.value == "") {
        alert("You did not fill the number of variables.");
        valido = false;
    }
    if(document.form1.name.value == "") {
        alert("You did not fill the dataset's name.");
        valido = false;
    }
}

```

```

if (valido == true) {
document.form1.submit();
}
}

function swY(){
t=document.getElementById('div1').style
t.visibility=('on'=='on')?'visible':'hidden'
t=document.getElementById('bdiv1').style
t.visibility=('on'=='on')?'visible':'hidden'
t=document.getElementById('div2').style
t.visibility=('off'=='on')?'visible':'hidden'
t=document.getElementById('bdiv2').style
t.visibility=('off'=='on')?'visible':'hidden'
}

function swN(){
t=document.getElementById('div1').style
t.visibility=('off'=='on')?'visible':'hidden'
t=document.getElementById('bdiv1').style
t.visibility=('off'=='on')?'visible':'hidden'
t=document.getElementById('div2').style
t.visibility=('on'=='on')?'visible':'hidden'
t=document.getElementById('bdiv2').style
t.visibility=('on'=='on')?'visible':'hidden'
}

function numbersonly(myfield, e, dec)
{
var key;
var keychar;

if (window.event)
    key = window.event.keyCode;
else if (e)
    key = e.which;
else
    return true;
keychar = String.fromCharCode(key);

// control keys
if ((key==null) || (key==0) || (key==8) ||
    (key==9) || (key==13) || (key==27) )
    return true;

// numbers
else if (((0123456789").indexOf(keychar) > -1))
    return true;

// decimal point jump
else if (dec && (keychar == "."))
{
    myfield.form.elements[dec].focus();
    return false;
}
else
    return false;
}

function numbersonly2(myfield, e, dec)
{
var key;
var keychar;

if (window.event)
    key = window.event.keyCode;
else if (e)
    key = e.which;
else
    return true;
keychar = String.fromCharCode(key);

// control keys
if ((key==null) || (key==0) || (key==8) ||
    (key==9) || (key==13) || (key==27) )
    return true;
}

```

```

// numbers
else if (((("2345678910").indexOf(keychar) > -1))
    return true;

// decimal point jump
else if (dec && (keychar == "."))
{
    myfield.form.elements[dec].focus();
    return false;
}
else
    return false;
}

</script>

<?

$con=mysql_connect("localhost","user","passuser") or die("CONNECTION ERROR");
mysql_select_db("article",$con)or die("CONNECTION ERROR");

$tbl_List = mysql_query("SHOW TABLES LIKE 'default_pca%'");
$i=0;
while($tables = mysql_tablename($tbl_List,$i))
{

    $i++;
}
$j=$i+1;
?>

<meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1"></head>
<body marginwidth="0" marginheight="0" leftmargin="0" topmargin="0">

<p>&nbsp;</p>
<table width="800" border="0" align="center" cellpadding="0" cellspacing="0">
<tr>
<td>

    <table width="80%" border="0" align="center">
        <tr>
            <th colspan="3" bgcolor="#009933" scope="col"><p align="center"
class="style12"><span class="style16">Principal Component Analysis </span></p></th>
        </tr>
        <tr>
            <th width="46%" scope="col">&nbsp;</th>
            <th width="8%" scope="col">&nbsp;</th>
            <th width="46%" scope="col">&nbsp;</th>
        </tr>
        <tr>
            <th colspan="3" class="style21" scope="col"><div align="justify"><br>
                As it is known the traditional
                Principal Component Analysis can only be applied to continuous variables. Thus
                in this example <span id="result_box" lang="en">categorical data should not be
                considered.</span></div></th>
        </tr>
        <tr>
            <th colspan="3" scope="col"><form name="form2" method="post"
action="pca_1.php">
                <table width="575" border="0" align="center" bordercolor="#FFFFFF">
                    <tr>
                        <td width="358" bordercolor="#FFFFFF"><span class="style23">Please
complete the informations of the data
                            <label></label>
                            <label> </label>
                            <label></label>
                        </span></td>
                        <td width="32" bordercolor="#FFFFFF"><div align="center"><span
class="style23">or

```

```

        <label></label>
        <label> </label>
        <label></label>
    </span></div></td>
<td width="171" bordercolor="#FFFFFF"><div align="center">
    <input type="hidden" name="id2" value='<? echo $pass; ?>'>
    <input name="submit" type="submit" value="Reset">
</div></td>
</tr>
</table>
</form>
<form name="form1" method="post" action="pca_2.php">
<table width="575" border="0" align="center" bordercolor="#FFFFFF">
<tr>
    <td colspan="3" bordercolor="#FFFFFF"><p align="left" >&ampnbsp</p></td>
</tr>
<tr>
    <td width="358" bgcolor="#99CC99" class="style23"><span
class="style33">Set the sample size (n):</span></td>
    <td width="203" colspan="2" bgcolor="#99CC99" class="style23"><span
class="style33">
        <label>
            <input name="na" type="text" id="n" style="cursor:text"
onKeyPress="return numbersonly(this, event)" value="21" size="26" DISABLED/>
        </label>
        <input type="hidden" name="n" value='21'>
    </span></td>
</tr>
<tr>
    <td bordercolor="#FFFFFF" class="style23">&ampnbsp</td>
    <td colspan="2" bordercolor="#FFFFFF" class="style23">&ampnbsp</td>
</tr>
<tr>
    <td bordercolor="#FFFFFF" bgcolor="#99CC99" class="style23"><span
class="style33">Set the number of variables:</span></td>
    <td colspan="2" bordercolor="#FFFFFF" bgcolor="#99CC99"
class="style23"><span class="style33">
        <label>
            <input name="pa" type="text" id="p" style="cursor:text"
onKeyPress="return numbersonly(this, event)" value="4" size="26" maxlength="2"
DISABLED/>
        </label>
        <input type="hidden" name="p" value='4'>
    </span></td>
</tr>
<tr>
    <td valign="top" bordercolor="#FFFFFF" class="style23">&ampnbsp</td>
    <td colspan="2" bordercolor="#FFFFFF" class="style23">&ampnbsp</td>
</tr>
<tr>
    <td valign="top" bordercolor="#FFFFFF" bgcolor="#99CC99"
class="style23"><span class="style33">Set the dataset's name:</span></td>
    <td colspan="2" bordercolor="#FFFFFF" bgcolor="#99CC99"
class="style23"><span class="style33">
        <label>
            <input name="namea" type="text" id="name" style="cursor:text"
value='<? echo "default_pca$j"; ?>' size="26" DISABLED/>
        </label>
        <input type="hidden" name="name" value="<? echo "default_pca$j"; ?>">
    </span></td>
</tr>
</table>
<p>&ampnbsp</p>
<p>
    <input type="hidden" name="id_d" value='1'>
    <input type="hidden" name="id" value='<? echo $pass; ?>'>
    <input name="submit2" type="button" value="Proceed &gt;&gt;">
<onClick="return validate()" style="cursor:hand" >
</p>
</form>           </th>
</tr>
</table>
</td>
</tr>
</table>
</body>
</html>
```

## pca\_2.php

```
<?
$id_d=$_POST['id_d'];

$vars=1;
$n=$_POST['n'];
$p=$_POST['p'];

$name_table=$_POST['name'];

$con=mysql_connect("localhost","user","passuser") or die("CONNECTION ERROR");
mysql_select_db("article",$con)or die("CONNECTION ERROR");

function verifica($name_table){
    if(!mysql_query("SELECT * FROM $name_table")){
        $verifica="ok";
    } else{
        echo "<!DOCTYPE HTML PUBLIC '-//W3C//DTD HTML 4.0 Transitional//EN'>

<html>
<head>
    <title>Examples in Article</title>

<meta NAME='description' CONTENT='Insert Description Here'>
<meta NAME='keywords' CONTENT='Insert Keywords Here'>

<style>
#div1,#div2,#bdiv1,#bdiv2 {visibility:hidden;}
</style>

<style type='text/css'>
<!--
a:link, a:active, a:visited {
color: #CBAC57;
text-decoration: underline}

a:hover {
color: #B28816;
text-decoration: none}

BODY {
    scrollbar-face-color: #000000;
    scrollbar-shadow-color: #CBAC57;
    scrollbar-highlight-color: #CBAC57;
    scrollbar-3dlight-color: #000000;
    scrollbar-darkshadow-color: #000000;
    scrollbar-track-color: #000000;
    scrollbar-arrow-color: #CBAC57;
    overflow: hidden;
}
//.style1 {color: #FFFFFF}
.style12 {
    font-family: 'Times New Roman', Times, serif;
    font-size: 16px;
    color: #000000;
}
.style16 {font-family: Arial, Helvetica, sans-serif; color: #FFFFFF; font-size: 16; }
.style21 {
    font-family: Arial, Helvetica, sans-serif;
    font-size: 12px;
}
.style23 {
    font-family: Arial, Helvetica, sans-serif;
    font-size: 12px;
    font-weight: bold;
    color: #009933;
}
}
```

```

.style33 {font-family: Arial, Helvetica, sans-serif; font-weight: bold; font-size: 12;
color: #000000; }
.style39 {
    color: #000000;
    font-weight: bold;
}
.style40 {    color: #666666;
    font-family: Arial, Helvetica, sans-serif;
    font-size: 14px;
}
-->
</style>
<Script type='text/javascript'>

function validate() {
    var valido = true;

    if(document.form1.m.value == '') {
        alert('You did not fill the number of samples.');
        valido = false;
    }
    if(document.form1.n.value == '') {
        alert('You did not fill the size of samples.');
        valido = false;
    }
    if(document.form1.name.value == '') {
        alert('You did not fill the dataset's name.');
        valido = false;
    }
    if (document.form1.inserir.value.length == 0) {
        alert('You did not enter the data.');
        valido = false;
    }

    if (valido == true) {
        document.form1.submit();
    }
}

function swY(){
t=document.getElementById('div1').style
t.visibility=('on'=='on')?'visible':'hidden'
t=document.getElementById('bdiv1').style
t.visibility=('on'=='on')?'visible':'hidden'
t=document.getElementById('div2').style
t.visibility=('off'=='on')?'visible':'hidden'
t=document.getElementById('bdiv2').style
t.visibility=('off'=='on')?'visible':'hidden'
}

function swN(){
t=document.getElementById('div1').style
t.visibility=('off'=='on')?'visible':'hidden'
t=document.getElementById('bdiv1').style
t.visibility=('off'=='on')?'visible':'hidden'
t=document.getElementById('div2').style
t.visibility=('on'=='on')?'visible':'hidden'
t=document.getElementById('bdiv2').style
t.visibility=('on'=='on')?'visible':'hidden'
}

function numbersonly(myfield, e, dec)
{
var key;
var keychar;

if (window.event)
    key = window.event.keyCode;
else if (e)
    key = e.which;
else
    return true;
keychar = String.fromCharCode(key);

// control keys
if ((key==null) || (key==0) || (key==8) ||
    (key==9) || (key==13) || (key==27) )

```

```

        return true;

    // numbers
    else if (((('0123456789')).indexOf(keychar) > -1))
        return true;

    // decimal point jump
    else if (dec && (keychar == '.'))

    {
        myfield.form.elements[dec].focus();
        return false;
    }
    else
        return false;
}

function numbersonly2(myfield, e, dec)
{
var key;
var keychar;

if (window.event)
    key = window.event.keyCode;
else if (e)
    key = e.which;
else
    return true;
keychar = String.fromCharCode(key);

// control keys
if ((key==null) || (key==0) || (key==8) ||
    (key==9) || (key==13) || (key==27) )
    return true;

// numbers
else if (((('2345678910')).indexOf(keychar) > -1))
    return true;

// decimal point jump
else if (dec && (keychar == '.'))

{
    myfield.form.elements[dec].focus();
    return false;
}
else
    return false;
}


```

</script>

```

<meta http-equiv='Content-Type' content='text/html; charset=iso-8859-1'></head>
<body marginwidth='0' marginheight='0' leftmargin='0' topmargin='0'>

<p>&nbsp;</p>
<table width='800' border='0' align='center' cellpadding='0' cellspacing='0'>
<tr>
<td>

<table width='80%' border='0' align='center'>
<tr>
    <th bgcolor='#009933' scope='col'><p align='center' class='style12'><span
class='style16'>Statistical Process Control</span></p></th>
    </tr>

    <tr>
        <th colspan='3' scope='col'><form name='form1' method='post' action='pca_1.php'>
            <div align='left'>
                <input type='hidden' name='id2' value='$pass'>
                <input type='submit' name='Submit' value='back &gt;&gt;'>
            </div>
        </form></th>
    
```

```

        </tr>
        <tr>
            <th scope='col'> </th>
        </tr>
        <tr>
            <th scope='col' class='style21' sc><p>&ampnbsp</p>
                <p>This data set already exists on our server. Please rename the data set.</p>
                <p>&ampnbsp</p></th>
        </tr>
        </table>
        </td>
    </tr>
</table>
</body>
</html>";
    } }

?>

<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">

<html>
<head>
    <title>Examples in Article</title>

<meta NAME="description" CONTENT="Insert Description Here">
<meta NAME="keywords" CONTENT="Insert Keywords Here">

<style>
#div1,#div2,#bdiv1,#bdiv2 {visibility:hidden;}
</style>

<style type="text/css">
<!--
a:link, a:active, a:visited {
color: #CBAC57;
text-decoration: underline}

a:hover {
color: #B28816;
text-decoration: none}

BODY {
    scrollbar-face-color: #000000;
    scrollbar-shadow-color: #CBAC57;
    scrollbar-highlight-color: #CBAC57;
    scrollbar-3dlight-color: #000000;
    scrollbar-darkshadow-color: #000000;
    scrollbar-track-color: #000000;
    scrollbar-arrow-color: #CBAC57;
    overflow: hidden;
}
/.style1 {color: #FFFFFF}
.style12 {
    font-family: "Times New Roman", Times, serif;
    font-size: 16px;
    color: #000000;
}
.style16 {font-family: Arial, Helvetica, sans-serif; color: #FFFFFF; font-size: 16; }
.style21 {
    font-family: Arial, Helvetica, sans-serif;
    font-size: 12px;
}
.style23 {
    font-family: Arial, Helvetica, sans-serif;
    font-size: 12px;
    font-weight: bold;
    color: #009933;
}
.style33 {font-family: Arial, Helvetica, sans-serif; font-weight: bold; font-size: 12;
color: #000000; }
.style39 {
    color: #000000;
    font-weight: bold;
}
}

```

```

.style40 {      color: #666666;
    font-family: Arial, Helvetica, sans-serif;
    font-size: 14px;
}
-->
</style>
<Script type="text/javascript">

function validate() {
    var valido = true;
    <?
for($i=1;$i<=$p;$i++) {
echo"
        if (document.form1.v$i.value.length == 0) {
            alert('You did not enter the data in Variable $i');
            valido = false;
        }";
}
?>
if (valido == true) {
document.form1.submit();
}
}

function swY(){
t=document.getElementById('div1').style
t.visibility=('on'=='on')?'visible':'hidden'
t=document.getElementById('bdiv1').style
t.visibility=('on'=='on')?'visible':'hidden'
t=document.getElementById('div2').style
t.visibility=('off'=='on')?'visible':'hidden'
t=document.getElementById('bdiv2').style
t.visibility=('off'=='on')?'visible':'hidden'
}

function swN(){
t=document.getElementById('div1').style
t.visibility=('off'=='on')?'visible':'hidden'
t=document.getElementById('bdiv1').style
t.visibility=('off'=='on')?'visible':'hidden'
t=document.getElementById('div2').style
t.visibility=('on'=='on')?'visible':'hidden'
t=document.getElementById('bdiv2').style
t.visibility=('on'=='on')?'visible':'hidden'
}

function numbersonly(myfield, e, dec)
{
var key;
var keychar;

if (window.event)
    key = window.event.keyCode;
else if (e)
    key = e.which;
else
    return true;
keychar = String.fromCharCode(key);

// control keys
if ((key==null) || (key==0) || (key==8) ||
    (key==9) || (key==13) || (key==27) )
    return true;

// numbers
else if (((0123456789").indexOf(keychar) > -1))
    return true;

// decimal point jump
else if (dec && (keychar == "."))
{
    myfield.form.elements[dec].focus();
    return false;
}
else
    return false;
}

```

```

function numbersonly2(myfield, e, dec)
{
var key;
var keychar;

if (window.event)
    key = window.event.keyCode;
else if (e)
    key = e.which;
else
    return true;
keychar = String.fromCharCode(key);

// control keys
if ((key==null) || (key==0) || (key==8) ||
    (key==9) || (key==13) || (key==27) )
    return true;

// numbers
else if (((("2345678910").indexOf(keychar) > -1))
    return true;

// decimal point jump
else if (dec && (keychar == "."))
{
    myfield.form.elements[dec].focus();
    return false;
}
else
    return false;
}

</script>

<meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1"></head>
<body marginwidth="0" marginheight="0" leftmargin="0" topmargin="0">

<p>&nbsp;</p>
<table width="800" border="0" align="center" cellpadding="0" cellspacing="0">
<tr>
<td>

<table width="80%" border="0" align="center">
<tr>
    <th colspan="3" bgcolor="#009933" scope="col"><p align="center"
class="style12"><span class="style16">Principal Component Analysis </span></p></th>
    </tr>
    <tr>
        <th width="46%" scope="col">&nbsp;</th>
        <th width="8%" scope="col">&nbsp;</th>
        <th width="46%" scope="col">&nbsp;</th>
    </tr>
    <tr>
        <th colspan="3" class="style21" scope="col"><div align="center">
            <p class="style33">Paste your data here. One variable per each box and with
just one column.<br>
                Type the variable name in the first line in each box. </p>
        </div></th>
    </tr>
    <tr>
        <th colspan="3" scope="col">
            <div align="left"></div>
        </th>
    </tr>
    <tr>
        <th colspan="3" scope="col"><form name="form1" method="post" action="pca_3.php">
            <table width="100%" border="0">
<?
if ($id_d==1) {
$default[1] =
X1

```

```
80
80
75
62
62
62
62
58
58
58
58
58
58
58
58
50
50
50
50
50
56
70
";
$default[2] =
X2
27
27
25
24
22
23
24
24
23
18
18
17
18
19
18
18
19
19
20
20
20
";
$default[3] =
X3
89
88
90
87
87
93
93
87
80
89
88
82
93
89
86
72
79
80
82
91
";
$default[4] =
X4
42
```

```

37
37
28
18
18
19
20
15
14
14
13
11
12
8
7
8
8
9
15
15
";
}

for($i=1;$i<=$p;$i++) {

echo "
<tr>
<th width='17%' scope='col' class='style21'><p align='center'> Variable $i </p></th>
<th width='83%' scope='col'><label><span class='style40'>
<textarea name='v$i' cols='50' rows='4' class='caixa'
style='cursor:text'>$default[$i]</textarea>
</span></label></th>
</tr>

";
}
?>
</table>
<p>
    <input type="hidden" name="n" value='<? echo $n; ?>'>
    <input type="hidden" name="p" value='<? echo $p; ?>'>
    <input type="hidden" name="id2" value='<? echo $pass; ?>'>
    <input type="hidden" name="name" value='<? echo $name_table; ?>'>
    <input name="submit2" type="button" value="Proceed &gt;&gt;" onClick="return
validate()" style="cursor:hand" >
</p>
</form>
</th>
</tr>
</table>
</td>
</tr>
</table>
</body>
</html>

```

### pca\_3.php

```

<?

$p=$_POST['p'];
$n=$_POST['n'];
$name_table=$_POST['name'];

for($i=1;$i<=$p;$i++) {
$aux="v$i";

$expl= explode(
', $_POST[$aux]);
$names[$i]=$expl[0];

$variaveis[$i]="$names[$i] varchar (10) NOT NULL,";

}

```

```

$todos_var=implode(" ", $variaveis);

$query_cria = "CREATE TABLE $name_table (id int (7) NOT NULL auto_increment,
                                             $todos_var
                                              PRIMARY KEY (id)

                                         ) ENGINE=MyISAM DEFAULT CHARSET=latin1 AUTO_INCREMENT=1 ;";

$con=mysql_connect("localhost","user","passuser") or die("CONNECTION ERROR");
mysql_select_db("article",$con) or die("CONNECTION ERROR");

$query_tabela = mysql_query($query_cria,$con) or die ("Error in Insert data");

for($i=0;$i<$n;$i++) {
    $id[$i]=$i+1;
}

for($l=0;$l<$n;$l++) {
$aux1 = $id[$l];
$query_inserel= "INSERT INTO $name_table (id) VALUES ('$aux1')";
mysql_query($query_inserel, $con) or die(mysql_error());

for($i=1;$i<=$p;$i++) {
$aux="v$i";
$expl= explode(
', $_POST[$aux]');
$o=$expl;
$aux2 = $o[$l+1];
$query_insere2= "UPDATE $name_table SET $names[$i]='$aux2' WHERE id='$aux1'";
mysql_query($query_insere2, $con) or die(mysql_error());
}

}

$msg="database=dbGetQuery(con,paste('select * from $name_table'))";

unlink("pca.txt");
unlink("biplot.png");
unlink("Scree.png");
unlink("subjects.png");

// creating the pca.txt
$fp = fopen("pca.txt", "a");

// Call the R file

$dowrite = fwrite($fp, $msg);

$cmd = "echo 'argv <- \\"pca.r\\"; source(argv)' | . /usr/bin/R --vanilla --slave";
$porc = exec($cmd);

?>

<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">

<html>
<head>
    <title>Examples in Article</title>
<meta NAME="description" CONTENT="Insert Description Here">
<meta NAME="keywords" CONTENT="Insert Keywords Here">

```

```

<style>
#div1,#div2,#bdiv1,#bdiv2 {visibility:hidden;}
</style>

<style type="text/css">
<!--
a:link, a:active, a:visited {
color: #CBAC57;
text-decoration: underline}

a:hover {
color: #B28816;
text-decoration: none}

BODY {
    scrollbar-face-color: #000000;
    scrollbar-shadow-color: #CBAC57;
    scrollbar-highlight-color: #CBAC57;
    scrollbar-3dlight-color: #000000;
    scrollbar-darkshadow-color: #000000;
    scrollbar-track-color: #000000;
    scrollbar-arrow-color: #CBAC57;
    overflow: hidden;
}
//.style1 {color: #FFFFFF}
.style12 {
    font-family: "Times New Roman", Times, serif;
    font-size: 16px;
    color: #000000;
}
.style16 {font-family: Arial, Helvetica, sans-serif; color: #FFFFFF; font-size: 16; }
.style21 {
    font-family: Arial, Helvetica, sans-serif;
    font-size: 12px;
}
.style42 {color: #009933}
-->
</style>
<Script type="text/javascript">

function validate() {
    var valido = true;

    if(document.form1.m.value == "") {
        alert("You did not fill the number of samples.");
        valido = false;
    }
    if(document.form1.n.value == "") {
        alert("You did not fill the size of samples.");
        valido = false;
    }
    if(document.form1.name.value == "") {
        alert("You did not fill the dataset's name.");
        valido = false;
    }
    if (document.form1.inserir.value.length == 0) {
        alert("You did not enter the data.");
        valido = false;
    }

    if (valido == true) {
        document.form1.submit();
    }
}

function swY(){
t=document.getElementById('div1').style
t.visibility=('on'=='on')?'visible':'hidden'
t=document.getElementById('bdiv1').style
t.visibility=('on'=='on')?'visible':'hidden'
t=document.getElementById('div2').style
t.visibility=('off'=='on')?'visible':'hidden'
t=document.getElementById('bdiv2').style
t.visibility=('off'=='on')?'visible':'hidden'
}

function swN(){


```

```

t=document.getElementById('div1').style
t.visibility=('off'=='on')?'visible':'hidden'
t=document.getElementById('bdiv1').style
t.visibility=('off'=='on')?'visible':'hidden'
t=document.getElementById('div2').style
t.visibility=('on'=='on')?'visible':'hidden'
t=document.getElementById('bdiv2').style
t.visibility=('on'=='on')?'visible':'hidden'
}

function numbersonly(myfield, e, dec)
{
var key;
var keychar;

if (window.event)
    key = window.event.keyCode;
else if (e)
    key = e.which;
else
    return true;
keychar = String.fromCharCode(key);

// control keys
if ((key==null) || (key==0) || (key==8) ||
    (key==9) || (key==13) || (key==27) )
    return true;

// numbers
else if (((0123456789).indexOf(keychar) > -1))
    return true;

// decimal point jump
else if (dec && (keychar == "."))
{
    myfield.form.elements[dec].focus();
    return false;
}
else
    return false;
}

function numbersonly2(myfield, e, dec)
{
var key;
var keychar;

if (window.event)
    key = window.event.keyCode;
else if (e)
    key = e.which;
else
    return true;
keychar = String.fromCharCode(key);

// control keys
if ((key==null) || (key==0) || (key==8) ||
    (key==9) || (key==13) || (key==27) )
    return true;

// numbers
else if (((2345678910).indexOf(keychar) > -1))
    return true;

// decimal point jump
else if (dec && (keychar == "."))
{
    myfield.form.elements[dec].focus();
    return false;
}
else
    return false;
}

</script>

```

```

<meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1"></head>
<body marginwidth="0" marginheight="0" leftmargin="0" topmargin="0">
<p>&nbsp;</p>
<table width="800" border="0" align="center" cellpadding="0" cellspacing="0">
<tr>
<td>

<table width="80%" border="0" align="center">
<tr>
<th colspan="3" bgcolor="#009933" scope="col"><p align="center" class="style12"><span class="style16">Principal Component Analysis </span></p></th>
</tr>
<tr>
<th width="46%" scope="col">&nbsp;</th>
<th width="8%" scope="col">&nbsp;</th>
<th width="46%" scope="col">&nbsp;</th>
</tr>
<tr>
</tr>
<tr>
<th colspan="3" scope="col">
</th>
</tr>
<tr>
<th colspan="2" class="style21" scope="col"><div align="center">
<p>In this example we only consider the PCA method by formulation through correlation matrix . </p>
<p>The two firsts PCA explain<span class="style42"> <? echo $porc; ?>%</span>of data variation. </p>
</div></th>
<th scope="col"> <iframe src ='subjects.php' width='300' height='200' scrolling='no' frameborder='0'> </iframe></th>
</tr>
<tr>
<th colspan="2" scope="col"> <iframe src ='scree.php' width='300' height='200' scrolling='no' frameborder='0'> </iframe></th>
<th scope="col"> <iframe src ='biplot.php' width='300' height='200' scrolling='no' frameborder='0'> </iframe></th>
</tr>
</table>
</td>
</tr>
</table>
</body>
</html>

```

### pca.r

```

library(RMySQL)
setwd("/var/www/html/")
con <- dbConnect(dbDriver('MySQL'), user='user', password='passuser', dbname =
'article')
dbListTables(con)

source('pca.txt')

dev.off.wrap <- function(){
dev.off()
invisible()
}

n=nrow(database)
p=ncol(database)

X=data.frame(database[,2:p])

M=matrix(0, ncol=(p-1), nrow=n, dimnames=list(1:n, names(X) ))

for (i in 1:n) {
for (j in 1:(p-1)) {
M[i,j]=as.numeric(X[i,j])
}
}

```

```

}

mX=cor (M)

a.vector=eigen (mX)$vector
a.valor=eigen (mX)$value

bitmap(file = 'Scree.png', type='png256',width=4,height=2.5)
plot(a.valor,type='l',ylab="Eigenvalues",xlab="Components",main="Scree
Plot",lwd=2,col="#009933",cex.main=2,cex.lab=2,cex.axis=1.6)
dev.off.wrap()

Y1=M%*%(a.vector[,1])
Y2=M%*%(a.vector[,2])

bitmap(file = 'subjects.png', type='png256',width=4,height=2.5)
plot(Y1,Y2,type='p',ylab="PCA 2",xlab="PCA 1",main="Subjects
Scores",col="#009933",cex.main=2,cex.lab=2,cex.axis=1.6,cex=1.5)
abline(0,0,0,0,col="gray",lty=3)
dev.off.wrap()

if (min(a.vector[,1])>=0) li1=min(a.vector[,1])*0.9
if (min(a.vector[,1])<0) li1=min(a.vector[,1])*1.1
if (max(a.vector[,1])>=0) ls1=max(a.vector[,1])*1.1
if (max(a.vector[,1])<0) ls1=max(a.vector[,1])*0.9

if (min(a.vector[,2])>=0) li2=min(a.vector[,2])*0.9
if (min(a.vector[,2])<0) li2=min(a.vector[,2])*1.1
if (max(a.vector[,2])>=0) ls2=max(a.vector[,2])*1.1
if (max(a.vector[,2])<0) ls2=max(a.vector[,2])*0.9

bitmap(file = 'biplot.png', type='png256',width=4,height=2.5)
plot(a.vector[,1],a.vector[,2],type='n',ylab="PCA 2",xlab="PCA 1",
xlim=c(li1,ls1),ylim=c(li2,ls2),
main="Variables Loadings",col="#009933",cex.main=2,cex.lab=2,cex.axis=1.6,cex=1.5)
text(a.vector[,1],a.vector[,2],labels=names(X),cex=2)
abline(0,0,0,0,col="gray",lty=3)
dev.off.wrap()

EXP=round((a.valor[1]+a.valor[2])/sum(a.valor)*100)
cat(encodeString(EXP), "\n", sep=" ")

```

### biplot.php

```

<html>
<head>
<title>Untitled Document</title>
<META http-equiv=Content-Type content="text/html; charset=iso-8859-1">
<script>
if(window.name!="first")
    window.location.reload();
window.name = "first";
</script>
</head>
<body bgcolor="#FFFFFF" text="#000000">
    <p align="center"><font size='3' face='Arial, Helvetica, sans-serif'><img
src='biplot.png'></font> </p>
</body>
</html>

```

### Scree.php

```

<html>
<head>
<title>Untitled Document</title>
<META http-equiv=Content-Type content="text/html; charset=iso-8859-1">
<script>
if(window.name!="first")
    window.location.reload();
window.name = "first";
</script>

```

```
</head>
<body bgcolor="#FFFFFF" text="#000000">
  <p align="center"><font size='3' face='Arial, Helvetica, sans-serif'><img
src='Scree.png'></font> </p>
</body>
</html>
```

### subjects.php

```
<html>
<head>
<title>Untitled Document</title>
<META http-equiv=Content-Type content="text/html; charset=iso-8859-1">
<script>
if(window.name!="first")
  window.location.reload();
window.name = "first";
</script>
</head>
<body bgcolor="#FFFFFF" text="#000000">
  <p align="center"><font size='3' face='Arial, Helvetica, sans-serif'><img
src='subjects.png'></font> </p>
</body>
</html>
```

THE END OF THE STANDALONE REPLICATION OF PCA EXAMPLE - EXAMPLE 3.