Perl

PERL PROGRAMS

1. Sample PERL

```
#!usr/bin/perl     # the above line is shebang directive
$name=<STDIN>;
chomp($name);
print "$name\n";
```

2. Scalar variables in PERL

```
#!/usr/bin/perl
my $animal="Camel"; # this variable is lexically scoped ie local
my $ans=42_243;  #this is similar to 42243
print "$animal\n";
print "$ans\n";
print "The square of &ans",$ans*$ans,"\n";
```

3. Array in PERL

```
#!usr/bin/perl
my @animal=("cow","Buffalo","Camel");
print "@animal\n"; # list all elements in array
print "$#animal\n"; # list last element position
print "$animal[0]\n"; #list 0th position element
$count=@animal;
print "$count";  # count no of elements in array
```

4. Hash in PERL

```
#!usr/bin/perl
%color=('apple'=>"red",'banana'=>"yellow",'orange'=>"orange");
print "$color{'apple'}\n";
```

5. To display all values in hash

```
#!usr/bin/perl
%color=('apple'=>"red",'banana'=>"yellow",'orange'=>"orange");
print "$color{'apple'}\n";
# to display all the values in hash
@keys=keys %color;
foreach $key (@keys)
{
print "$color{$key}\n";
}
```

6.If loop in perl

```
#!usr/bin/perl
my $a=10;
$condition=1;
if($condition)
{
my  $y=100;
print  "$a\n";
print "$y\n";
}
```

```
print "$a\n";
print "$y\n";
```

7. If not loop (unless)in perl

```
#!usr/bin/perl
$a=5;
unless($a>10) #is equal to if not
{
print "a less than 10";
}
```

8. While loop (until) in perl

```
#!usr/bin/perl
$a=0;
until($a>10) #is equal to while
{
print "$a\n";
$a++;
}
```

9. for each loop (upper limit is not fixed)in perl

```
#!usr/bin/perl
my @animals=("cow","buffalo","camel",123,100,243,300);
foreach $key(@animals)
{
print "$key\n";
}
```

10. String operation:

```
#!usr/bin/perl
$a="hello";
$b="world";
print $a.$b,"\n";
$str="-";
print $str x 80,"/n";
@a=(10..25);
print "@a\n";
```

11. Magic variable in perl

```
#!usr/bin/perl
%color=('apple'=>"red",'banana'=>"yellow",'orange'=>"orange");
$h=\%color;
print "$h\n";#print the reference address
@keys=keys %$h;
print "$h->{'apple'}\n"; # it print the the apple alone
foreach (@keys)
{
print "$h->($_}\n"; # to display all key values we use $_ instead of keys
}
```

12.Function

```
#!usr/bin/perl
sub sayHello()
{
print "Hello\n";
}
&sayHello();
```

13.Function with parameter

```
#!usr/bin/perl
sub add()
{
my ($a,$b)=@_; #the values will be stored in @_ array variable for
dynamically
print $a+$b;
}
&add(10,15);
```

14.program to check greater among 3 number

```
#Greatest among 3 number
print "Enter A value : ";
$a=<>;
print "Enter b value : ";
$b=<>;
print "Enter c value : ";
$c=<>;
if(($a > $b)&&($a > $c))
{
print "A is greater";
}
elsif(($b > $c)&&($b > $a))
{
print "B is greater";
}
```

```
else
{
print "C is greater";
}
```

15.Program to get details in run time

```
#! usr/bin/perl
print "Enter the Student Information";
print "\n enter name";
chomp($name = <>);
print "\nenter dob";

chomp($dob=<>);
print "\n enter registerno.";
chomp($registern0.=<>);
print "\n enter education";
chomp($Education=<>);
print "\n Student Information";
print "\n Name: $name";
print "\n Date Of Birth :$dob";
print "\n Register no.:$registern0.";
print "\nQualification :$Education";
```

APPLICATION USING PERL

1.create the table in perl that will be automatically updated in database using mysql

1.1 First create the database as follows in mysql

```
[linuxpert@localhost ~]$ mysql -u root -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 2
Server version: 5.1.45 Source distribution

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> show databases;
+--------------------+
| Database           |
+--------------------+
| information_schema |
| mysql              |
| test               |
+--------------------+
3 rows in set (0.25 sec)
```

```
mysql> create database student;
Query OK, 1 row affected (0.02 sec)

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

mysql> use student;
Database changed
mysql> connect;
Connection id:    3
Current database: student

mysql> show tables;
Empty set (0.00 sec)
```

now the table is empty . To create the table we use the following procedure

1.2 The following packages should be used to connect PERL with Mysql (use new terminal)

[linuxpert@localhost ~]$ rpm -q perl-DBI
perl-DBI-1.609-4.fc13.i686

[linuxpert@localhost ~]$ rpm -q perl-DBD-MySQL
perl-DBD-MySQL-4.013-3.fc13.i686

1.3 Write the PERL script to connect with mysql as follows

```
#!usr/bin/perl
use DBI; #to use the build in package we use "Use", DBI is the build in package in perl
my $dbh=DBI->connect("dbi:mysql:student","root",""); #connect to database
if(!$dbh)
{
die("error:$!");
}
$sth=$dbh->prepare("create table students(rollno int,sname varchar(50))");
# create the table
$sth->execute();
$dbh->disconnect;
```

1.4 Run the Perl script

[linuxpert@localhost ~]$ perl connect.pl

now see the tables in database (“student”)

```
mysql> show tables;
+------------------+
| Tables_in_student |
+------------------+
| students         |
+------------------+
1 row in set (0.00 sec)
```

2. insert the values in perl that will be automatically updated in database using mysql as follows

```
#!usr/bin/perl
use DBI; #to use the build in package we use "Use", DBI is the build in package in perl
my $dbh=DBI->connect("dbi:mysql:student","root",""); #connect to database
if(!$dbh)
{
die("error:$!");
}
```

```
$sth=$dbh->prepare("insert into students values(100,'thamarai')"); # create
the table
$sth->execute();
$dbh->disconnect;
```

2.1 compile the perl

```
[linuxpert@localhost ~]$ perl dbinsert.pl
```

now the output is

```
mysql> select * from students;
+--------+----------+
| rollno | sname    |
+--------+----------+
|    100 | thamarai |
+--------+----------+
1 row in set (0.00 sec)
```

2.2 insert the values in perl using execute statement

```
#!usr/bin/perl
use DBI; #to use the build in package we use "Use", DBI is the build in
package in perl
$rollno=200;
$sname="selvi";
```

```
my $dbh=DBI->connect("dbi:mysql:student","root",""); #connect to
database
if(!$dbh)
{
die("error:$!");
}
$sth=$dbh->prepare("insert into students values(?,?)"); # create the table
$sth->execute($rollno,$sname);
$dbh->disconnect;
```
compile the program

as [linuxpert@localhost ~]$ perl

dbinsert1.pl **now the output is**

```
mysql> select * from students;
+--------+----------+
| rollno | sname    |
+--------+----------+
|    100 | thamarai |
|    200 | selvi    |
+--------+----------+
2 rows in set (0.08 sec)
```

CGI PROGRAMMING

EXAMPLE -1

type the following in terminal

[linuxpert@localhost ~]$ su

Password:

[root@localhost linuxpert]# cd /var/www/cgi-bin

[root@localhost cgi-bin]# gedit

type the following in gedit

```
#!/usr/bin/perl
use CGI;
$cgi=new CGI;
print $cgi->header,
$cgi->start_html,
$cgi->h1("A simple Example"),
$cgi->end_html;
```

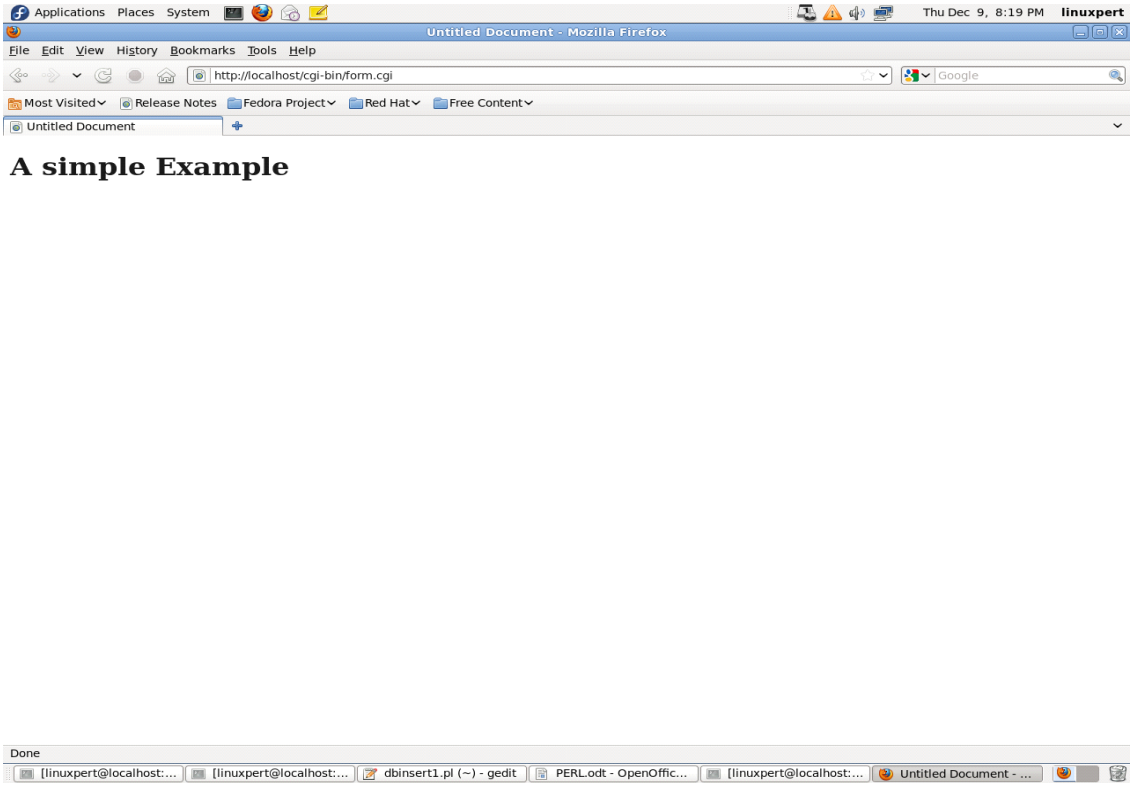
type the following in the same terminal

[root@localhost cgi-bin]# chmod +x form.cgi

go to browser and type the following URL

http://localhost/cgi-bin/form.cgi

Output:


Applications Places System
Thu Dec 9, 8:19 PM linuxpert
Untitled Document - Mozilla Firefox
File Edit View History Bookmarks Tools Help
http://localhost/cgi-bin/form.cgi
Google
Most Visited Release Notes Fedora Project Red Hat Free Content
Untitled Document
A simple Example
Done
[linuxpert@localhost:...
[linuxpert@localhost:...
dbinsert1.pl (~) - gedit
PERL.odt - OpenOffic...
[linuxpert@localhost:...
Untitled Document - ...

EXAMPLE -2

in terminal

[linuxpert@localhost ~]$ su

Password:

[root@localhost linuxpert]# cd /var/www/html

[root@localhost html]# gedit

type the following in gedit editor

```
<html>
<head>
<title>LOGIN</title></head>
<body>
<form action="/cgi-bin/form2.cgi" method="post">
<p>
"Enter student roll no"<input type="text" name="rollno"></p>
<p>"enter the student name"<input type="text" name="sname"></p>
<p>"click here to submit"<input type="submit" name="submit"></p>
</form>
</body>
```

save the page as form.html & close it

type the following URL in browser

http://localhost/form.html

then type the following in the terminal

[root@localhost html]# cd /var/www/cgi-bin

[root@localhost cgi-bin]# gedit

type the following in gedit

```
#!/usr/bin/perl
use CGI;
$cgi=new CGI;
use DBI;
$rollno=$cgi->param('rollno');
$name=$cgi->param('sname');
my $dbh=DBI->connect("dbi:mysql:student","root","");
my $sth=$dbh->prepare("insert into students values(?,?)");
$res=$sth->execute($rollno,$name);
$dbh->disconnect;
if($res)
{
print $cgi->header,
$cgi->start_html,
$cgi->h1("Record created"),
$cgi->end_html;
}
```

save that file as form2.cgi

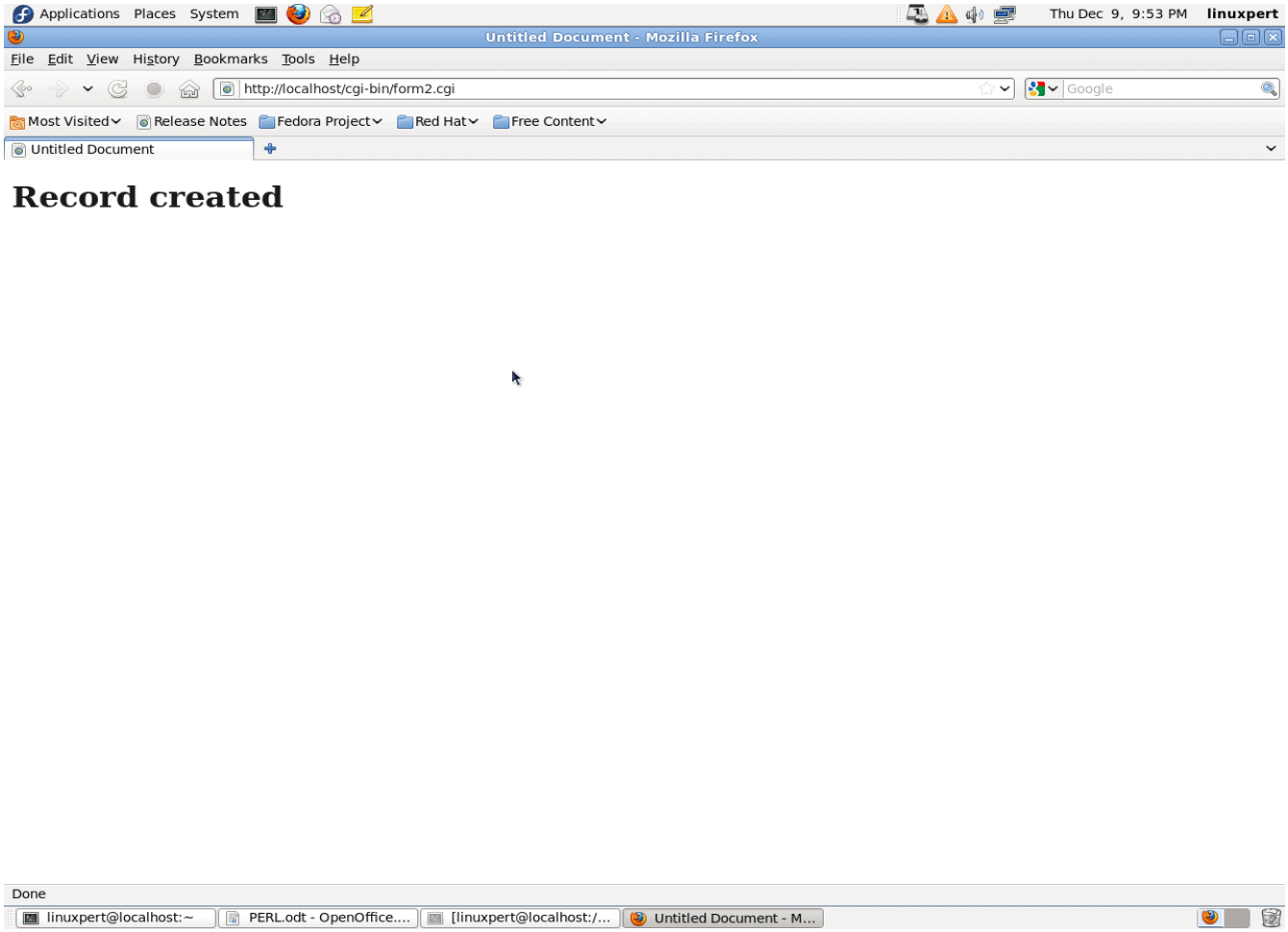
close that file & open a same terminal type as

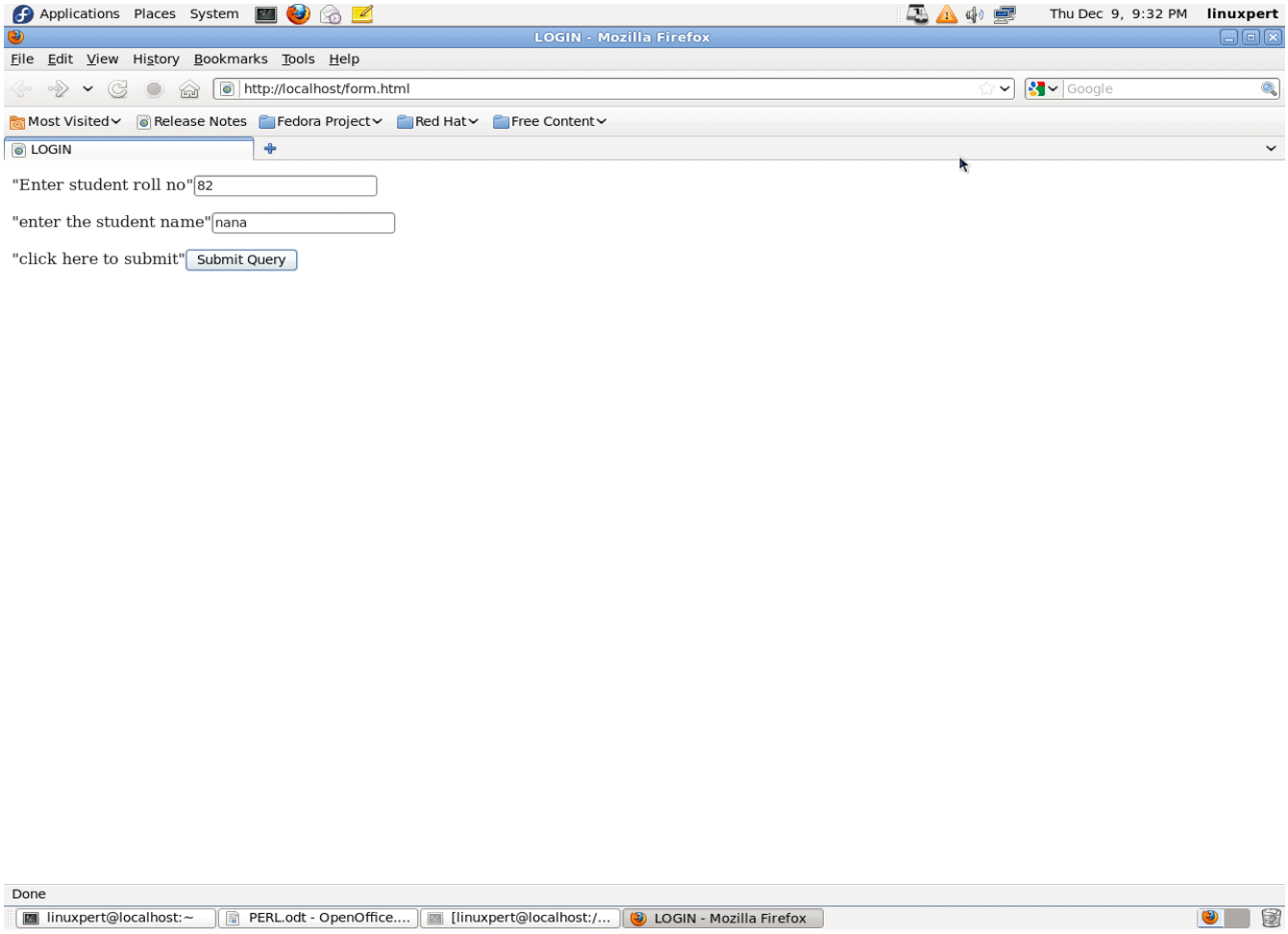
[root@localhostcgi-bin]# chmod +x form2.cgi

In new browser type the following

http://localhost/form.html

Output:


Applications Places System
Thu Dec 9, 9:53 PM linuxpert
Untitled Document - Mozilla Firefox
File Edit View History Bookmarks Tools Help
http://localhost/cgi-bin/form2.cgi
Google
Most Visited Release Notes Fedora Project Red Hat Free Content
Untitled Document
Record created
Done
linuxpert@localhost:~
PERL.odt - OpenOffice....
[linuxpert@localhost:/...
Untitled Document - M...


Applications Places System
Thu Dec 9, 9:32 PM linuxpert
LOGIN - Mozilla Firefox
File Edit View History Bookmarks Tools Help
http://localhost/form.html
Google
Most Visited Release Notes Fedora Project Red Hat Free Content
LOGIN
"Enter student roll no" 82
"enter the student name" nana
"click here to submit" Submit Query
Done
linuxpert@localhost:~
PERL.odt - OpenOffice....
[linuxpert@localhost:/...
LOGIN - Mozilla Firefox

now check the database as

```
mysql> select * from students;
+--------+---------------+
| rollno | sname         |
+--------+---------------+
|    100 | thamarai      |

|    200 | selvi         |
|   NULL | abcd          |
|     71 | thamaraiselvi |
+--------+---------------+
4 rows in set (0.00 sec)
```