

# Web Programming Lab Manual

Manual for VII Sem CSE/ISE

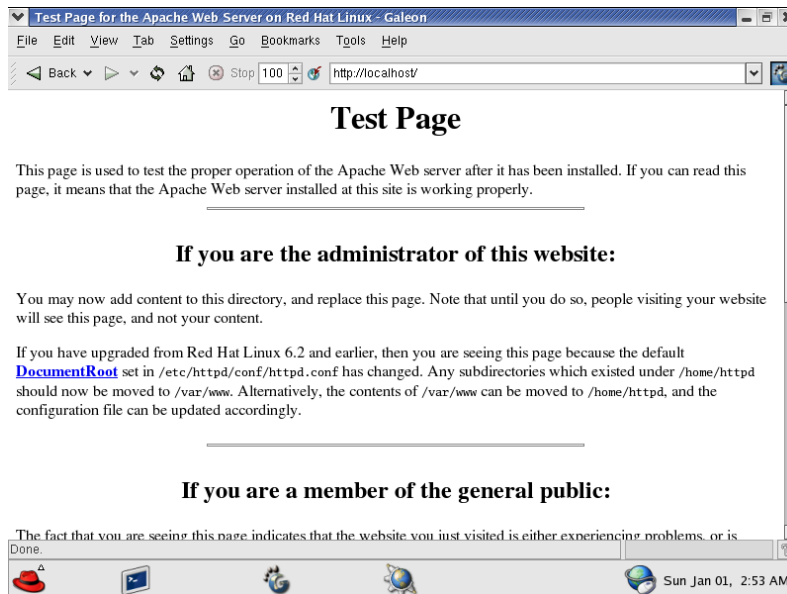
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## Introduction

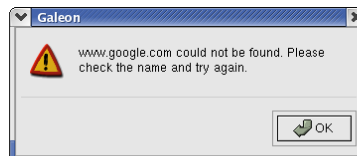
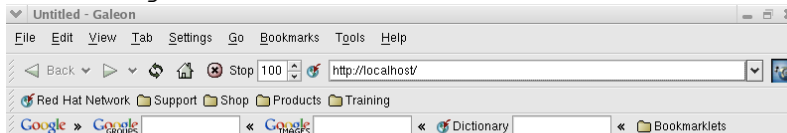
This document is intended to give the students a complete reference for web programming Laboratory. Before going in detail to execute the programs first we shall see about

## Apache HTTP Server

Web server used here is the apache http server, it is open source and more importantly most Linux flavors has it in built, to check apache is running or not, open browser and type <http://localhost> in URL, you must find Test Page as below



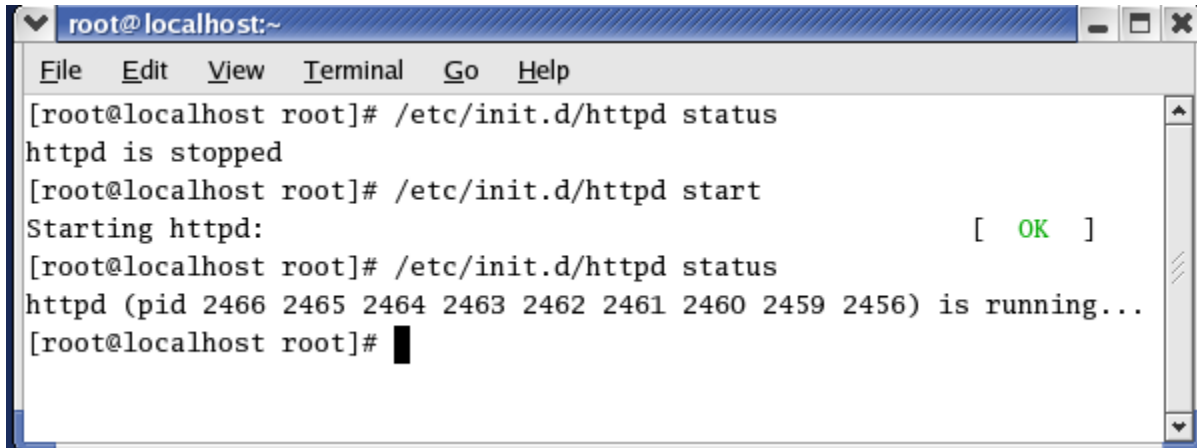
If you get something like this



Either apache is not installed or its service is stopped.

You can check the status of apache and start its service by typing following in command prompt /terminal as shown below

```
/etc/init.d/httpd status → to know status  
/etc/init.d/httpd start → to start service  
/etc/init.d/httpd stop → to stop service
```

A terminal window titled 'root@localhost:~' with a menu bar containing 'File', 'Edit', 'View', 'Terminal', 'Go', and 'Help'. The terminal shows the following commands and output:

```
[root@localhost root]# /etc/init.d/httpd status  
httpd is stopped  
[root@localhost root]# /etc/init.d/httpd start  
Starting httpd: [ OK ]  
[root@localhost root]# /etc/init.d/httpd status  
httpd (pid 2466 2465 2464 2463 2462 2461 2460 2459 2456) is running...  
[root@localhost root]#
```

Once you find the pid's on giving status as shown above, apache is running and you are fine to carry out the experiments given in this document, other prerequisites include perl,php,mysql.

**Question:** 1. Develop and demonstrate a XHTML file that includes Javascript script for the following problems:

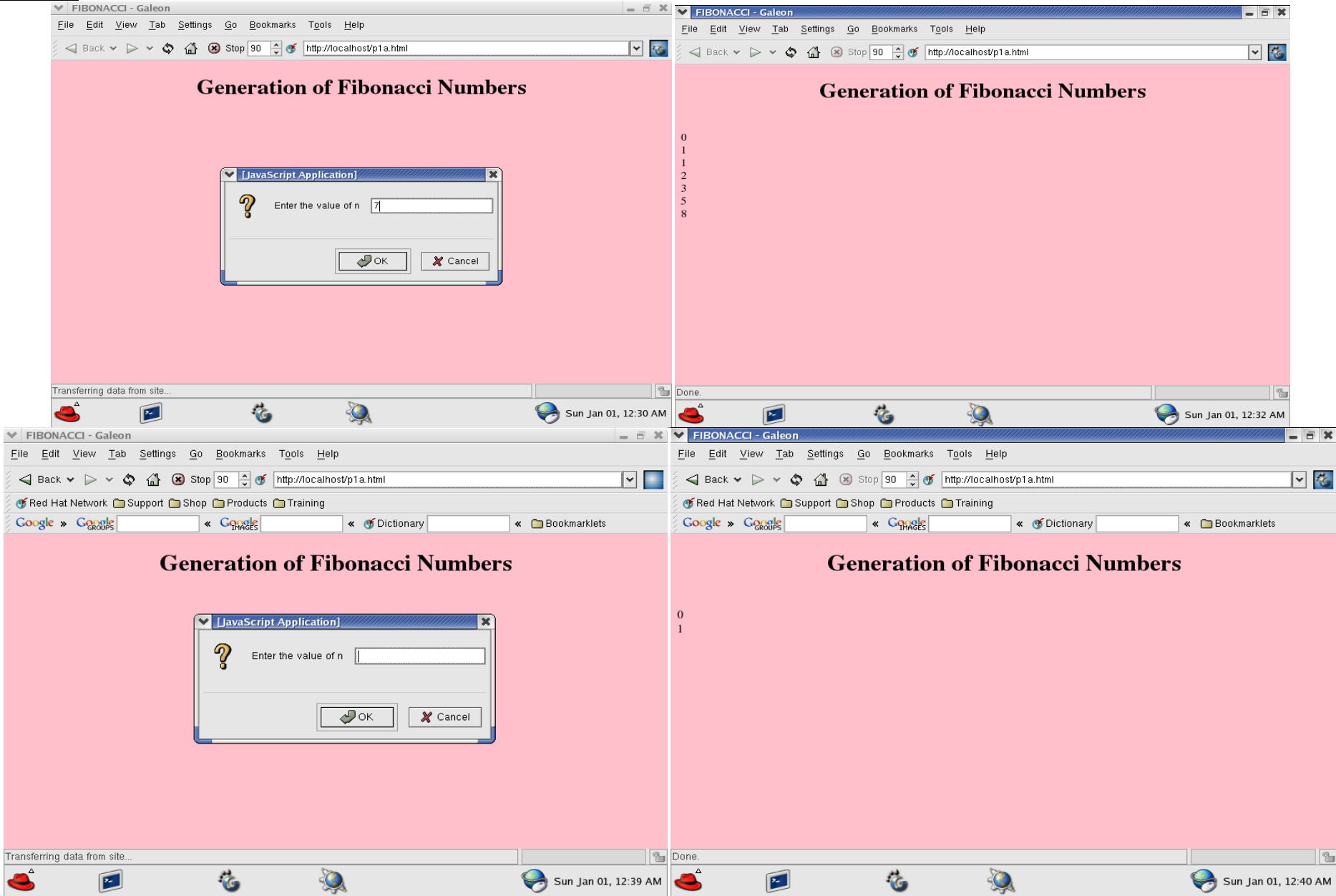
a) Input: A number n obtained using prompt

Output: The first n Fibonacci numbers

**File name = pla.html path= cd /var/www/html**

```
<?xml version="01" encoding="utf-8"?>
<html xmlns="http://www.w3.org/1999/xhtml">
<head>
<title>FIBONACCI</title>
</head>
<body bgcolor="pink">
<center><h1>Generation of Fibonacci Numbers</h1></center>
<br/>
<script type="text/javascript">
var n=prompt("Enter the value of n ","");
var f1=0;
var f2=1;
if(n==1)
{
    document.write(f1);
}
else
{
    document.write(f1+"<br/>"+f2);
}
for(var i=2;i<n;i++)
{
    var f3=f1+f2;
    document.write("<br/>"+f3);
    f1=f2;
    f2=f3;
}
</script>
</body>
</html>
```

**Output :**



**Question:** 1. Develop and demonstrate a XHTML file that includes Javascript script for the following problems:

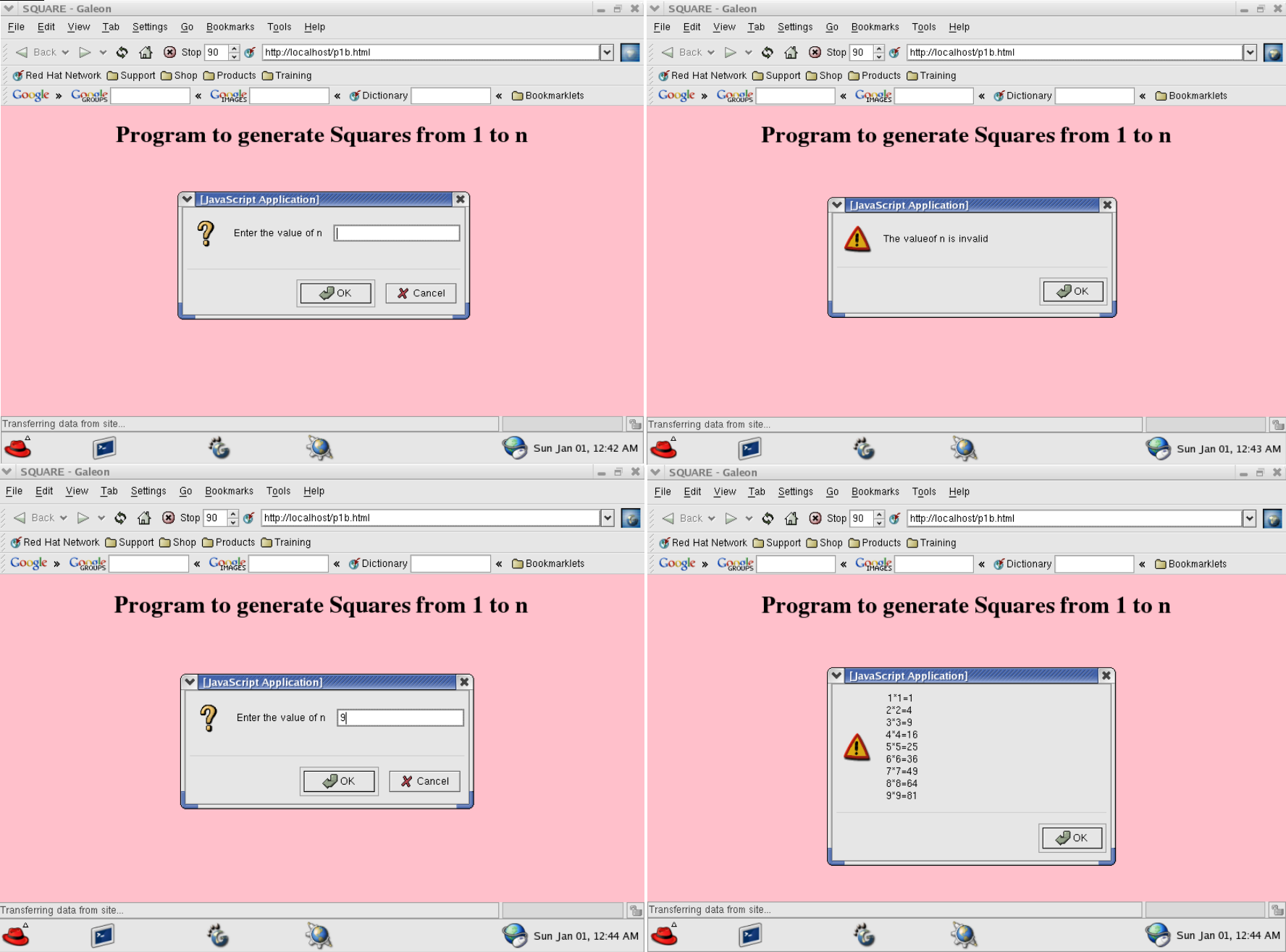
b) Input: A number n obtained using prompt

Output: A table of numbers from 1 to n and their squares using **alert**

**File name = p1b.html path= cd /var/www/html**

```
<?xml version="1.0" encoding="utf-8"?>
<html xmlns="http://www.w3.org/1999/xhtml">
<head>
<title>SQUARE</title>
</head>
<body bgcolor="pink">
<center><h1>Program to generate Squares from 1 to
n</h1></center>
<script type="text/javascript">
var n=prompt("Enter the value of n ","");
var msg=" ";
var x='0';
if(n>0)
{
    for(var i=1;i<=n;i++)
    {
        x=i*i;
        msg=msg+" "+i+"*"+i+"="+x+"\n";
    }
    alert(msg);
}
else
alert("The value of n is invalid");
</script>
</body>
</html>
```


**Output :**



**Question:** 2. a) Develop and demonstrate, using Javascript script, a XHTML document that collects the USN ( the valid format is: A digit from 1 to 4 followed by two upper-case characters followed by two digits followed by two upper-case characters followed by three digits; no embedded spaces allowed) of the user. Event handler must be included for the form element that collects this information to validate the input. Messages in the alert windows must be produced when errors are detected.

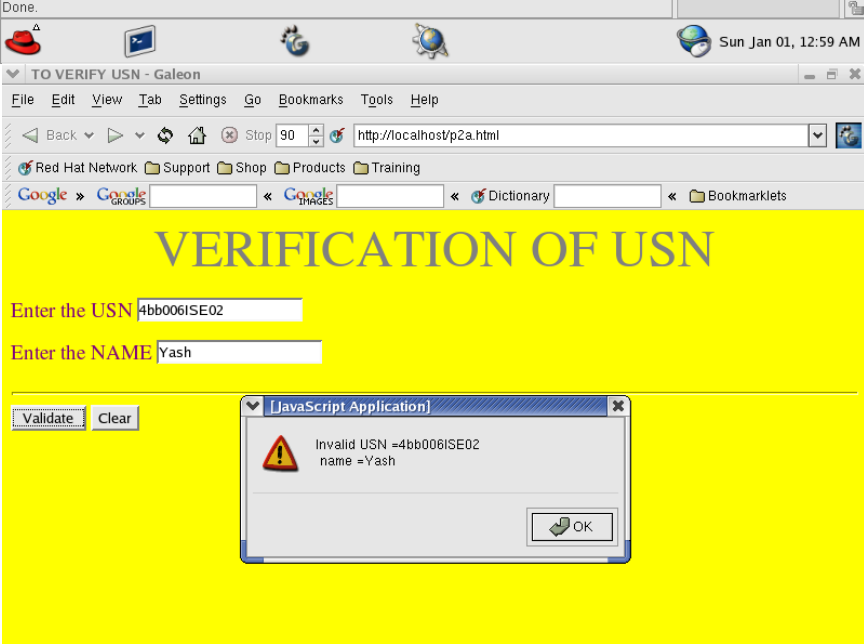
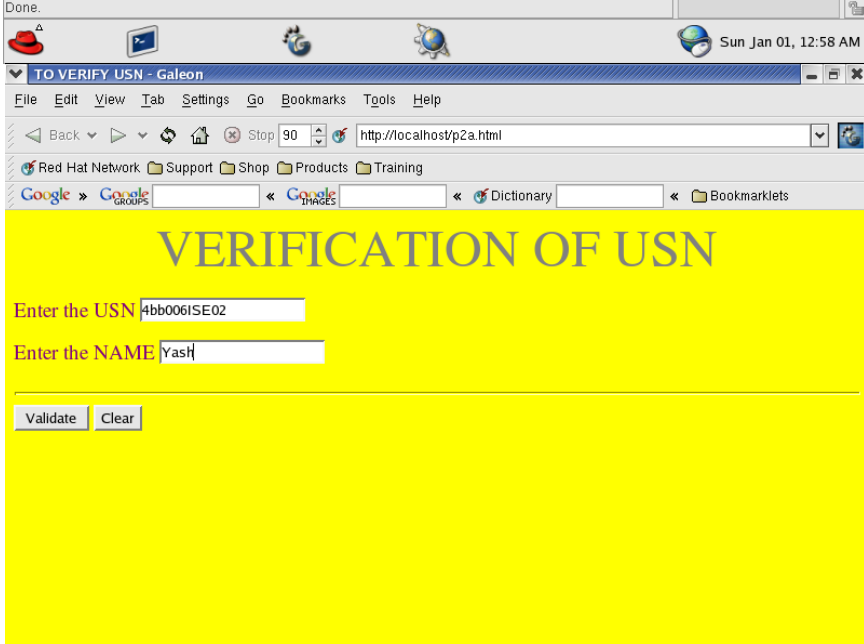
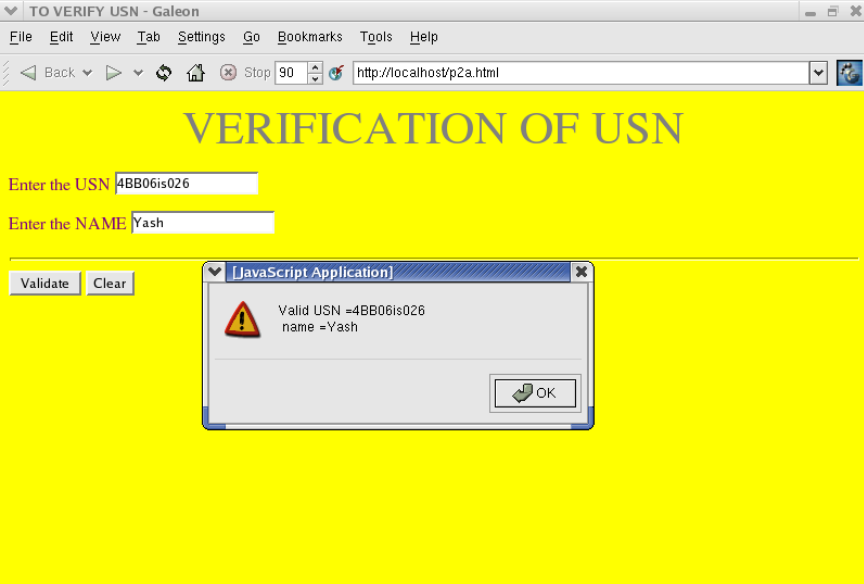
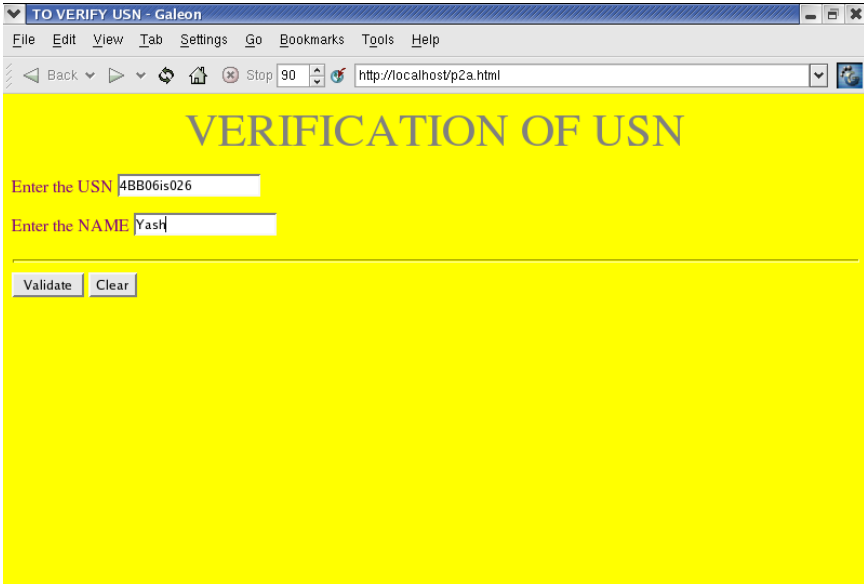
**File name = p2a.html path= cd /var/www/html**

```
<?xml version="1.0" encoding="utf-8"?>
<html xmlns="http://www.w3.org/1999/xhtml">
<head>
<title>TO VERIFY USN</title>
<script type="text/javascript">
function valid_usn()
{
    var str=document.getElementById("usn");
    var str1=document.getElementById("name");
    var result=str.value.search(/^[1-4]{1}[A-Za-z]{2}[0-9]{2}[A-Za-z]{2}[0-9]{3}$/);
    if(result==0)
        alert("Valid USN\t="+str.value+"\n name\t="+str1.value);
    else
        alert("Invalid USN\t="+str.value+"\n name\t="+str1.value);
}
</script>
</head>
<body bgcolor="yellow">
<center><font size="8" color="grey">VERIFICATION OF
USN</font></center>
<form>
<p>
<font size="4" color="purple">Enter the USN</font>
<input type="text" id="usn"/>
</p>
<p>
<font size="4" color="purple">Enter the NAME</font>
<input type="text" id="name"/>
</p>
<hr/>
<input type="submit" value="Validate" onclick="valid_usn()"/>
<input type="reset" value="Clear"/>
</form>
</body>
</html>
```





Output:



**Question:** 2b) Modify the above program to get the current semester also (restricted to be a number from 1 to 8)

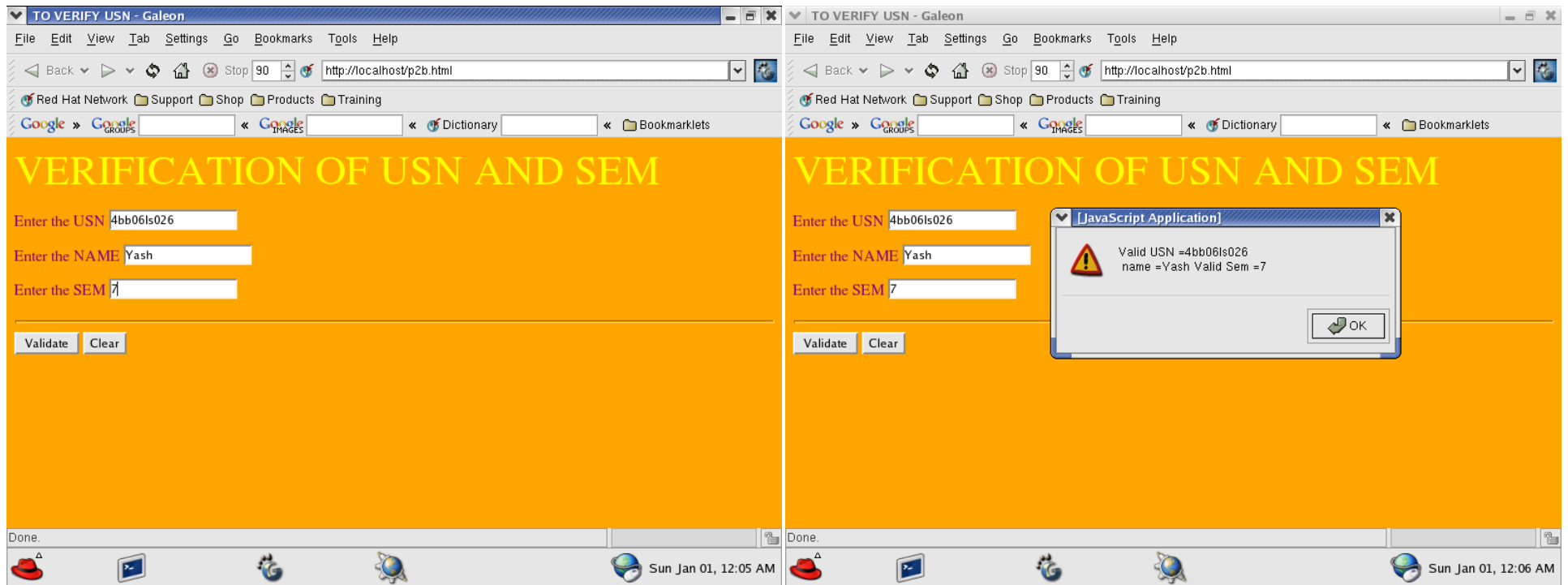
**File name = p2b.html path= cd /var/www/html**

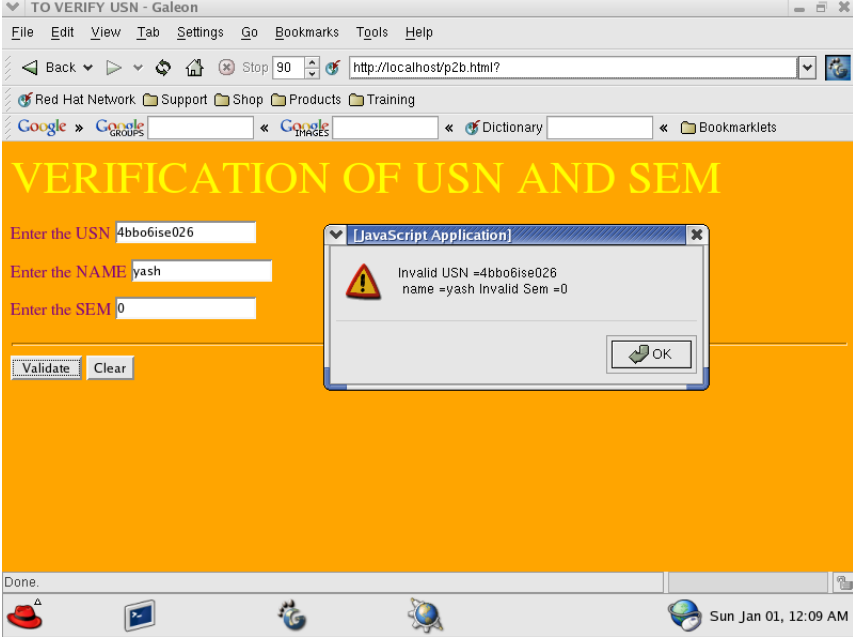
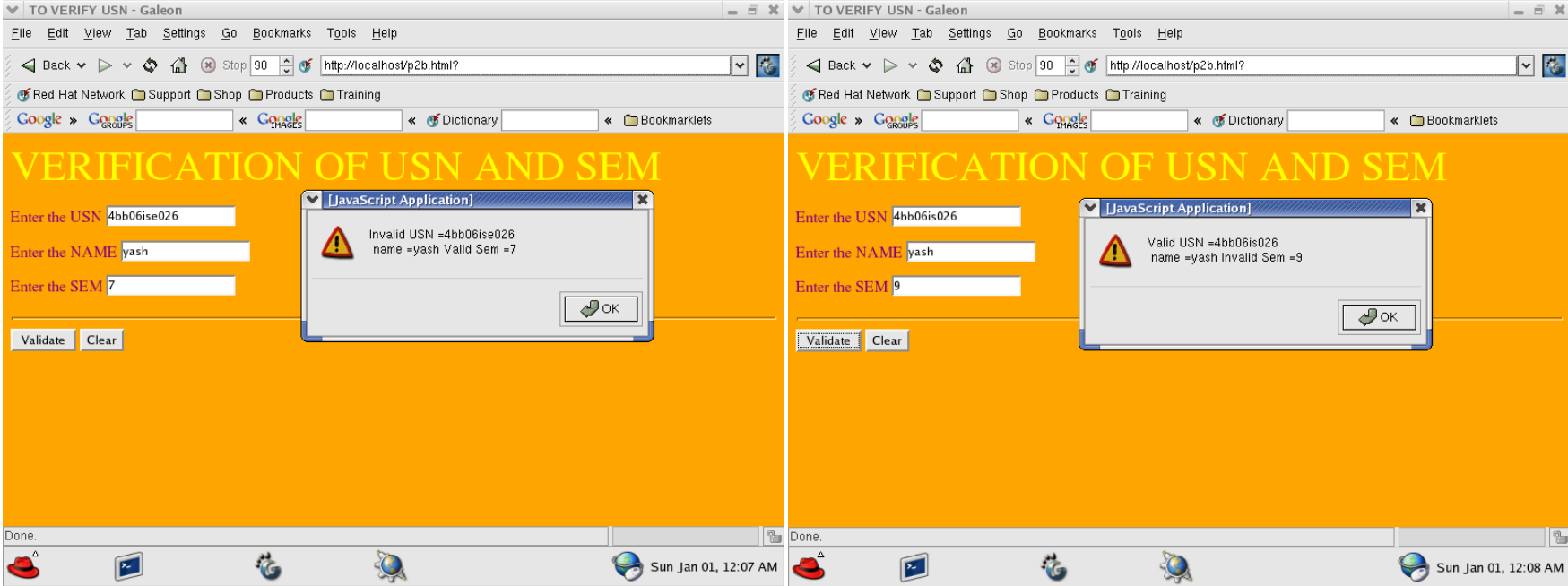
```
<?xml version="1.0" encoding="utf-8"?>
<html xmlns="http://www.w3.org/1999/xhtml">
<head>
<title>TO VERIFY USN</title>
<script type="text/javascript">
function valid_usn()
{
    var str=document.getElementById("usn");
    var str1=document.getElementById("name");
    var str2=document.getElementById("sem");
    var result=str.value.search(/^[1-4]{1}[A-Za-z]{2}[0-9]{2}[A-Za-z]{2}[0-9]{3}$/);
    var result1=str2.value.search(/^[1-8]{1}$/);
    if(result==0&&result1==0)
        alert("Valid USN\t="+str.value+"\n name\t="+str1.value+"
Valid Sem\t="+str2.value);
    else if(result!=0&&result1==0)
        alert("Invalid USN\t="+str.value+"\n
name\t="+str1.value+" Valid Sem\t="+str2.value);
    else if(result==0&&result1!=0)
        alert("Valid USN\t="+str.value+"\n name\t="+str1.value+"
Invalid Sem\t="+str2.value);
    else
        alert("Invalid USN\t="+str.value+"\n
name\t="+str1.value+" Invalid Sem\t="+str2.value);
}
</script> </head> <body bgcolor="orange">
<font size="8" color="yellow">VERIFICATION OF USN AND SEM</font>
<form>
<p> <font size="4" color="purple">Enter the USN</font>
<input type="text" id="usn"/></p>
<p> <font size="4" color="purple">Enter the NAME</font>
<input type="text" id="name"/></p>
<p> <font size="4" color="purple">Enter the SEM</font>
<input type="text" id="sem"/> </p>
<hr/>
<input type="submit" value="Validate" onclick="valid_usn();"/>
<input type="reset" value="Clear"/>
</form> </body> </html>
```

USN != usn

(Case sensitive)

Output :






**Question:** 3. a) Develop and demonstrate, using Javascript script, a XHTML document that contains three short paragraphs of text, stacked on top of each other, with only enough of each showing so that the mouse cursor can be placed over some part of them. When the cursor is placed over the exposed part of any paragraph, it should rise to the top to become completely visible.

**File name = p3a.html path= cd /var/www/html**

```
<?xml version="1.0" encoding="utf-8"?>
<html xmlns="http://www.w3.org/1999/xhtml">
<head>
<title>STACKING ELEMENTS</title>
<link rel="stylesheet" type="text/css" href="stack.css"/>
<script type="text/javascript">
var toplayer="layer3";
function stack(totop)
{
    var oldtop=document.getElementById(toplayer).style;
    var newtop=document.getElementById(totop).style;
    oldtop.zIndex="0";
    newtop.zIndex="10";
    toplayer=document.getElementById(totop).id;
}
</script>
</head>
<body bgcolor="cyan" text="blue">
<marquee><font size="4" color="red">STACKING
ELEMENTS</font></marquee>
<hr/>
<div class="ls1" id="layer1" onmouseover="stack('layer1')">
HTTP is a web commiunication protocol. HTTP stands for Hyper
Text Transfer Protocol.
</div>
<div class="ls2" id="layer2" onmouseover="stack('layer2')">
URL is Uniform Resource Locator which is used to identify the
different kinds of documents on the internet.
</div>
<div class="ls3" id="layer3" onmouseover="stack('layer3')">
MIME is the Multipurpose Internet Mail Extension which is used
to identify the format of the documents.
</div>
</body>
</html>
```



I ! i  
in  
zIndex

**File name = stack.css path= cd /var/www/html**

```
.ls1
{
    border:solid thin black;
    padding:25px;
    width:350px;
    background-color:purple;
    position:absolute;
    top:100px;
    left:200px;
}
.ls2
{
    border:solid thin black;
    padding:25px;
    width:350px;
    background-color:red;
    position:absolute;
    top:150px;
    left:250px;
}
.ls3
{
    border:solid thin black;
    padding:25px;
    width:350px;
    background-color:orange;
    position:absolute;
    top:200px;
    left:300px;
}
```

Output:



**Question:** 3b) Modify the above document so that when a paragraph is moved from the top stacking position, it returns to its original position rather than to the bottom.

**File name = p3b.html path= cd /var/www/html**

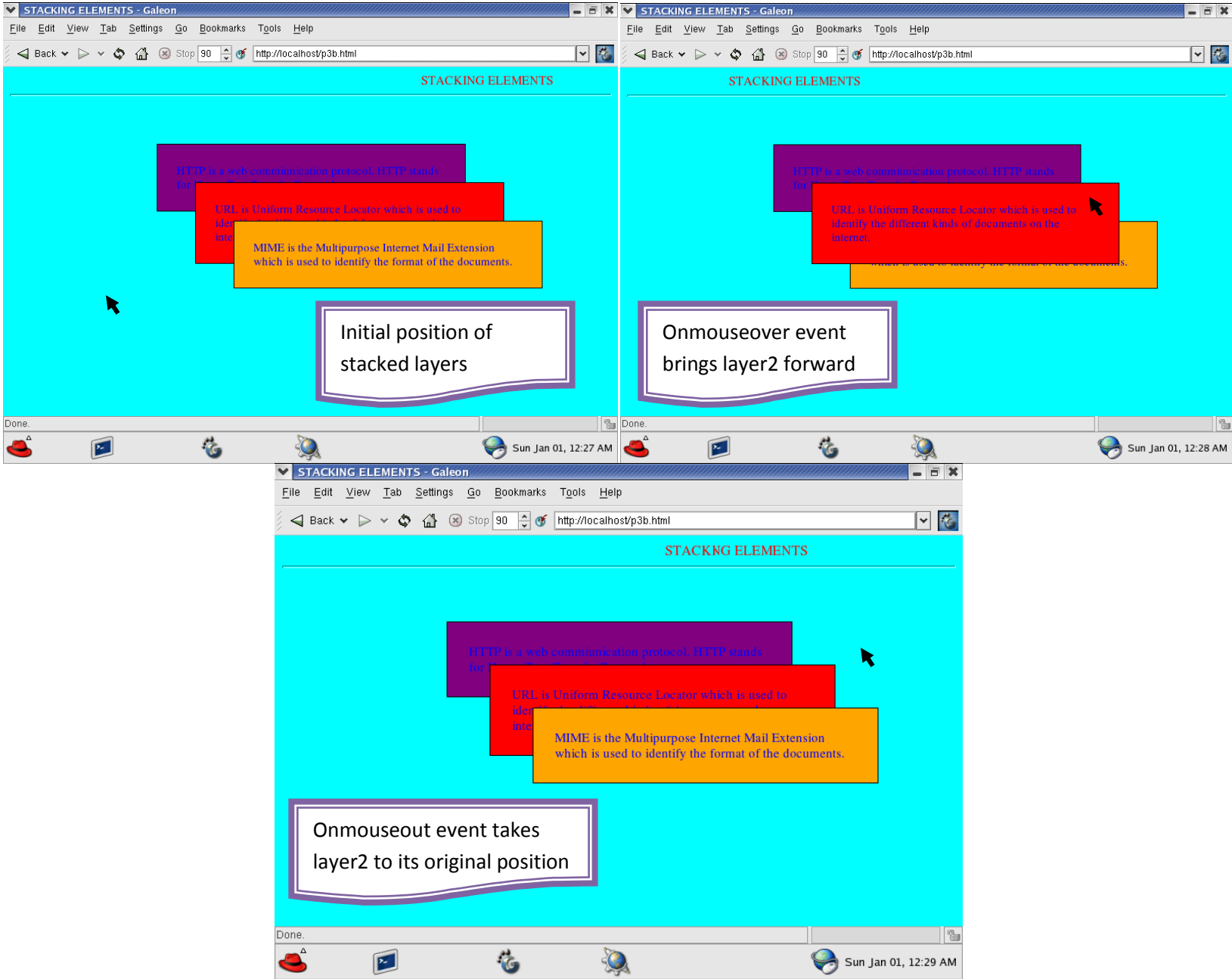
```
<?xml version="1.0" encoding="utf-8"?>
<html xmlns="http://www.w3.org/1999/xhtml">
<head>
<title>STACKING ELEMENTS</title>
<link rel="stylesheet" type="text/css" href="stack.css"/>
<script type="text/javascript">
var toplayer="layer3";
function stack(totop,pos)
{
    var newtop=document.getElementById(totop).style;
    original=pos;
    newtop.zIndex="10";
    toplayer=document.getElementById(totop).id;
}
function moveback()
{
    document.getElementById(toplayer).style.zIndex=original;
}
</script>
</head>
<body bgcolor="cyan" text="blue">
<marquee><font size="4" color="red">STACKING
ELEMENTS</font></marquee>
<hr/>
<div class="ls1" id="layer1" onmouseover="stack('layer1','1')
onmouseout="moveback()">
HTTP is a web communication protocol. HTTP stands for Hyper
Text Transfer Protocol.
</div>
<div class="ls2" id="layer2" onmouseover="stack('layer2','2')
onmouseout="moveback()">
URL is Uniform Resource Locator which is used to identify the
different kinds of documents on the internet.
</div>
<div class="ls3" id="layer3" onmouseover="stack('layer3','3')
onmouseout="moveback()">
MIME is the Multipurpose Internet Mail Extension which is used
to identify the format of the documents.
</div>
</body>
</html>
```



**File name = stack.css path= cd /var/www/html**

```
.ls1
{
    border:solid thin black;
    padding:25px;
    width:350px;
    background-color:purple;
    position:absolute;
    top:100px;
    left:200px;
}
.ls2
{
    border:solid thin black;
    padding:25px;
    width:350px;
    background-color:red;
    position:absolute;
    top:150px;
    left:250px;
}
.ls3
{
    border:solid thin black;
    padding:25px;
    width:350px;
    background-color:orange;
    position:absolute;
    top:200px;
    left:300px;
}
```

Output:



**Question:** 4. a) Design an XML document to store information about a student in an engineering college affiliated to VTU. The information must include USN, Name, Name of the College, Branch, Year of Joining, and e-mail id. Make up sample data for 3 students. Create a CSS style sheet and use it to display the document.

**File name = p4a.xml path= cd /var/www/html**

```
<?xml version="1.0" encoding="utf-8"?>
<!DOCTYPE student[
<!ELEMENT student-information (ad+)>
<!ELEMENT ad (usn,name,college,branch,year,email)+>
<!ELEMENT usn (#PCDATA)>
<!ELEMENT name (#PCDATA)>
<!ELEMENT college (#PCDATA)>
<!ELEMENT branch (#PCDATA)>
<!ELEMENT year (#PCDATA)>
<!ELEMENT email (#PCDATA)>
<!ELEMENT label (email|year|branch|college|name|usn) *>
<!ELEMENT h1 (#PCDATA)>
<!ELEMENT h2 (#PCDATA)>
]>
<?xml-stylesheet type="text/css" href="p4a.css"?>
<student-information>
<h1>Student 1</h1>
<ad><label>USN: <usn>4BB12CS006</usn></label>
<label>NAME: <name>Darshan KH</name></label>
<label>COLLEGE: <college>BCE</college></label>
<label>BRANCH: <branch>CSE</branch></label>
<label>YEAR: <year>2012</year></label>
<label>EMAIL: <email>darshankhs99@gmail.com</email></label>
</ad>
<h1>Student 2</h1>
<ad><label>USN: <usn>4BB10CS006</usn></label>
<label>NAME: <name>Namitha</name></label>
<label>COLLEGE: <college>BCE</college></label>
<label>BRANCH: <branch>ISE</branch></label>
<label>YEAR: <year>2010</year></label>
<label>EMAIL: <email>namitha@gmail.com</email></label>
</ad>
<h1>Student 3</h1>
<ad><label>USN: <usn>4BB10CS019</usn></label>
<label>NAME: <name>Namratha</name></label>
<label>COLLEGE: <college>BCE</college></label>
<label>BRANCH: <branch>CSE</branch></label>
<label>YEAR: <year>2010</year></label>
<label>EMAIL: <email>namratha@gmail.com</email></label>
</ad>
</student-information>
```

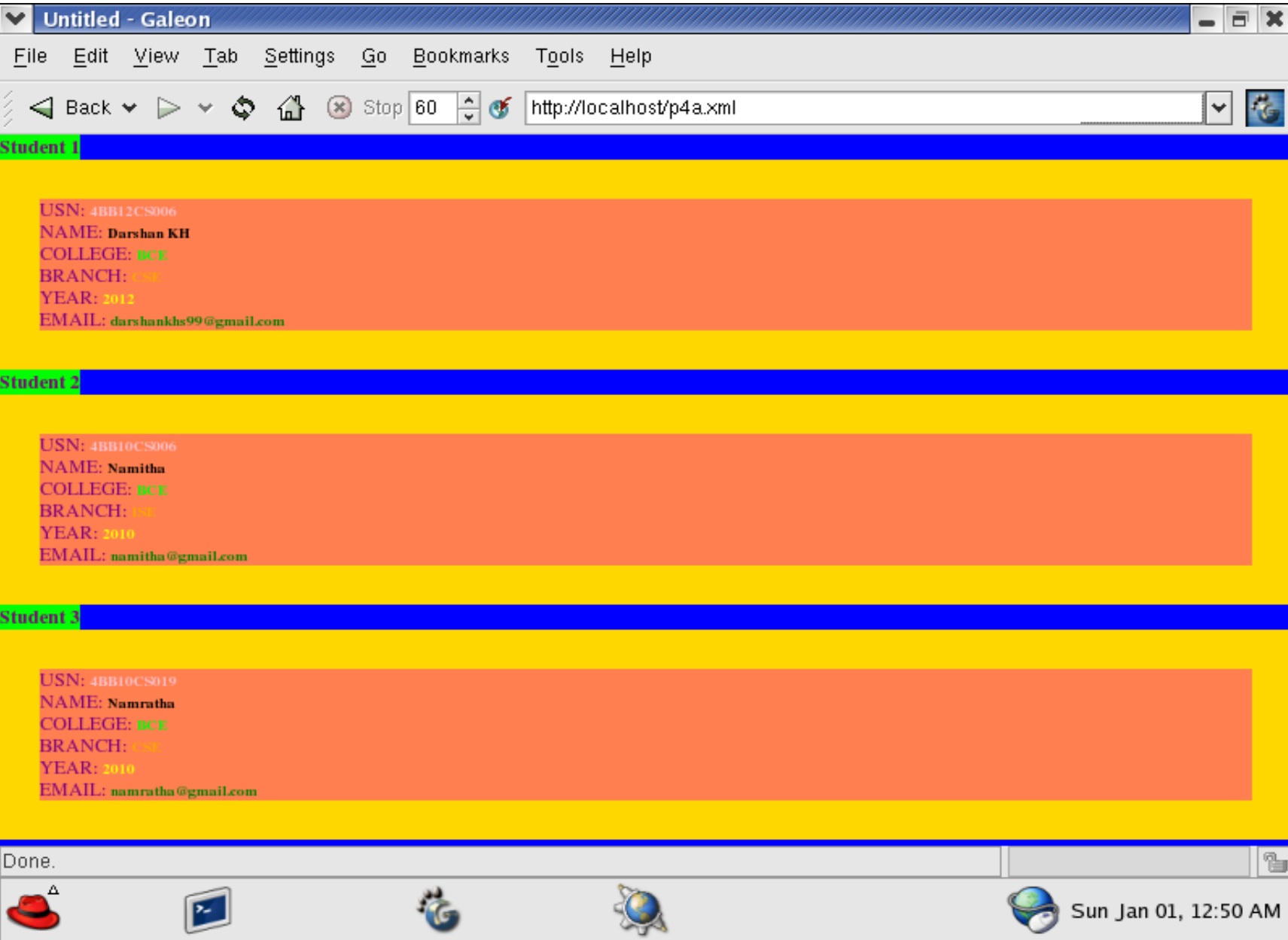
**File name = p4a.css path= cd /var/www/html**

```

student-information      college
{                        {
background-color:blue;   color:lime;
}                        font-weight:700;
                        font-size:15px;
ad                       }
{
    display:block;      branch
    font-size:20px;     {
    font-family:"times new   color:orange;
roman";                 font-size:15px;
    color:blue;          font-weight:700;
    background-color:gold; }
    padding:25px;
    color:red;           year
}                        {
                        color:yellow;
label                   font-size:15px;
{                        font-weight:700;
    display:block;     }
    font-size:20px;
    font-family:"times   email
new roman";            {
    background-         color:green;
color:coral;           font-size:15px;
    color:purple;       font-weight:700;
}                       }
}                       h1
                        {
usn                     color:purple;
{                        font-weight:900;
    font-size:15px;     font-size:20px;
    color:pink;         background-color:lime;
    font-weight:bold;  font-weight:200px;
}                       }
}                       h2
name                    {
{                        color:violet;
    color:black;        font-size:20px;
    font-size:15px;     background-
font-weight:700;       color:yellow;
}                       font-weight:700px;
}                       }

```

Output:



**Question:** 4b) Create an XSLT style sheet for one student element of the above document and use it to create a display of that element.

**File name = p4b.xml path= cd /var/www/html**

```
<?xml version="1.0" encoding="utf-8"?>
<?xml-stylesheet type="text/xsl" href="p4b.xsl"?>
<students>
<student>
<num>Student1</num>
<usn>4BB12IS001</usn>
<name>Nigam Jain</name>
<college>BCE</college>
<branch>ISE</branch>
<year>4th</year>
<email>nigam.jain@outlook.com</email>
</student>
</students>
```

**File name = p4b.xsl path= cd /var/www/html**

```
<?xml version="1.0" encoding="utf-8"?>
<xsl:stylesheet xmlns:xsl="http://www.w3.org/1999/XSL/Transform"
xmlns="http://www.w3.org/1999/xhtml">
<xsl:template match="students">
<h1>Student Information</h1>
<xsl:for-each select="student">
<span style="font-style:italic;color:blue;font-
weight:900;padding:20;background-color:cyan;">
<xsl:value-of select="num"/></span><br/>

<span style="font-style:italic;color:orange;font-
weight:200;">usn</span>
<span style="font-style:italic;color:violet;"><xsl:value-of
select="usn"/></span><br/>

<span style="font-style:bold;color:red;font-
weight:750;">name</span>
<xsl:value-of select="name"/><br/>

<span style="font-style:italic;color:green;font-
weight:250;">college</span>
<xsl:value-of select="college"/><br/>

<span style="font-style:italic;color:coral;font-
weight:300;">branch</span>
<xsl:value-of select="branch"/><br/>
```

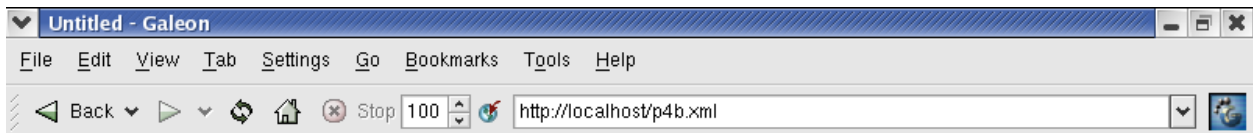


UPPER CASE

```
<span style="font-style:bold;color:purple;font-weight:240;">year</span>  
<xsl:value-of select="year"/><br/>
```

```
<span style="font-style:italic;color:red;font-weight:350;">email</span>  
<xsl:value-of select="email"/><br/>  
</xsl:for-each>  
</xsl:template>  
</xsl:stylesheet>
```

### Output:



## Student Information

### **Student1**

*usn*4BB12IS001

*name*Nigam Jain

*college*BCE

*branch*ISE

*year*4th

*email*nigam.jain@outlook.com

Add any number of student details in p4b.xml, it works as **for-each** is used in p4b.xsl, try it.



**Question:** 5. a) Write a Perl program to display various Server Information like Server Name, Server Software, Server protocol, CGI Revision etc.

**File name = p5a.cgi path= cd /var/www/cgi-bin**

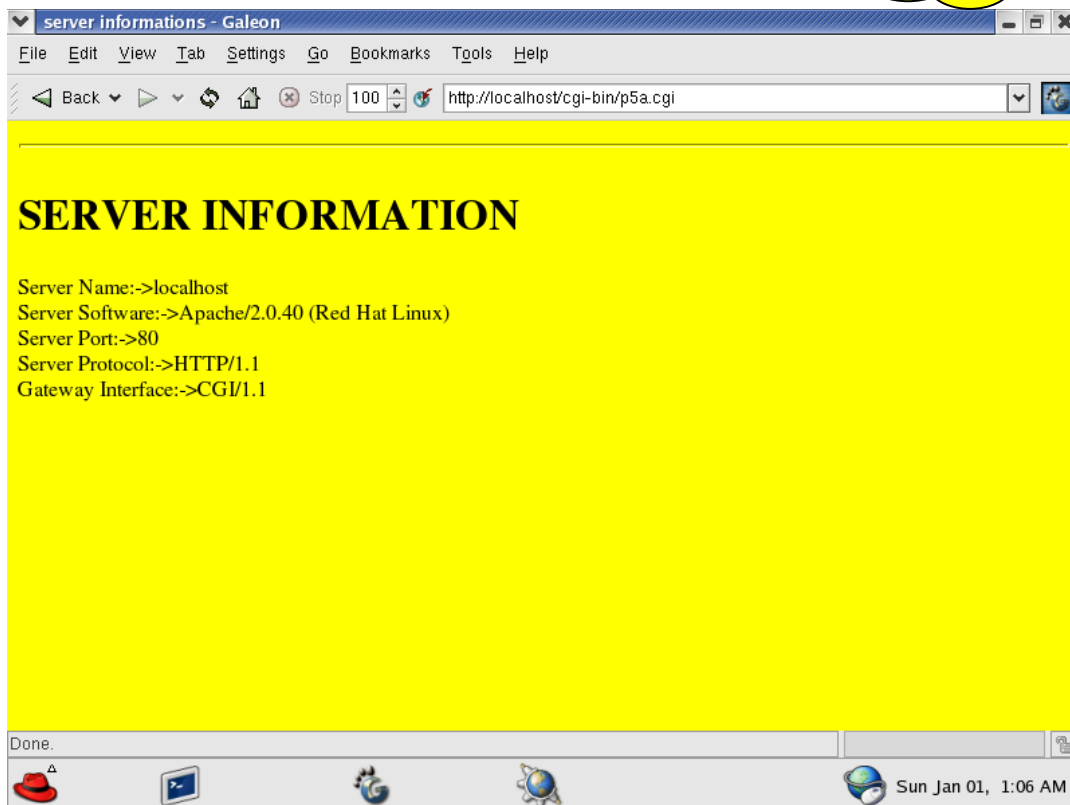
```
#!/usr/bin/perl
print "content-type:text/html", "\n\n";
print "<html>";
print "<head>";
print "<title> server informations</title>";
print "</head>";
print "<body bgcolor=yellow>";
print "<hr/>";
print "<h1>SERVER INFORMATION</h1>";
print "Server Name:->", $ENV{'SERVER_NAME'}, "<br/>";
print "Server Software:->", $ENV{'SERVER_SOFTWARE'}, "<br/>";
print "Server Port:->", $ENV{'SERVER_PORT'}, "<br/>";
print "Server Protocol:->", $ENV{'SERVER_PROTOCOL'}, "<br/>";
print "Gateway Interface:->", $ENV{'GATEWAY_INTERFACE'}, "<br/>";
print "</body>";
print "</html>";
```

**Output:**

*Before opening any Cgi programs in Browser to see output change its permissions, chmod +777 filename.cgi here  
chmod +777 p5a.cgi in terminal.*

*To Compile cgi programs use cmd: perl -c filename.cgi  
Ex: perl -c p5a.cgi*

UPPER CASE





**Question:** 5b) Write a Perl program to accept UNIX command from a HTML form and to display the output of the command executed.

**File name = p5b.html path= cd /var/www/html**

```
<head>
<title>unix command </title>
</head>
<body bgcolor="grey">
<center><h1>Unix Command Execution</h1></center>
<hr/>
<form action="http://localhost/cgi-bin/p5b.cgi" method="POST">
<p>
<b>Enter a Unix Command</b>
<input type="text" name="t1"/>
</p>
<input type="submit" value="Execute"/>
<input type="reset" value="Clear"/>
</form>
</body>
</html>
```

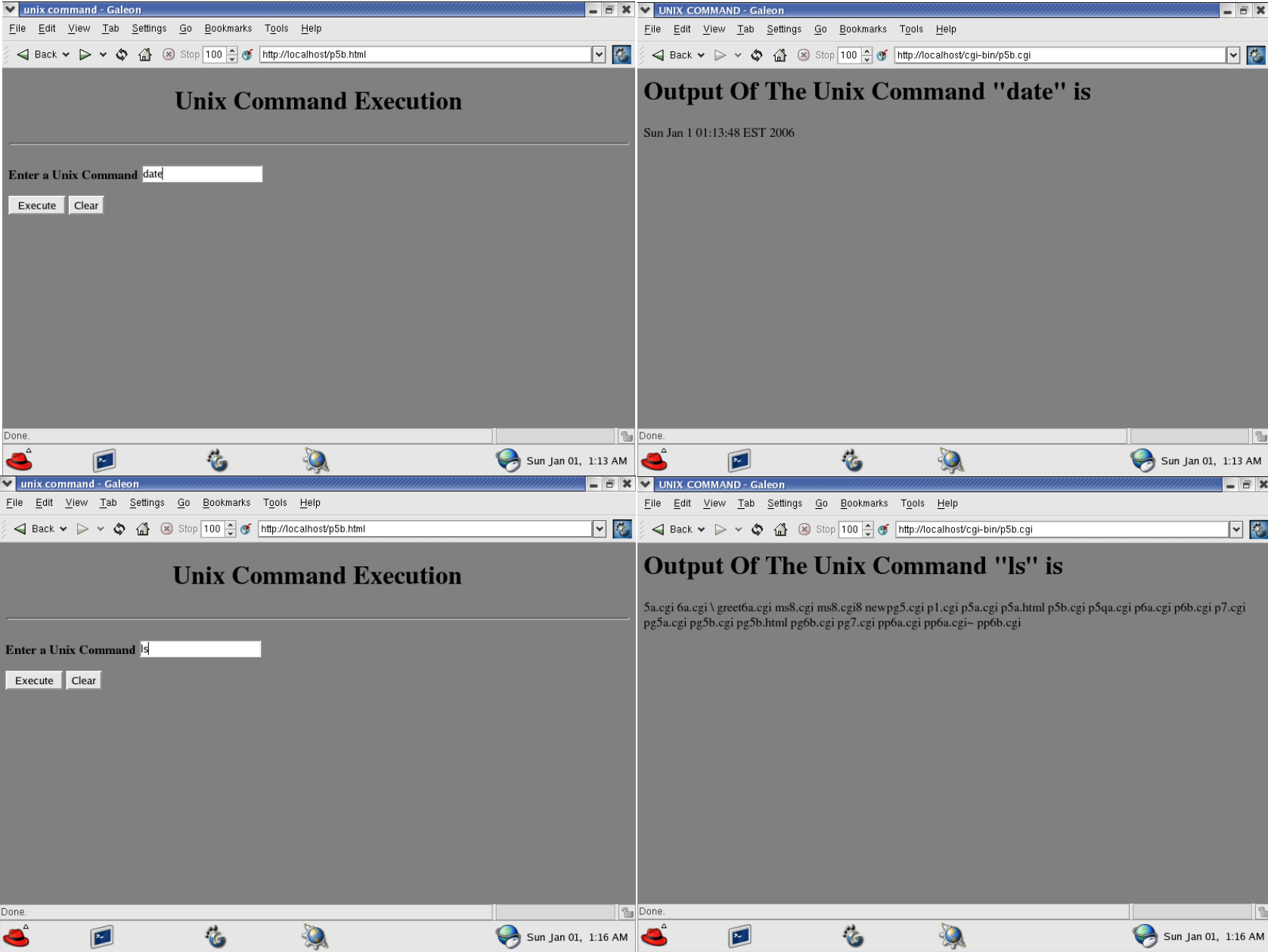
**File name = p5b.cgi path= cd /var/www/cgi-bin**

```
#!/usr/bin/perl
use CGI "standard";
print "content-type:text/html", "\n\n";
print "<html>";
print "<head>";
print "<title>UNIX COMMAND</title>";
print "</body>";
print "<body bgcolor=grey>";
$c=param('t1');
print "<h1>Output Of The Unix Command \"$c\" is</h1>";
if($c)
{
    $z="/bin/$c||/usr/bin/$c";
    print "$z";
}
print "</body>";
print "</html>";
```

It's ` (back quote)

Not ' (quote)

Output:



**Question:** 6. a) Write a Perl program to accept the User Name and display a greeting message randomly chosen from a list of 4 greeting messages.

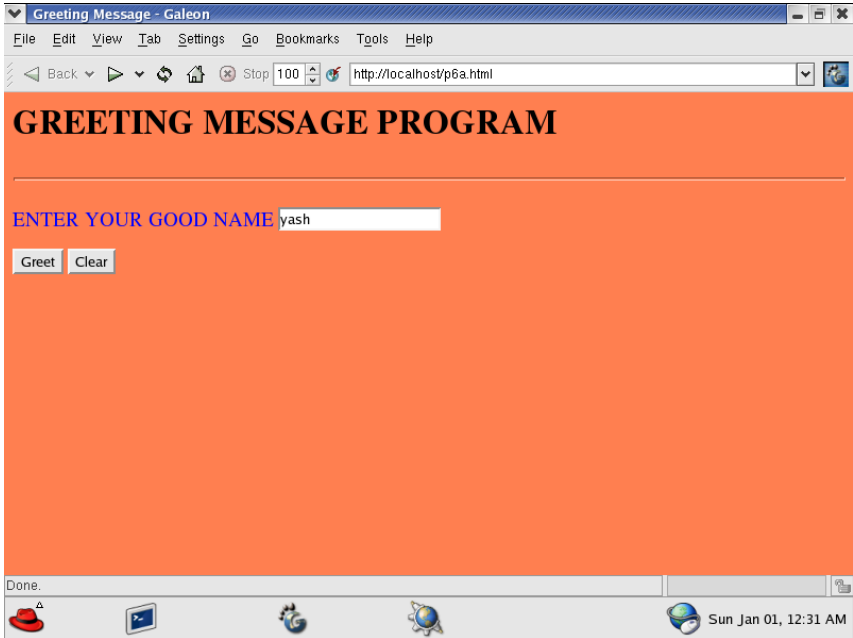
**File name = p6a.html path= cd /var/www/html**

```
<html>
<head>
<title>Greeting Message</title>
</head>
<body bgcolor="CORAL">
<h1>GREETING MESSAGE PROGRAM</h1>
<hr/>
<form action="http://localhost/cgi-bin/pp6a.cgi" method="GET">
<p><font size="4" color="blue">ENTER YOUR GOOD NAME</font>
<input type="text" name="t1"/>
</p>
<input type="submit" value="Greet"/>
<input type="reset" value="Clear"/>
</form>
</body>
</html>
```

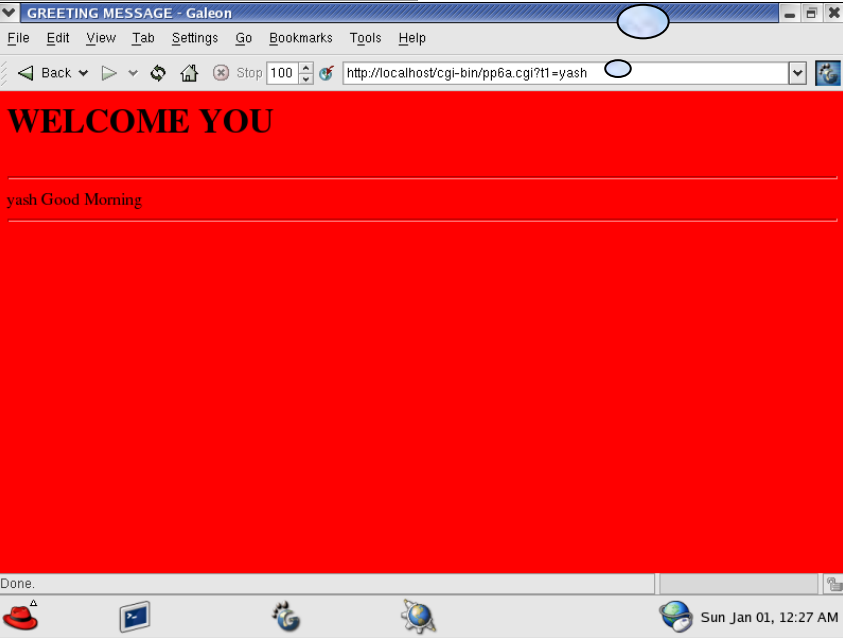
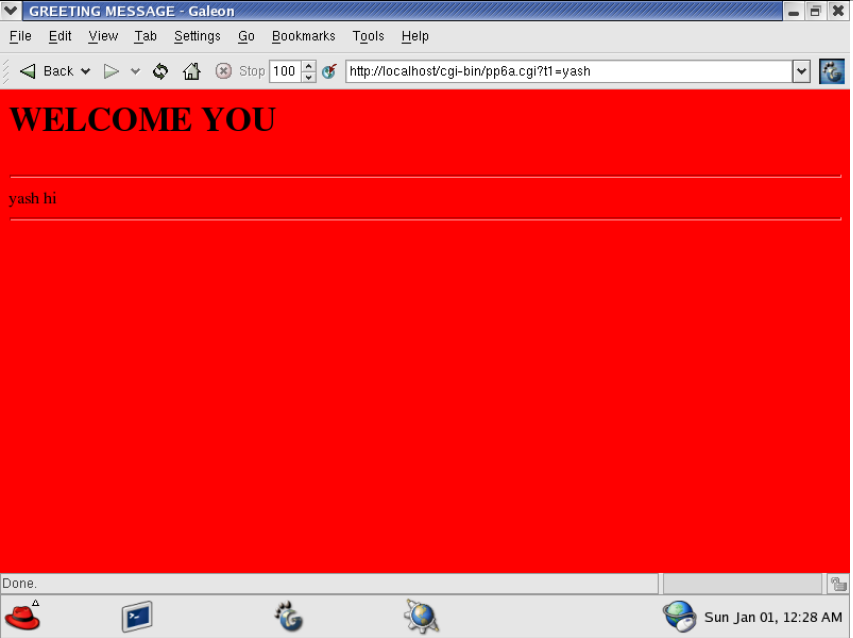
**File name = pp6a.cgi path= cd /var/www/cgi-bin**

```
#!/usr/bin/perl
use CGI":standard";
print"content-type:text/html","\n\n";
print"<html>";
print"<html>";
print"<head>";
print"<title>GREETING MESSAGE</title>";
print"</head>";
print"<body bgcolor=red>";
print"<h1>WELCOME YOU</h1>";
print"<hr/>";
$msg=param('t1');
if($msg)
{
    print"$msg";
    @msg=(" hello"," Good Morning"," hi"," bye");
    print$msg [int rand scalar @msg];
}
print"<hr/>";
print"<body>";
print"</html>";
```

Output:



Method here is GET, change it to POST in <form method=" " >, notice change in URL



**Question:** 6b) Write a Perl program to keep track of the number of visitors visiting the web page and to display this count of visitors, with proper headings.

**File name = a.txt path= cd /usr/bin**

**Initially type 0 ← "zero" :wq(save and quit)**

**File name = p6b.cgi path= cd /var/www/cgi-bin**

```
#!/usr/bin/perl
use CGI":standard";
print"content-type:text/html","\n\n";
print"<html>";
print"<head>";
print"<title>VISITORS</title>";
print"</head>";
print"<body bgcolor=amber>";
print"<h1><center>No.of times the visitor has visited this
page</center></h1>";
print"<hr/>";
$c="/usr/bin/a.txt";
if (open (FILE, "<", $c)) ← Read Mode
{
    $cnt=<FILE>;
    close (FILE);
    if (open (FILE, ">", $c)) ← Write Mode
    {
        print"<h2><center>The No.of Times
Visited</center></h2>";
        $cnt++;
        print FILE $cnt;
        print"<h1><center>$cnt</center></h1>";
        close (FILE);
    }
    else
    {
        print"writemode ERROR";
    }
}
else
{
    print"readmode ERROR";
}
print"</body>";
print"</html>";
```

```
root@localhost:/usr/bin
File Edit View Terminal Go Help
root@localhost:/var/www/cgi-bin root@localhost:/var/www/html root@localhost:/usr/bin
[root@localhost root]# cd /usr/bin
[root@localhost bin]# vi a.txt
\[root@localhost bin]# chmod +777 a.txt
[root@localhost bin]#
```

Output:

The screenshot displays two windows side-by-side. On the left is a Galeon web browser window titled 'VISITORS - Galeon' showing a green web page. The page content includes the heading 'No.of times the visitor has visited this page' and a section titled 'The No.of Times Visited' with the number '3' centered below it. On the right is a terminal window titled 'root@localhost:/usr/bin'. The terminal shows the command sequence: `cd /usr/bin`, `vi a.txt`, and `chmod +777 a.txt`. The current content of the file `a.txt` is shown as `3`. A green callout box with a pointer to the `3` in the terminal contains the text: 'Contents of a.txt after three visits, cd /usr/bin vi a.txt'. The terminal status bar at the bottom shows '-- INSERT --' and '2,1 All'.

**Question:** 7. Write a Perl program to display a digital clock which displays the current time of the server.

**File name = p7.cgi path= cd /var/www/cgi-bin**

```
#!/usr/bin/perl
use CGI":standard";
print"content-type:text/html", "\n\n";
$time=`date +%H:%M:%S`;
print <<here;
<html>
<head>
<title>DIGITAL CLOCK</title>
<META HTTP-EQUIV="refresh" content="1.0";"http://localhost/cgi-
bin/p7.cgi"/>
</head>
<body bgcolor="orange">
<h1><center>DIGITAL CLOCK</center></h1>
<hr/>
<h1>$time</h1>
</body>
</html>
here
```

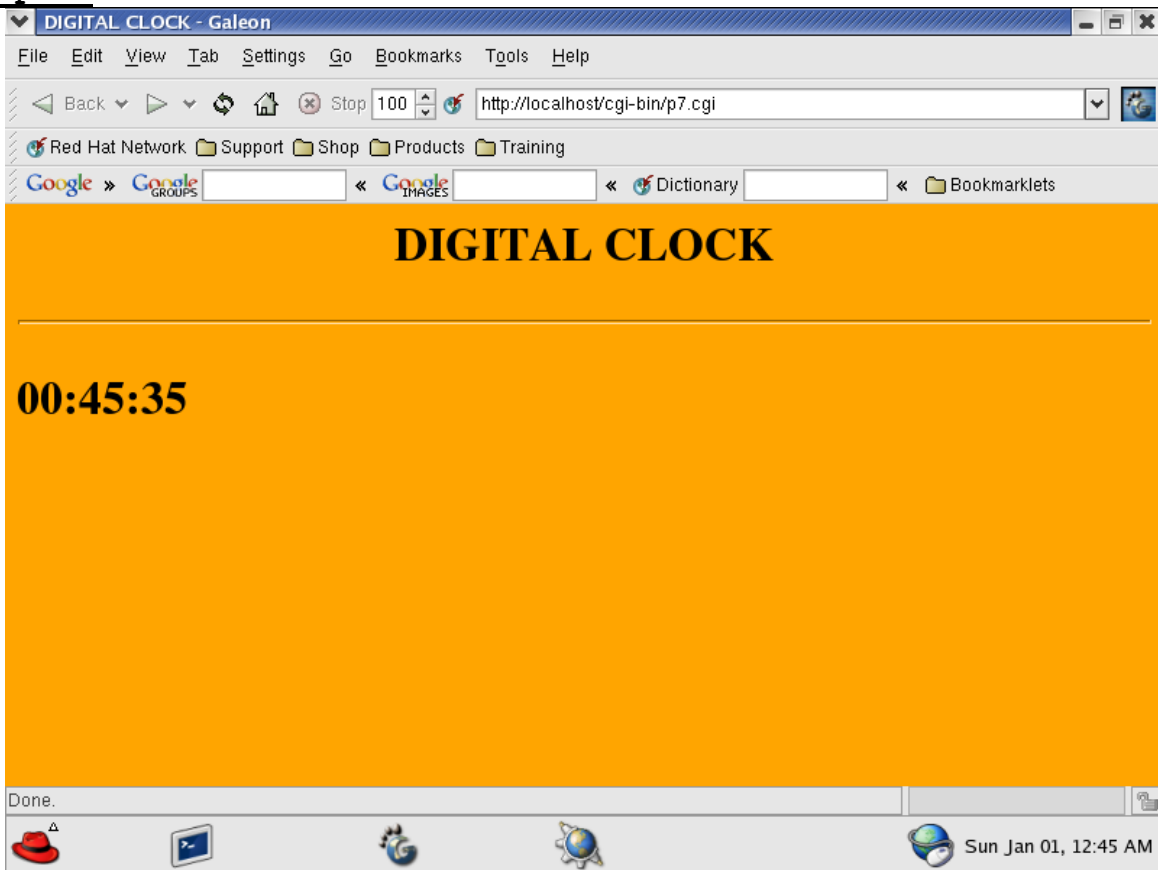
Give Space b/w  
date & +

It's (back quote)

Not ' (quote)

Refresh intervals  
in sec, try 5.0

**Output:**



**Question:** 8. Write a Perl program to insert name and age information entered by the user into a table created using MySQL and to display the current contents of this table.

**File name = p8.html path= cd /var/www/html**

```
<html>
<head>
<title> Student Information </title>
</head>
<body bgcolor='coral'>
<form action="http://localhost/cgi-bin/ms8.cgi" method="POST">
<center><h1>Student Information</h1></center>
<hr/>
<p>Enter Your Name:
<input type="text" name="t1"/>
</p><hr/>
<p>Enter your Age:
<input type="text" name="t2"/>
</p><hr/>
<p>
<input type="submit" value="Store"/>
<input type="reset" value="Clear"/>
</p>
</body>
</html>
```

**File name = ms8.cgi path= cd /var/www/cgi-bin**

```
#!/usr/bin/perl
use CGI ":standard";
use DBI
print "content-type:text/html", "\n\n";
$name=param('t1');
$age=param('t2');
$dbh=DBI -> connect ('DBI:mysql:studentprof','root');
$sth=$dbh -> prepare ('insert into student1 values(?,?)');
$sth->execute($name,$age);
$sth=$dbh -> prepare ('select * from student1');
$sth -> execute();
print<<here;
<html>
<head>
<title> student information</title>
</head>
<body bgcolor="indianred">
<center><marquee><h1>Student Database</h1></marquee>
</center>
<hr/>
<table border="4">
<th>
```



```

<td> Name </td>
<td> Age </td>
</th>
here
while(($n,$a)=$sth -> fetchrow())
{
print "<tr><td></td><td> $n</td><td> $a</td></tr>";
}
$dbh -> disconnect();
print<<now;
</table>
</body>
</html>
now

```

```

root@localhost:~
File Edit View Terminal Go Help
root@localhost:/var/www/cgi-bin root@localhost:/var/www/html root@localhost:~
[root@localhost root]# mysql
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 6 to server version: 3.23.54

Type 'help;' or '\h' for help. Type '\c' to clear the buffer.

mysql> show databases;
+-----+
| Database |
+-----+
| database_name |
| mysql |
| studentinfo |
| test |
+-----+
4 rows in set (0.00 sec)

mysql> create database studentprof;
Query OK, 1 row affected (0.00 sec)

mysql> use studentprof;
Database changed
mysql> create table student1(name varchar(30),age int);
Query OK, 0 rows affected (0.00 sec)

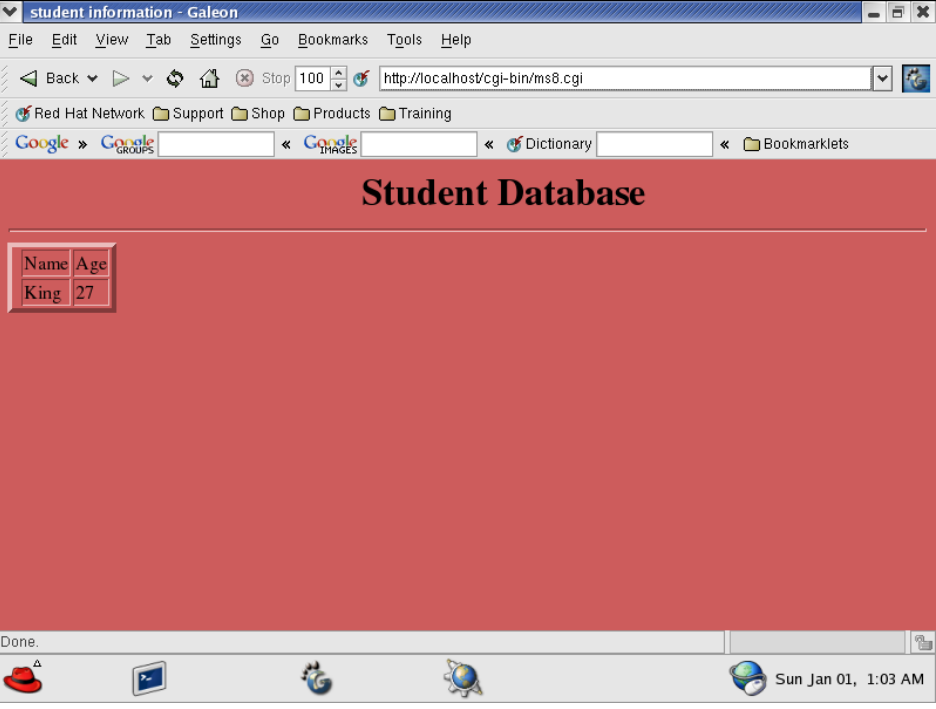
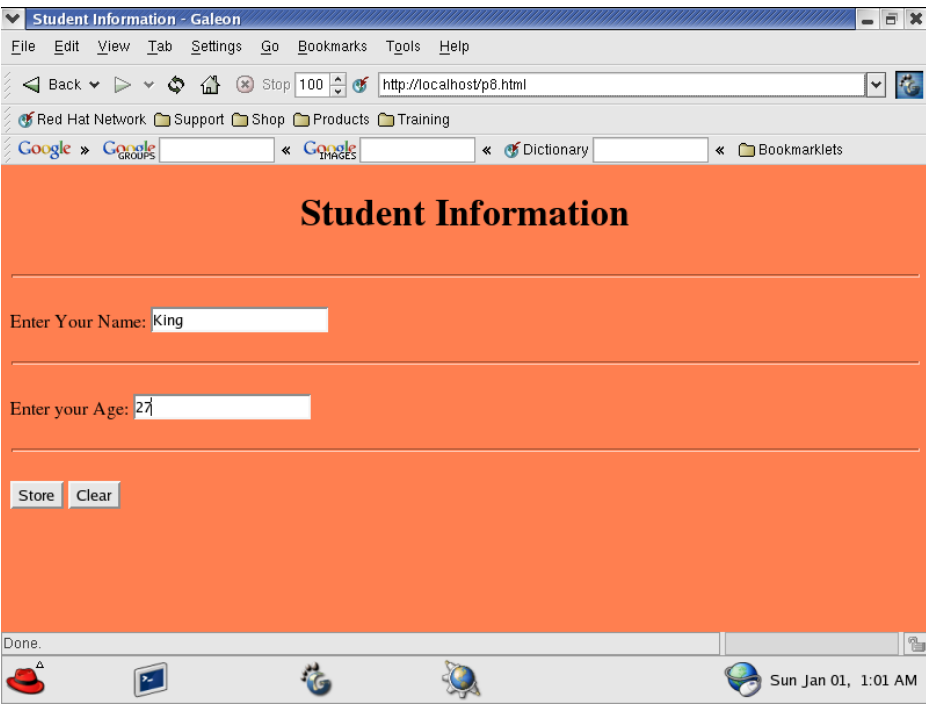
```

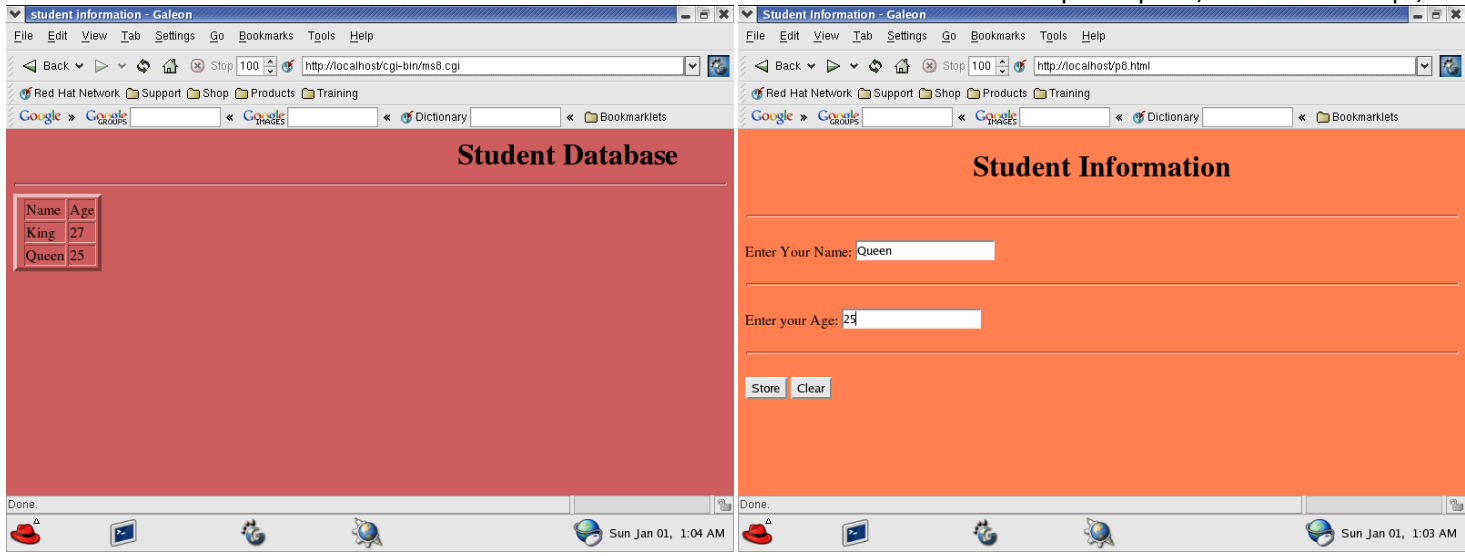
See existing databases before creating yours

Remember **studentprof** you create here, to use in **ms8.cgi** while connect

Change database, and create table. **student1** used in queries refer **ms8.cgi**

**Output :**





```
root@localhost:~  
File Edit View Terminal Go Help  
root@localhost:/var/www/html root@localhost:/var/www/cgi-bin root@localhost:~  
[root@localhost root]# mysql  
Welcome to the MySQL monitor. Commands end with ; or \g.  
Your MySQL connection id is 9 to server version: 3.23.54  
  
Type 'help;' or '\h' for help. Type '\c' to clear the buffer.  
  
mysql> use studentprof  
Reading table information for completion of table and column names  
You can turn off this feature to get a quicker startup with -A  
  
Database changed  
mysql> select * from student1;  
+-----+-----+  
| name | age |  
+-----+-----+  
| King | 27 |  
| Queen | 25 |  
+-----+-----+  
2 rows in set (0.00 sec)  
  
mysql> exit  
Bye  
[root@localhost root]#
```

Contents of table student1 after inserting Records

**Question:** 9. Write a PHP program to store current date-time in a COOKIE and display the 'Last visited on' date-time on the web page upon reopening of the same page.

**File name = p9.php path= cd /var/www/html/php**

```
<?php
$exp=20;
$time=$exp+time();
setcookie('V',date("g:i::d/m/y"),$time);
?>
<html>
<head>
<title>Cookie</title>
</head>
<body bgcolor="silver">
<center><h1>Cookie has been created</h1></center>
<h2>OPEN OTHER PHP(p9a.php) with in <? echo "$exp";?>sec TO SEE
IT'S CONTENTS</h2>
<hr/>
</body>
</html>
```

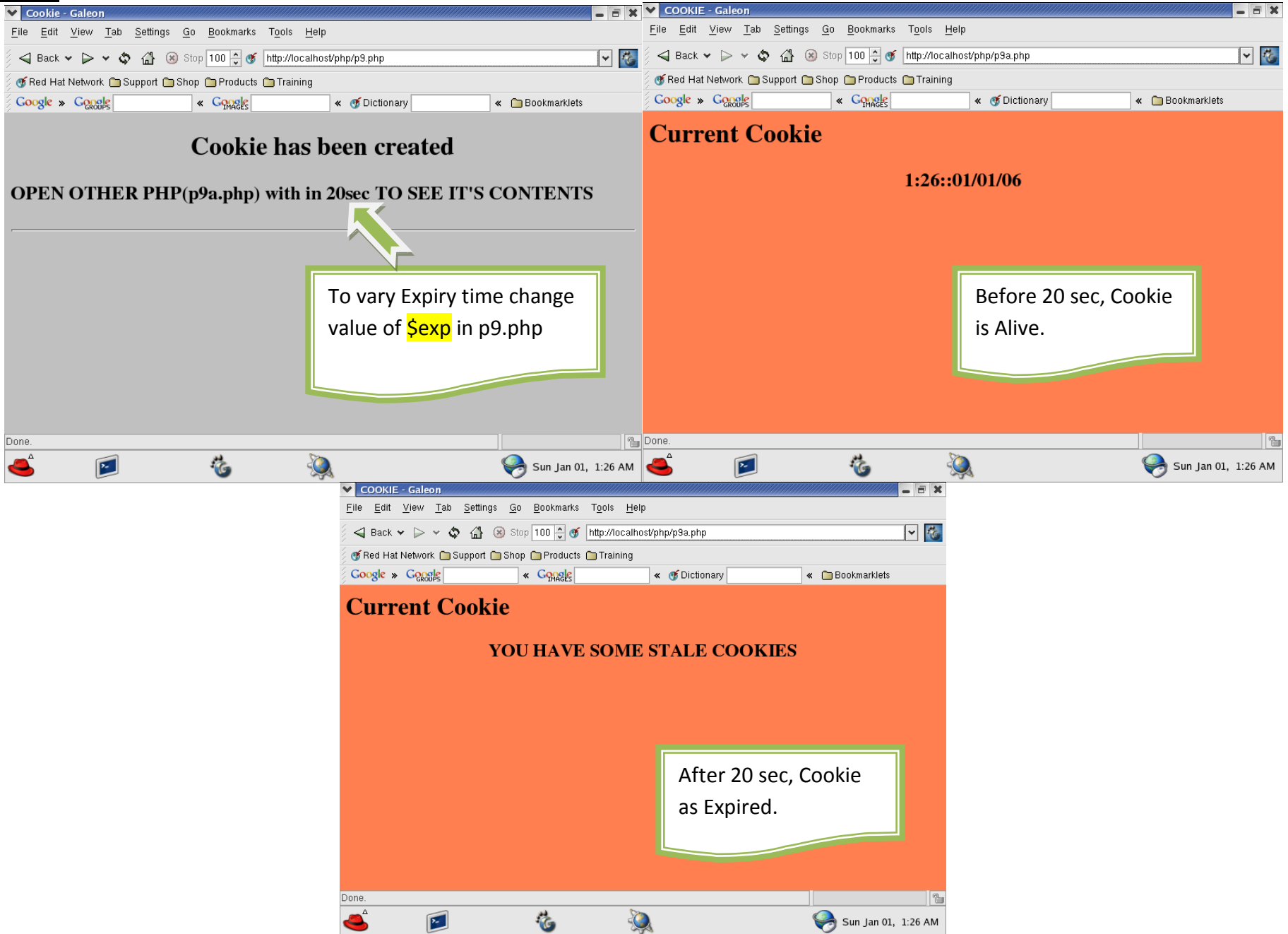
Directory php may not be present by default, so create one by typing following in terminal.

- cd /var/www/html
- mkdir php
- chmod +777 php
- cd php

**File name = p9a.php path= cd /var/www/html/php**

```
<?php
if(isset($_COOKIE['V']))
{
    $visit=$_COOKIE['V'];
    $f=1;
}else
$f=0;
?>
<html>
<head><title>COOKIE</title></head>
<body bgcolor="coral">
<h1>Current Cookie</h1>
<h2><center><? if($f) echo "$visit"; else echo "YOU HAVE SOME
STALE COOKIES";?><center><h2>
</body>
</html>
```

**Output :**

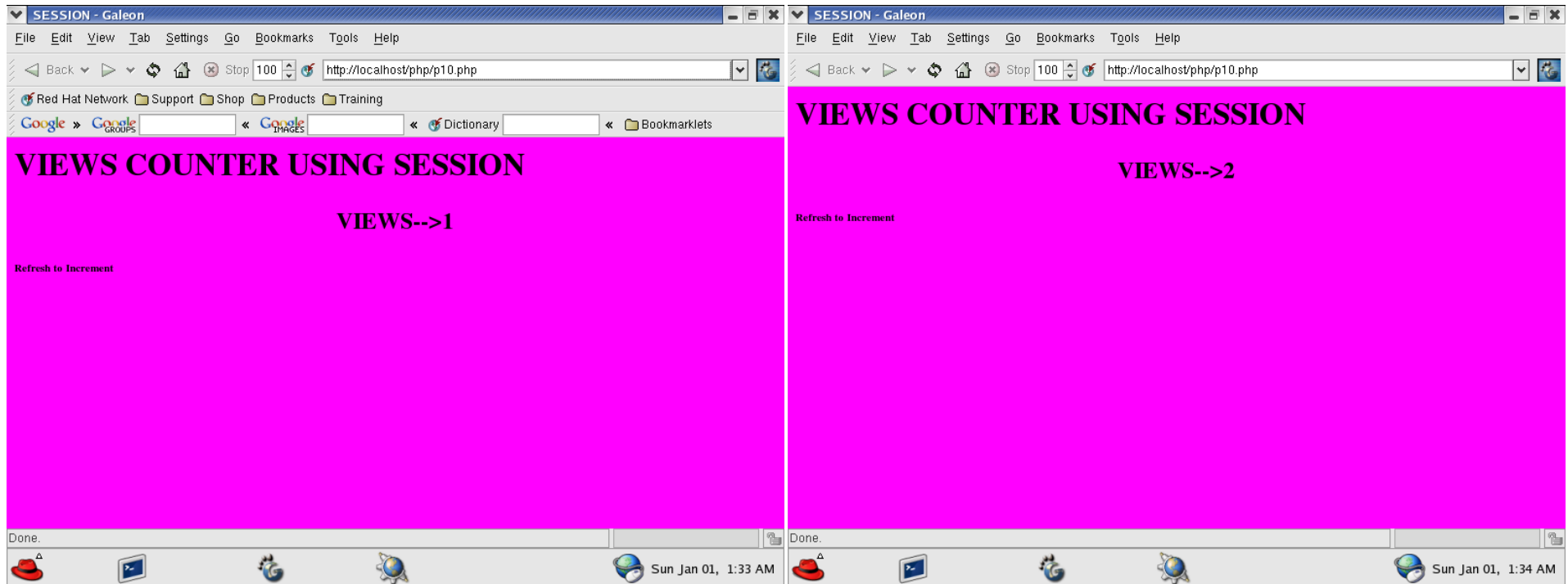


**Question:** 10. Write a PHP program to store page views count in SESSION, to increment the count on each refresh, and to show the count on web page.

**File name = p10.php path= cd /var/www/html/php**

```
<?php
SESSION_START();
if(isset($_SESSION[' ']))
$_SESSION[' ']=$_SESSION[' ']+1;
else
$_SESSION[' ']=1;
?>
<html>
<head>
<title>SESSION</title>
<body bgcolor="magenta">
<h1>VIEWS COUNTER USING SESSION</h1>
<center><h2><?echo"VIEWS-->".$_SESSION[' '];?></h2></center>
<h6>Refresh to Increment</h6>
</body>
</html>
```

Output :



**Question: 11.** Create a XHTML form with Name, Address Line 1, Address Line 2, and E-mail text fields. On submitting, store the values in MySQL table. Retrieve and display the data based on Name.

**File name = p11a.html path= cd /var/www/html**

```
<?xml version="1.0" encoding="utf-8"?>
<html xmlns="http://www.w3.org/1999/xhtml">
<head>
    <title> Person Databases </title>
</head>
<body bgcolor='olive'>
    <center> <h1> Person Details Database </h1> </center>
</hr>
<form action="http://localhost/php/p11a.php" method="POST">
<center>
<table border="5">
</center>
<tr>
<td>Enter your name </td>
<td><input type="text" name='t1' /> </td>
</tr>
<tr>
<td>Enter the address1 </td>
<td><input type="text" name='t2' /> </td>
</tr>
<tr>
<td>Enter the address2 </td>
<td><input type="text" name='t3' /> </td>
</tr>
<tr>
<td>Enter the email </td>
<td><input type="text" name='t4' /> </td>
</tr>
</table>
<hr/>
<input type="submit" value="Store it" />
<input type="reset" value="Clear it"/>
</form><br/><hr/>
<a href="http://localhost/p11b.html">Click here to search record by name</a>
</body>
</html>
```

**File name = p11b.html path= cd /var/www/html**

```
<?xml version="1.0" encoding="utf-8"?>
<html xmlns="http://www.w3.org/1999/xhtml">
<head>
    <title> Database Search </title>
</head>
<body bgcolor='orchid'>
```



```

<h1>Search Database by name</h1>
</hr>
<form action="http://localhost/php/p11b.php" method="POST">
<center>
<table border="5">
</center>
<tr>
<td>Enter name to be searched </td>
<td><input type="text" name='t1' /> </td>
</tr>
</table>
<hr/>
<input type="submit" value="Search"/>
<input type="reset" value="Clear"/>
</form><br/><hr/>
<a href="http://localhost/p11a.html">Click here to insert more records</a>
</body>
</html>

```

**File name = p11a.php path= cd /var/www/html/php**

```

<?
$name=$HTTP_POST_VARS['t1'];
$address1=$HTTP_POST_VARS['t2'];
$address2=$HTTP_POST_VARS['t3'];
$email=$HTTP_POST_VARS['t4'];
$mysql=mysql_connect("localhost","root");
mysql_select_db("person");
mysql_query("insert into student values('$name','$address1','$address2',
'$email')");
$result=mysql_query("select * from student");
?>
<html>
<head>
<title> Database </title>
</head>
<body bgcolor='khaki'>
<h1><center> Student Database</center></h1>
<h4><marquee><font> Bahubali College of Engineering, Department of
Information Science, Shraavanabelagola, Hassan District-573135 </font>
</marquee></h4>
<hr/>
<center><table border='5'> </center>
<tr>
<th>name</th>
<th>address1</th>
<th>address2</th>
<th>email</th>
</tr>
<?while($array=mysql_fetch_row($result)){?>
<tr><td><? echo $array[0];?> </td>

```

If you use <form ...method="GET" in html, use \$HTTP\_GET\_VARS['t1']; in php

```

        <td><? echo $array[1];?> </td>
        <td><? echo $array[2];?> </td>
        <td><? echo $array[3];?> </td>
</tr>
<?>
mysql_free_result($result);
mysql_close($mysql);
?>
</table><br/>
<a href="http://localhost/p11a.html">Click here to insert more Records</a>
<a href="http://localhost/p11b.html">Click here to search more Records</a>
</body>
</html>

```

**File name = p11b.php path= cd /var/www/html/php**

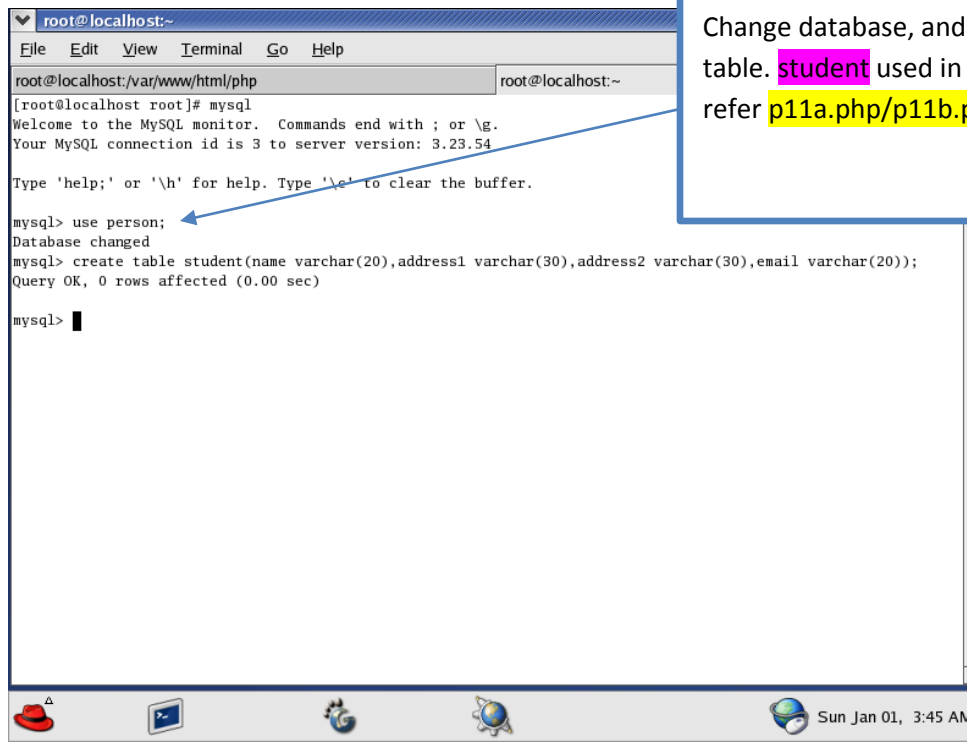
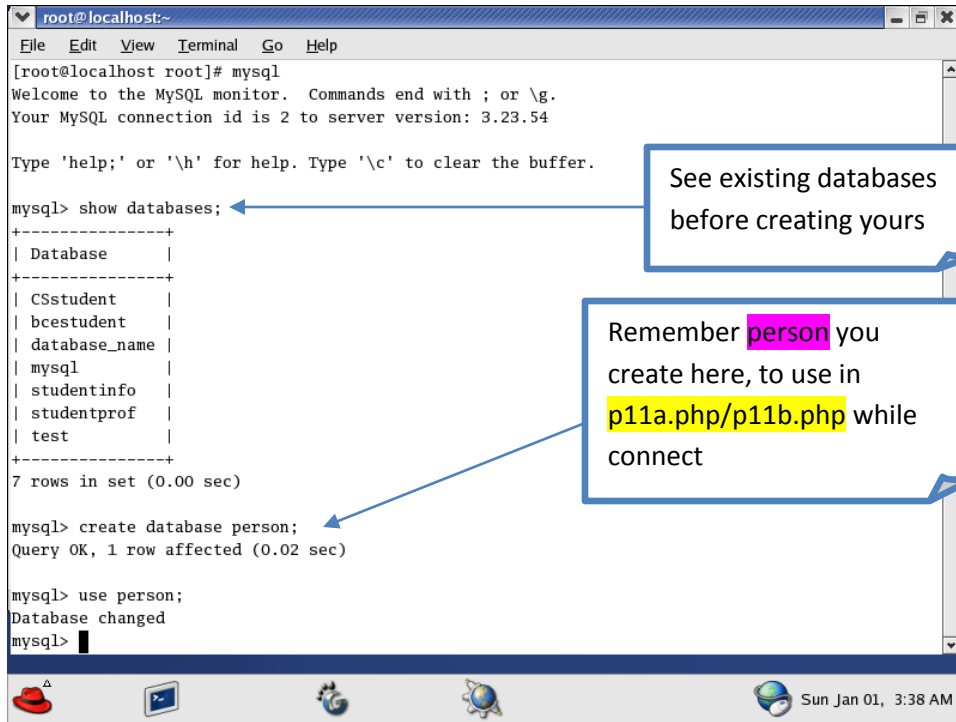
```

<?
$search=$HTTP_POST_VARS['t1'];
$mysql=mysql_connect("localhost","root");
mysql_select_db("person");
$result=mysql_query("select * from student where name like '%$search%'");
?>
<html>
<head>
    <title> Database</title>
</head>
<body bgcolor='peru'>
<h1><center> Person Database Search Results </center></h1>
<h4><marquee><font> Bahubali College of Engineering, Department of
Information Science, Shraavanabelagola, Hassan District-573135 </font>
</marquee></h4>
<hr/>
<?if(mysql_num_rows($result)>0){?>
<center><table border='5'> </center>
<tr>
<th>name</th>
<th>address1</th>
<th>address2</th>
<th>email</th>
</tr>
<?while($array=mysql_fetch_row($result)){?>
<tr><td><? echo $array[0];?> </td>
    <td><? echo $array[1];?> </td>
    <td><? echo $array[2];?> </td>
    <td><? echo $array[3];?> </td>
</tr>
<?}}
else
echo "No records";
mysql_free_result($result);
mysql_close($mysql);

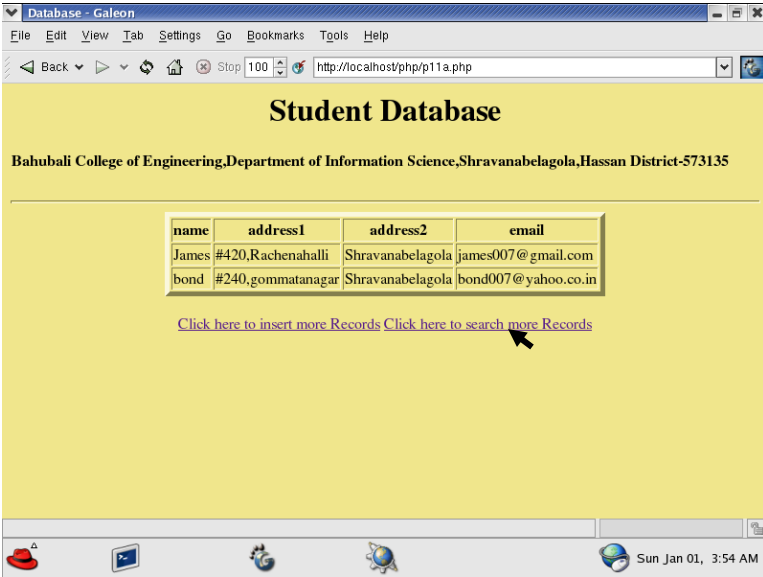
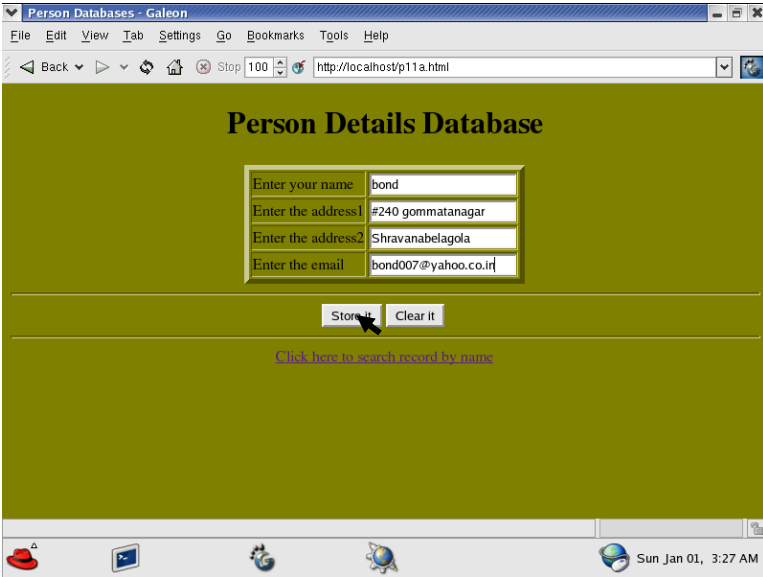
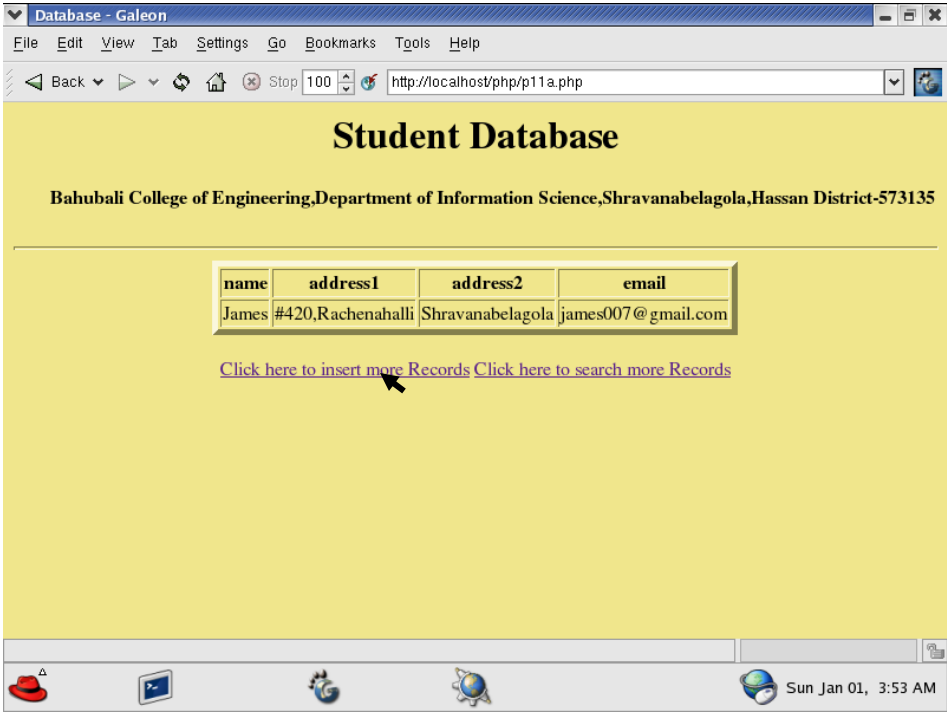
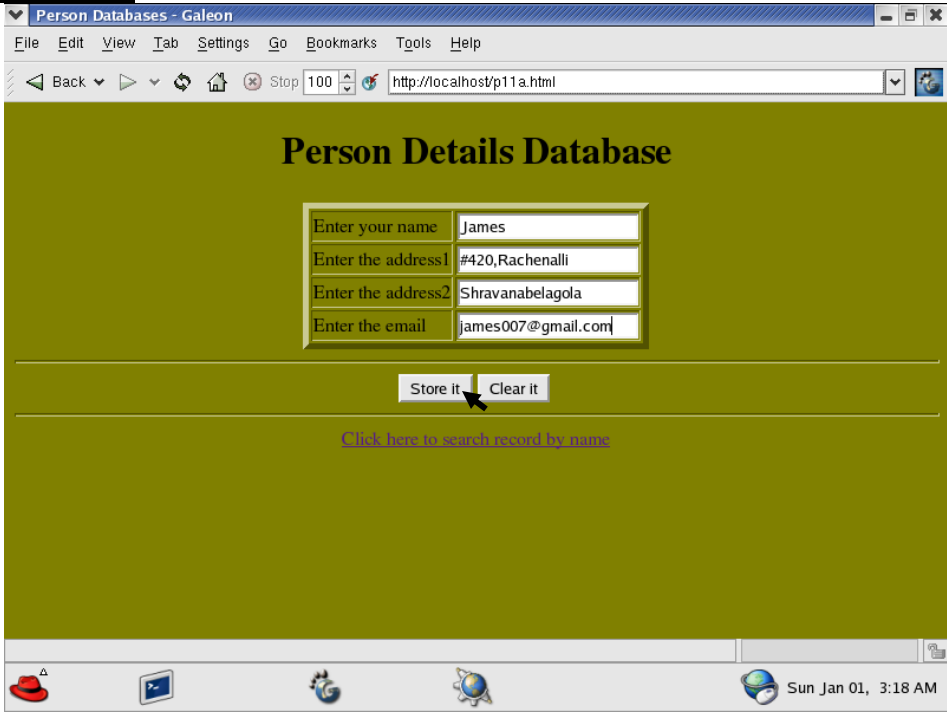
```

If you use <form ...method="GET" in  
html, use \$HTTP\_GET\_VARS['t1']; in php

```
?>
</table><br/>
<a href="http://localhost/p11a.html">Click here to insert more Records</a>
<a href="http://localhost/p11b.html">Click here to search more Records</a>
</body>
</html>
```



Output:



Database Search - Galeon

File Edit View Tab Settings Go Bookmarks Tools Help

Back Stop 100 http://localhost/p11b.html

### Search Database by name

Enter name to be searched

Search Clear

[Click here to insert more records](#)

Sun Jan 01, 3:28 AM

Database - Galeon

File Edit View Tab Settings Go Bookmarks Tools Help

Back Stop 100 http://localhost/php/p11b.php

### Person Database Search Results

ahubali College of Engineering,Department of Information Science,Shraavanabelagola,Hassan District-573135

name	address1	address2	email
bond	#240 gommatanagar	Shraavanabelagola	bond007@yahoo.co.in

[Click here to insert more Records](#) [Click here to search more Records](#)

**Search Successful**

Sun Jan 01, 3:28 AM

Database Search - Galeon

File Edit View Tab Settings Go Bookmarks Tools Help

Back Stop 100 http://localhost/p11b.html

### Search Database by name

Enter name to be searched

Search Clear

[Click here to insert more records](#)

Done.

Sun Jan 01, 3:48 AM

Database - Galeon

File Edit View Tab Settings Go Bookmarks Tools Help

Back Stop 100 http://localhost/php/p11b.php

### Person Database Search Results

Bahubali College of Engineering,Department of Information Science,Shraavanabelagola,Hassan District-573135

No records

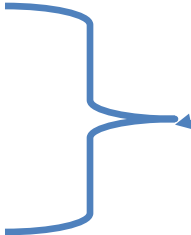
[Click here to insert more Records](#) [Click here to search more Records](#)

**Search Unsuccessful**

Sun Jan 01, 3:48 AM

```
root@localhost:~  
File Edit View Terminal Go Help  
root@localhost:/var/www/html/php root@localhost:~  
[root@localhost root]# mysql  
Welcome to the MySQL monitor.  Commands end with ; or \g.  
Your MySQL connection id is 8 to server version: 3.23.54  
  
Type 'help;' or '\h' for help. Type '\c' to clear the buffer.  
  
mysql> use person;  
Reading table information for completion of table and column names  
You can turn off this feature to get a quicker startup with -A  
  
Database changed  
mysql> select * from student;  
+-----+-----+-----+-----+  
| name | address1 | address2 | email |  
+-----+-----+-----+-----+  
| James | #420,Rachenahalli | Shraavanabelagola | james007@gmail.com |  
| bond | #240,gommatanagar | Shraavanabelagola | bond007@yahoo.co.in |  
+-----+-----+-----+-----+  
2 rows in set (0.00 sec)  
  
mysql> █
```

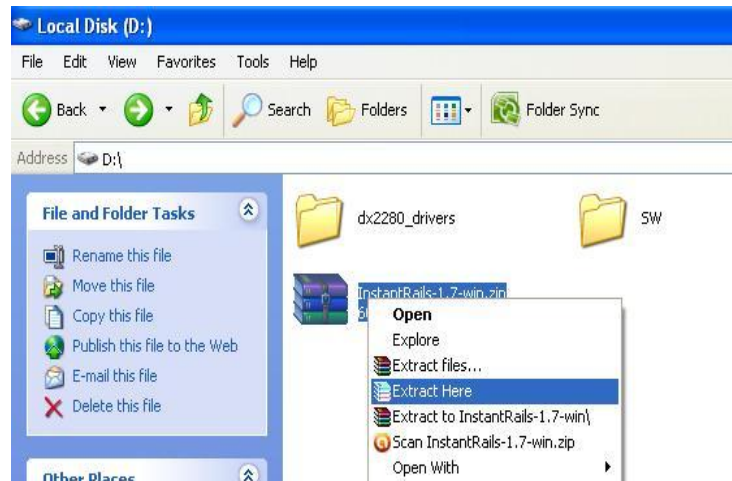
Contents of table **student** after inserting Records



**Question:** 12. Build a Rails application to accept book information viz. Accession number, title, authors, edition and publisher from a web page and store the information in a database and to search for a book with the title specified by the user and to display the search results with proper headings.

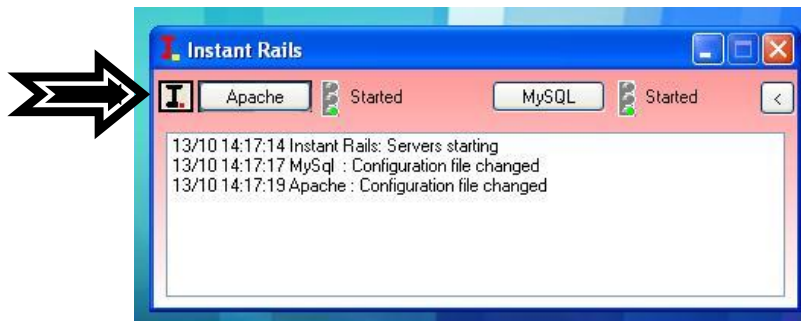
**File name = InstantRails.exe** **path= D:\InstantRails\**

**Step 1: Extract Instant rail files (unzip InstantRails-1.7-win.zip).**

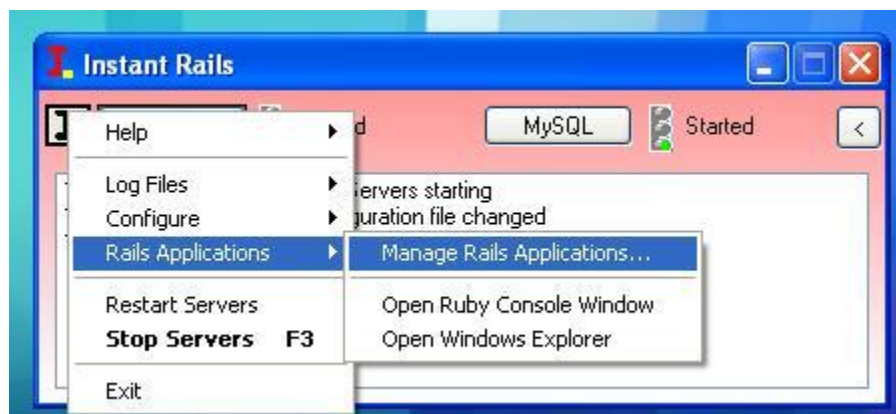


**Step 2: Click on InstantRails folder, double click on InstantRails.exe.**

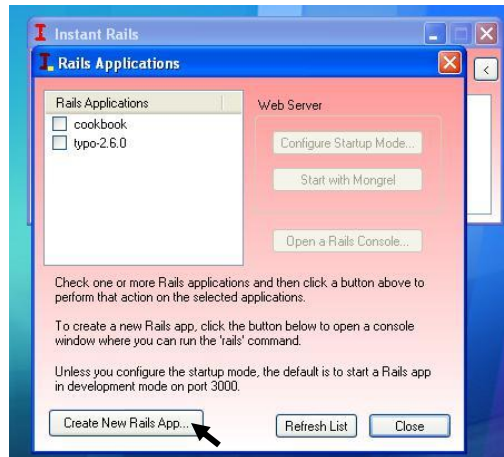
You will get below window.



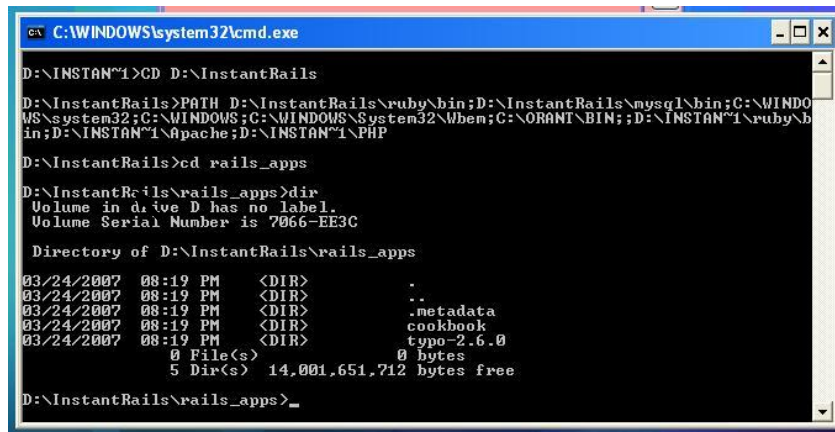
Click on black color I symbol at the top left corner and select manage Rails Applications as shown below.



Then you will get the new window

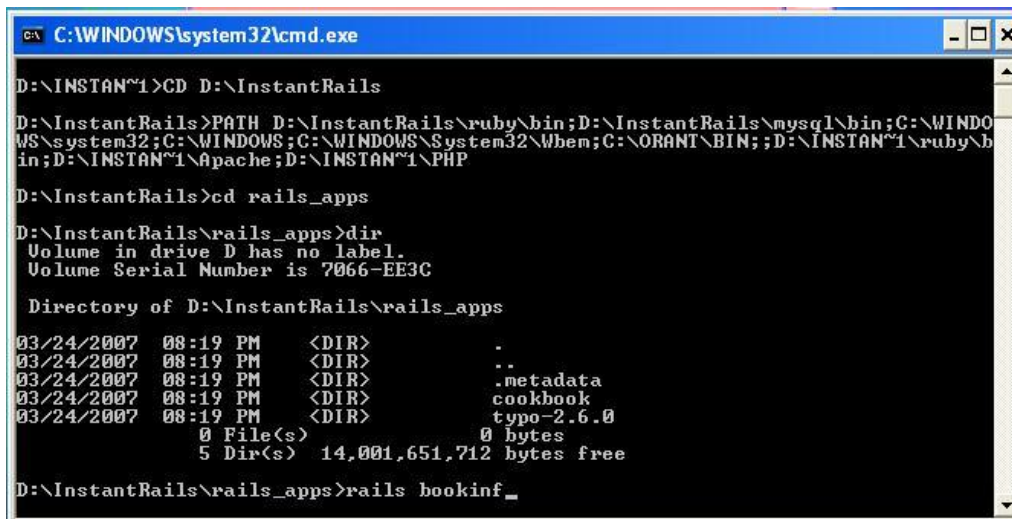


In the above new window click on Create New Rails App button Now you will get a command window show below.



Then type rails applicationName

Example **D:\InstantRails\rails\_apps>rails bookinf**



This command will create all the necessary files inside books folder as show below

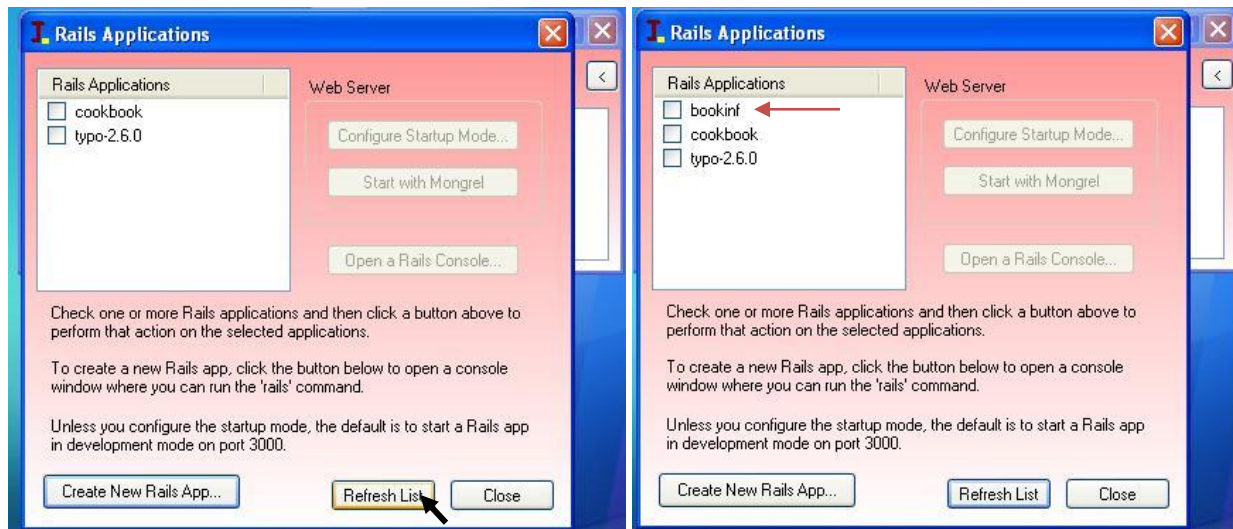


```
C:\WINDOWS\system32\cmd.exe

create public/.htaccess
create config/boot.rb
create config/environment.rb
create config/environments/production.rb
create config/environments/development.rb
create config/environments/test.rb
create script/about
create script/breakpointer
create script/console
create script/destroy
create script/generate
create script/performance/benchmarker
create script/performance/profiler
create script/process/reaper
create script/process/spawner
create script/process/inspector
create script/runner
create script/server
create script/plugin
create public/dispatch.rb
create public/dispatch.cgi
create public/dispatch.fcgi
create public/404.html
create public/500.html
create public/index.html
create public/favicon.ico
create public/robots.txt
create public/images/rails.png
create public/javascripts/prototype.js
create public/javascripts/effects.js
create public/javascripts/dragdrop.js
create public/javascripts/controls.js
create public/javascripts/application.js
create doc/README_FOR_APP
create log/development.log
create log/production.log
create log/test.log

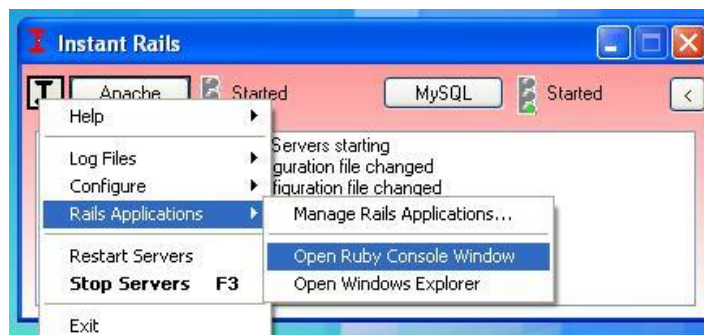
D:\InstantRails\rails_apps>
```

Click on refresh button in rails window, you will get new application name



### Step 3: Now we need to create Database

Launch Ruby Console



Type `mysqladmin -u root create bookinf_development` in the path as shown

`D:\InstantRails\rails_apps>cd bookinf`

`D:\InstantRails\rails_apps\bookinf>mysqladmin -u root create bookinf_development` to use a development database.

\*\* before executing this command close all other windows except Instant Rail window and below shown window.

```

C:\WINDOWS\system32\cmd.exe

D:\INSTAN~1>CD D:\InstantRails

D:\InstantRails>PATH D:\InstantRails\ruby\bin;D:\InstantRails\mysql\bin;C:\WINDO
WS\system32;C:\WINDOWS;C:\WINDOWS\system32\Wbem;C:\ORANT\BIN; ;D:\INSTAN~1\ruby\b
in;D:\INSTAN~1\Apache;D:\INSTAN~1\PHP

D:\InstantRails>cd rails_apps

D:\InstantRails\rails_apps>dir
Volume in drive D has no label.
Volume Serial Number is 7066-EE3C

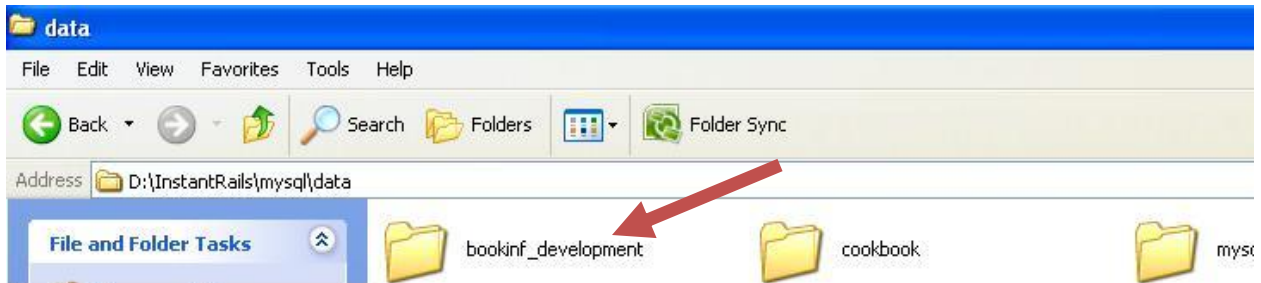
Directory of D:\InstantRails\rails_apps

10/13/2015  02:24 PM    <DIR>          -
10/13/2015  02:24 PM    <DIR>          ..
03/24/2007  08:19 PM    <DIR>          .metadata
10/13/2015  02:24 PM    <DIR>          bookinf
03/24/2007  08:19 PM    <DIR>          cookbook
03/24/2007  08:19 PM    <DIR>          typo-2.6.0
               0 File(s)      0 bytes
               6 Dir(s)  14,001,274,880 bytes free

D:\InstantRails\rails_apps>cd bookinf

D:\InstantRails\rails_apps\bookinf>mysqladmin -u root create bookinf_development
    
```

If no error returned , then created successfully. You can check database in InstantRails/mysql/data.



## Step 4: Creating Model

In the above path execute `D:\InstantRails\rails_apps\bookinf>ruby script/generate model book`

```

C:\WINDOWS\system32\cmd.exe

Directory of D:\InstantRails\rails_apps
10/13/2015  02:24 PM    <DIR>      .
10/13/2015  02:24 PM    <DIR>      ..
03/24/2007  08:19 PM    <DIR>      .metadata
10/13/2015  02:24 PM    <DIR>      bookinf
03/24/2007  08:19 PM    <DIR>      cookbook
03/24/2007  08:19 PM    <DIR>      typo-2.6.0
            0 File(s)          0 bytes
            6 Dir(s)    14,001,274,880 bytes free

D:\InstantRails\rails_apps>cd bookinf

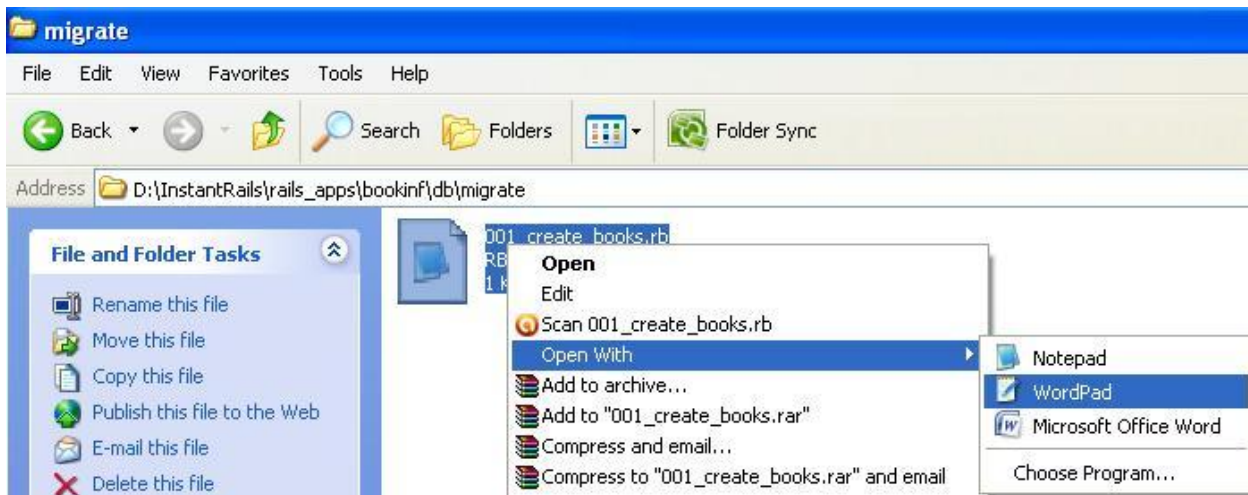
D:\InstantRails\rails_apps\bookinf>ruby script/generate model book
exists app/models/
exists test/unit/
exists test/fixtures/
create app/models/book.rb
create test/unit/book_test.rb
create test/fixtures/books.yml
create db/migrate
create db/migrate/001_create_books.rb ←

D:\InstantRails\rails_apps\bookinf>

```

The last lines in the console returns create db/migrate/001\_create\_books.rb.

Modify that file which is located in db/migrate/001\_create\_books.rb so that it should create table and adds some records to it. Edit as shown below.



**001\_create\_books.rb**

```
class CreateBooks < ActiveRecord::Migration
```

```
  def self.up
```

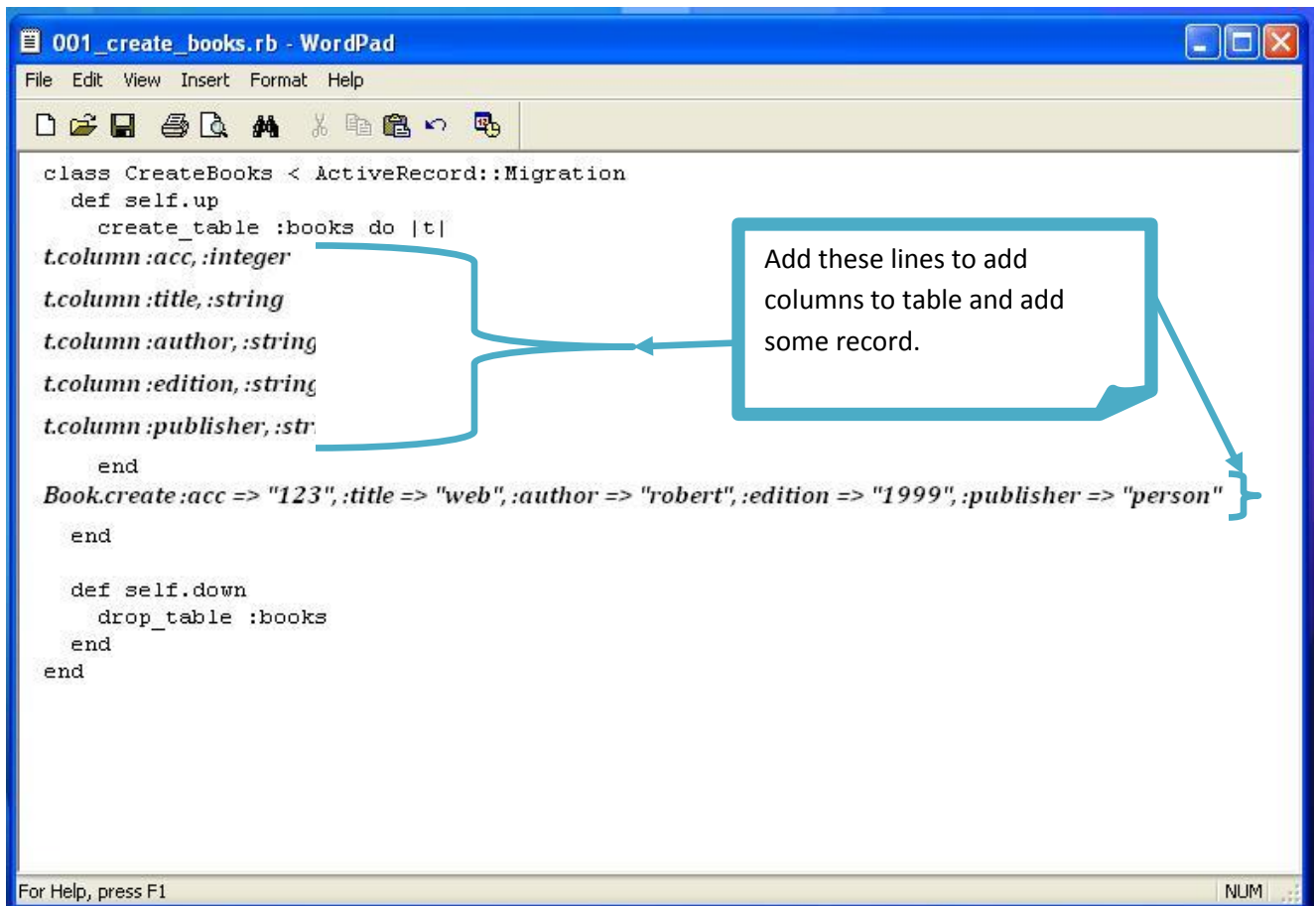
```
    create_table :books do |t|
```

```
      t.column :acc, :integer
```

```
      t.column :title, :string
```

```
      t.column :author, :string
```

```
t.column :edition, :string
t.column :publisher, :string
end
Book.create :acc => "123", :title => "web",
:author => "robert", :edition => "1999",
:publisher => "person"
end
def self.down
drop_table :books
end
end
```



The screenshot shows a WordPad window titled "001\_create\_books.rb - WordPad". The code inside is as follows:

```
class CreateBooks < ActiveRecord::Migration
  def self.up
    create_table :books do |t|
      t.column :acc, :integer
      t.column :title, :string
      t.column :author, :string
      t.column :edition, :string
      t.column :publisher, :string
    end
    Book.create :acc => "123", :title => "web", :author => "robert", :edition => "1999", :publisher => "person"
  end

  def self.down
    drop_table :books
  end
end
```

A callout box with a blue border and a drop shadow contains the text: "Add these lines to add columns to table and add some record." Two blue arrows originate from this box. One arrow points to the column definitions within the `create_table` block, and the other points to the `Book.create` line.

Then type **rake db:migrate** in the application directory of the ruby window as shown below(path D:/InstantRails/rails\_apps/bookinf).If no error found, then migration successfully done.

```

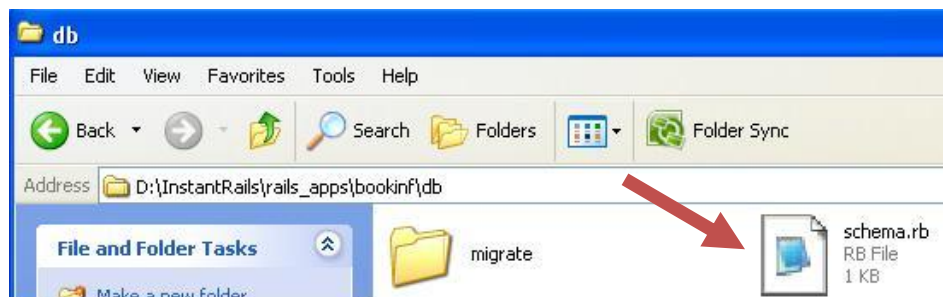
C:\WINDOWS\system32\cmd.exe
D:\InstantRails\rails_apps>cd bookinf
D:\InstantRails\rails_apps\bookinf>ruby script/generate model book
exists app/models/
exists test/unit/
exists test/fixtures/
create app/models/book.rb
create test/unit/book_test.rb
create test/fixtures/books.yml
create db/migrate
create db/migrate/001_create_books.rb

D:\InstantRails\rails_apps\bookinf>rake db:migrate ←
(in D:/InstantRails/rails_apps/bookinf)
== CreateBooks: migrating =====
-- create_table(:books)
-> 0.0630s
== CreateBooks: migrated (0.1250s) =====

D:\InstantRails\rails_apps\bookinf>_

```

If it is successful then search schema.rb automatically generated file in the path D:/InstantRails/rails\_apps/bookinf/db if you find schema.rb then **migration successful**.



## Step5: creating controllers

D:\InstantRails\rails\_apps\bookinf>**ruby script/generate controller books**

This create several file including books\_controller.rb

```

C:\WINDOWS\system32\cmd.exe
exists test/fixtures/
create app/models/book.rb
create test/unit/book_test.rb
create test/fixtures/books.yml
create db/migrate
create db/migrate/001_create_books.rb

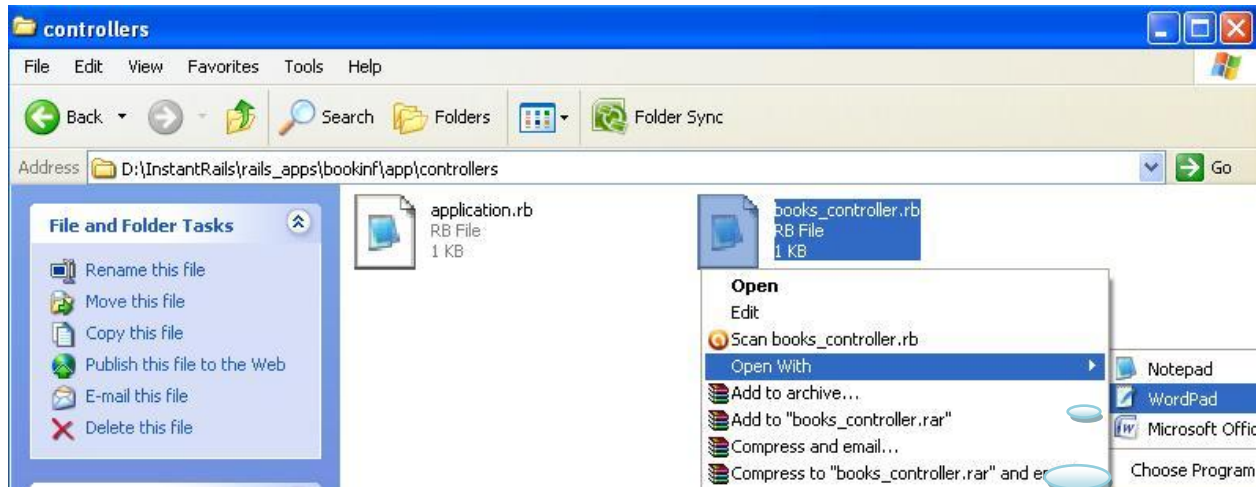
D:\InstantRails\rails_apps\bookinf>rake db:migrate
(in D:/InstantRails/rails_apps/bookinf)
== CreateBooks: migrating =====
-- create_table(:books)
-> 0.0630s
== CreateBooks: migrated (0.1250s) =====

D:\InstantRails\rails_apps\bookinf>ruby script/generate controller books
exists app/controllers/
exists app/helpers/
create app/views/books
exists test/functional/
create app/controllers/books_controller.rb ←
create test/functional/books_controller_test.rb
create app/helpers/books_helper.rb

D:\InstantRails\rails_apps\bookinf>_

```

Search file in D:/InstantRails/rails\_apps/bookinf/app/controllers/books\_controller.rb

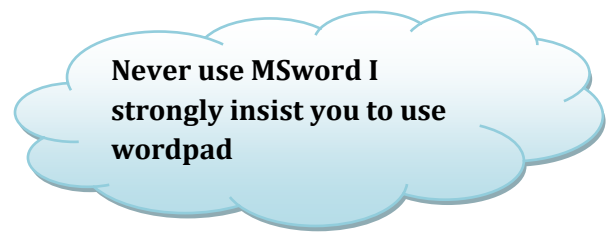


edit as below

**books\_controller.rb**

```
class BooksController < ApplicationController  
scaffold :book  
def result  
@j=params[:title]  
@bookz = Book.find(:all, :conditions=>["title=?",@j])  
end  
end
```

books\_controller.rb which contains a class name BookController as below.



After adding contents shown Save and close the file.

## Step 6: List view

Design XHTML front end and display page. Note: Insert page is automatically created.

We need to create

search.rhtml(to search book using title)

result.rhtml(to display search data)

```

C:\WINDOWS\system32\cmd.exe
== CreateBooks: migrating =====
-- create_table(:books)
  -> 0.0630s
== CreateBooks: migrated (0.1250s) =====

D:\InstantRails\rails_apps\bookinf>ruby script/generate controller books
exists  app/controllers/
exists  app/helpers/
create  app/views/books
exists  test/functional/
create  app/controllers/books_controller.rb
create  test/functional/books_controller_test.rb
create  app/helpers/books_helper.rb

D:\InstantRails\rails_apps\bookinf>cd app/views/books
D:\InstantRails\rails_apps\bookinf\app\views\books>edit search.rhtml
D:\INSTAN~1\RAILS_~1\bookinf\app\views\books>edit result.rhtml
D:\INSTAN~1\RAILS_~1\bookinf\app\views\books>
  
```

*all these file should be saved in the path D:/InstantRails/rails\_apps/bookinf/app/views/books*

D:/InstantRails/rails\_apps/bookinf>**cd app/views/books**

D:/InstantRails/rails\_apps/bookinf/app/views/books>**edit search.rhtml**

write program into file as given below

```

<html>
<head>
</head>
<body style="background-color:yellow">
<h1>search book using title</h1>
<form action="result" method="post">
booktitle<input type="text" name="title"/>
<input type="submit" vale="search" />
</form>
</body>
</html>
  
```

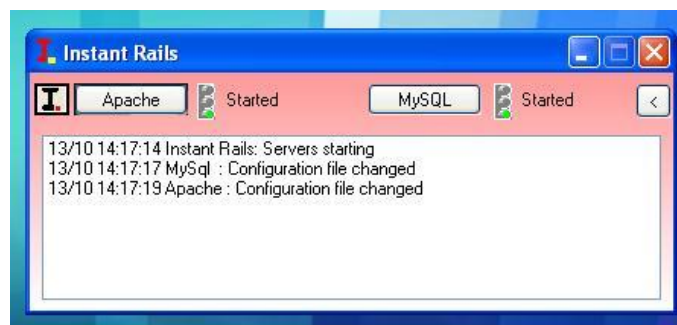
D:/InstantRails/rails\_apps/bookinf/app/views/books>**edit result.rhtml**

write program into file as given below

```
<html>
<head>
</head>
<body>
<h1>Searched result</h1>
<table border>
<tr>
<td>ACC</td>
<td>TITLE</td>
<td>AUTHOR</td>
<td>EDITION</td>
<td>PUBLISHER</td>
</tr>
<% for book in @bookz %>
<tr>
<td><%= book.acc %></td>
<td><%= book.title %></td>
<td><%= book.author %></td>
<td><%= book.edition %></td>
<td><%= book.publisher %></td>
</tr>
<%end%>
</table>
<a href="http://localhost:3000/books/search">search more</a>
</body>
</html>
```

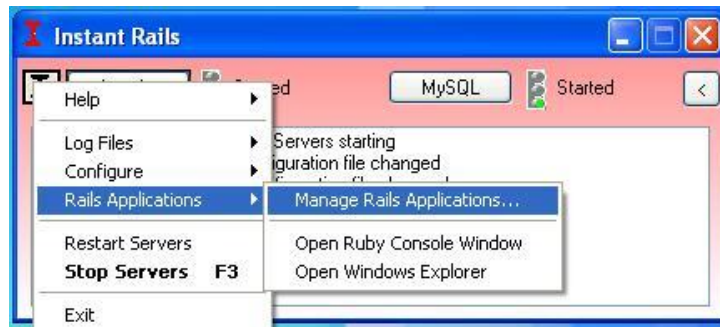
## Step 7: Execution

Below window will be running in the background.

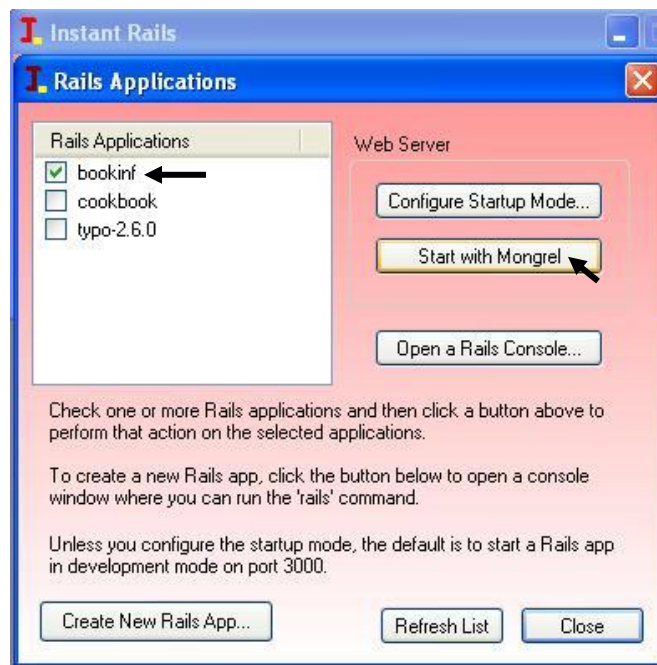




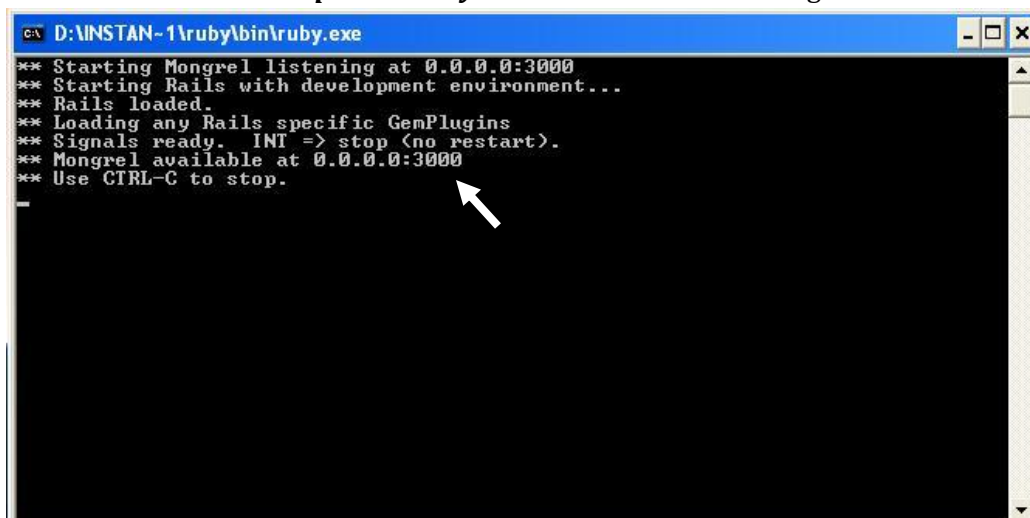
Click on black color I symbol at the top left corner and select manage Rails Applications as shown below.



Then you will get the new window show below check bookinf and click on start with Mongrel button. It opens server window.



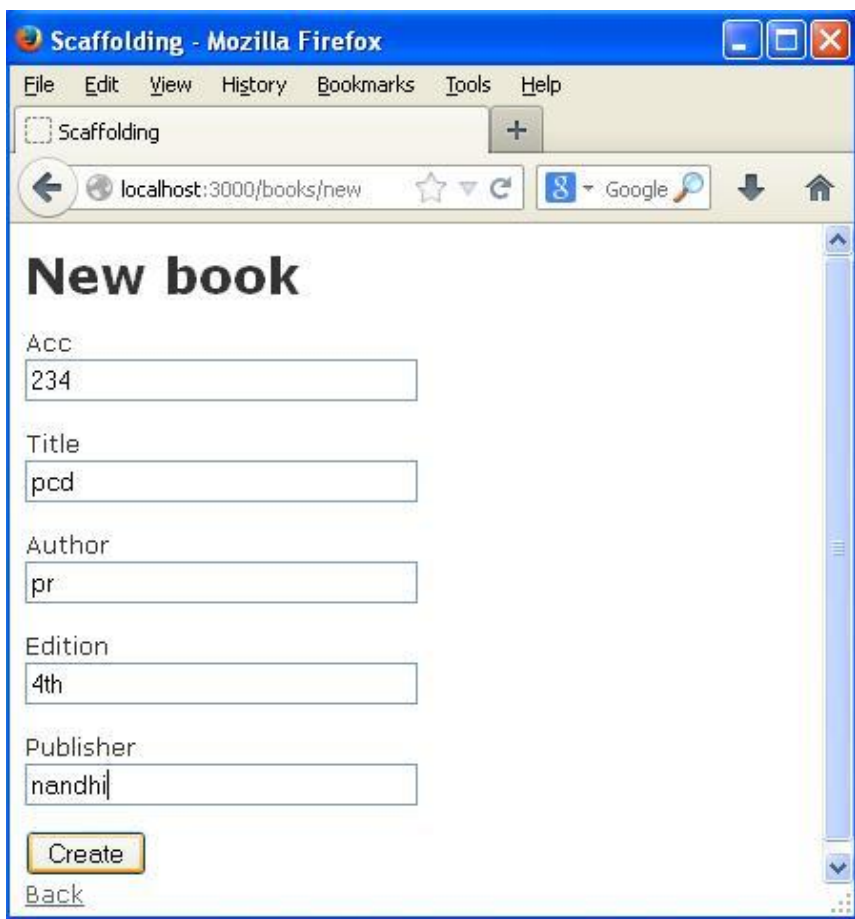
**Server window opens when you click on start with Mongrel button**



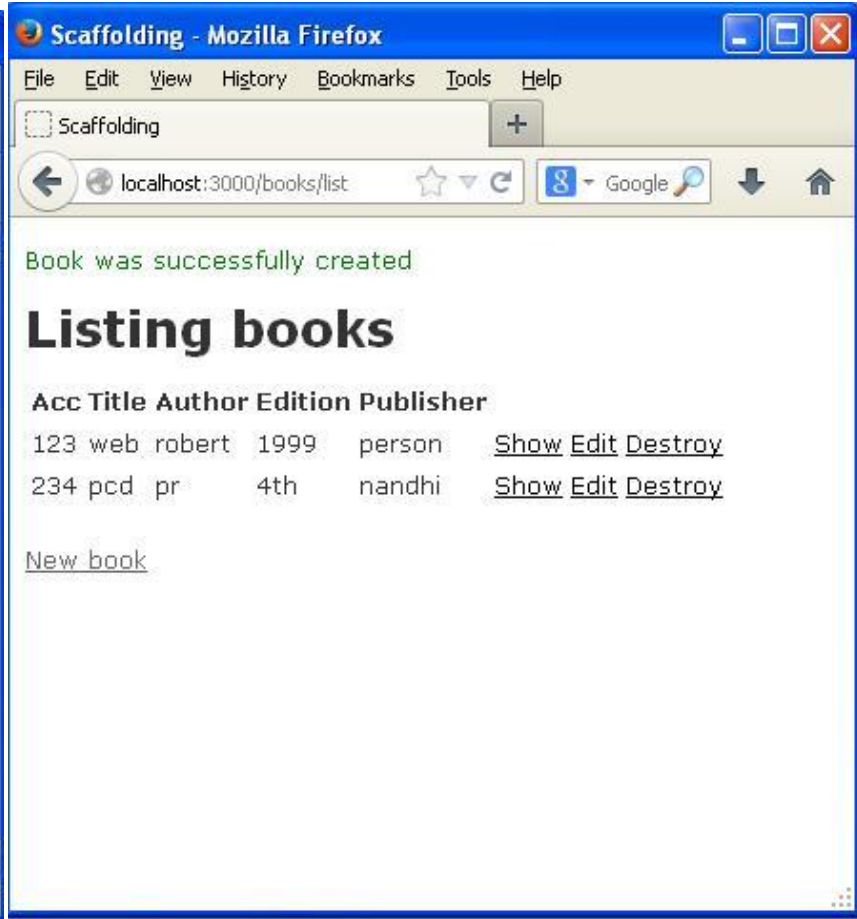
*Look into port address in the first line, use same port address in the URL of the browser.*

*books/new is file automatically created by scaffolding. Use any browser to run*

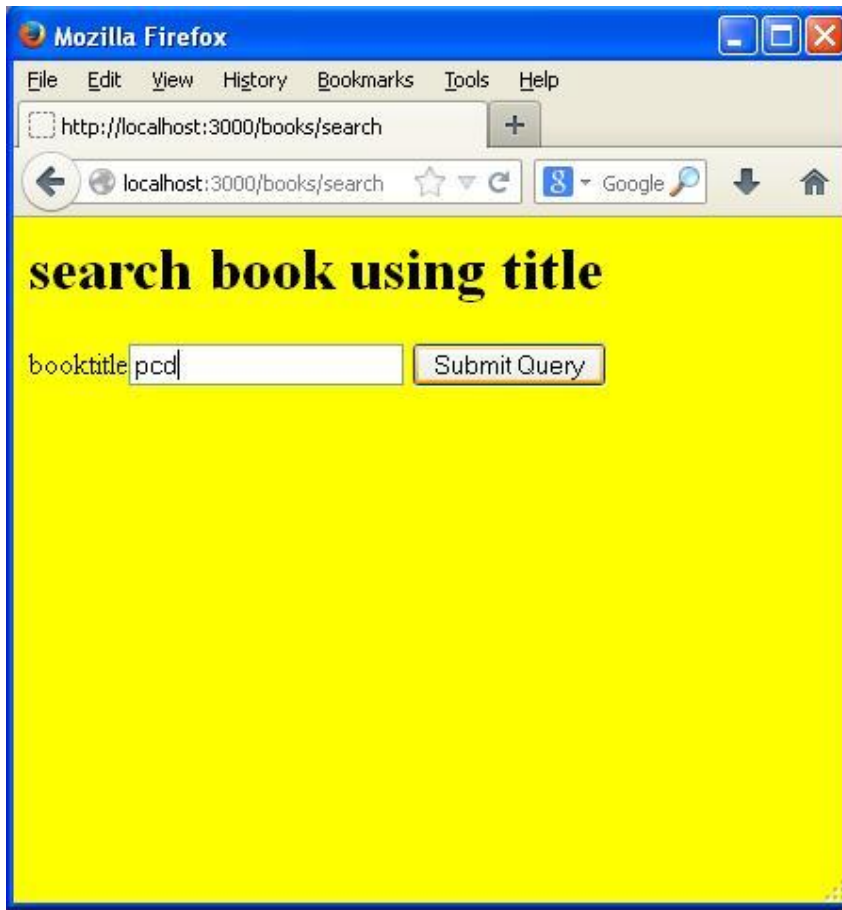
Better results can be expected in *firefox* browser



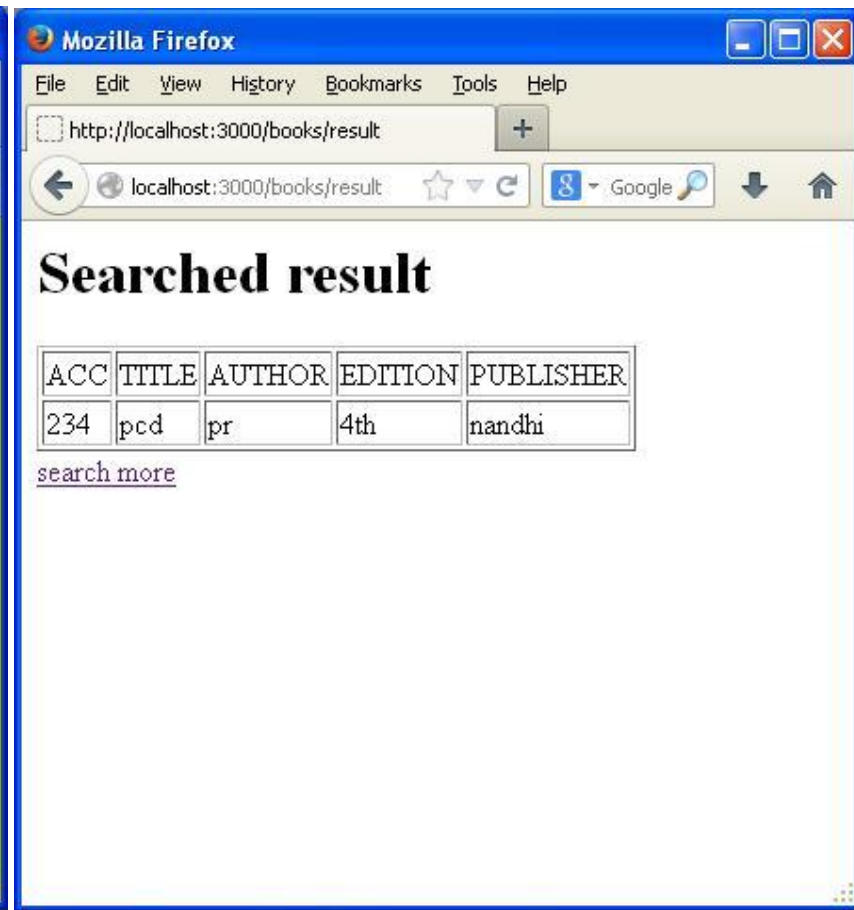
URL->localhost:3000/books/new



URL->localhost:3000/books/list



URL->localhost:3000/books/search



URL->localhost:3000/books/result