Slip 1

A. Write a java program to scroll the text from left to right and vice versa continuously.

```
import java.awt.*;
import java.awt.event.*;

class slip1_1 extends Frame implements Runnable
{
        Thread t;

        int f,x,y;
String str;
        slip1_1()
        {
                t=new Thread(this);
                t.start();
                setLayout(null);
                setSize(300,300);
                setVisible(true);
                f=1;
              x=100;y=100;
                str="hello java";
        }
   public void update()
        {

         x=x+10*f;
              if(x>300)
            f=-1;
            if(x<100)
               f=1;

        }
```

```
  public void run()
        {

                    while(true)
                        {

                                repaint();
                                   update();
                                 try{

                                       Thread.sleep(500);
                                  }catch(Exception e){}
                        }
        }
      public void paint(Graphics g)
          {

              g.drawString(str,x,y);
        }
          public static void main(String a[])
          {
                  new slip1_1();
          }
}
```

Slip 2

A) Write a JSP program to check whether given number is Perfect or not. (Use Include directive).

```
<html>
<body>
<form action="http://localhost:8080/ty/slip12_1.jsp" method="POST">
Enter Number : <input type=text name=t1><br>
<input type=submit>
</form>
</body>
</html>
```

2nd code

```
<%@ page language="java"%>
<html>
<head>
<title>Perfect Number Checker</title>
</head>
<body>
<font color="red">
   <h1>Perfect Number Checker</h1>
<%! int sum=0,i=1;%>
   <%
```

```
        int num = Integer.parseInt(request.getParameter("t1"));
        while(i<num )
         {
          if(num%i==0)
           {
          sum=sum+i;
         }
          i++;
        }
      if(sum==num)
{
 out.println(num+"is Perfect");}
else
{
    out.println(num+"is not perfect");
  }
    %>
  </font>
</body>
</html>
```

B) Write a java program in multithreading using applet for drawing flag.

```
import java.awt.*;
public class slip2_2 extends Frame
{
   int f = 0;
   public slip2_2()
{
      flag s = new flag();
      s.start();
      setSize(500,500);
      setVisible(true);
   }
   public void paint (Graphics g)
  {
      switch (f)
        {
         case 0 :
         g.drawLine(150, 50, 150, 300);
         case 1 :
         g.drawRect(150, 50, 100, 90);
        }
   }
class flag extends Thread{
   public void run(){
      while(true){
```

```
      f = (f+1)%2;
          repaint();
          try{
             Thread.sleep(1000);
          }catch(Exception e){ }
       }
    }
}
    public static void main(String args[]){
       new slip2_2();
    }
}
```

Slip 3

A) Write a socket program in Java to check whether given number is prime or not. Display result on client terminal.

```
import java.io.*;
import java.net.*;
public class Slip3A {
   public static void main(String args[]) throws Exception {
      Socket s = new Socket("localhost", 7500);
      DataInputStream din = new DataInputStream(System.in);
      System.out.print("Enter any number:");
      String n = din.readLine();
      System.out.println("====================");
      DataOutputStream dos = new DataOutputStream(s.getOutputStream());
      dos.writeBytes(n + "\n");
      DataInputStream dis = new DataInputStream(s.getInputStream());
      System.out.println(dis.readLine());
   }
}
```

2nd code

```
import java.io.*;
import java.net.*;
public class Slip3A1 {
public static void main(String args[]) throws Exception {
```

```
        ServerSocket ss = new ServerSocket(7500);
        Socket s = ss.accept();
       System.out.println("server started");
        DataInputStream dis = new DataInputStream(s.getInputStream());
        int n = Integer.parseInt(dis.readLine());
        int i, cnt = 0;
        for (i = 2; i < n; i++) {
           if (n % i == 0)
              cnt++;
           break;
        }
        DataOutputStream dos = new DataOutputStream(s.getOutputStream());
        if (cnt == 0){
           dos.writeBytes(n + " is prime number.");
          }
        else{
           dos.writeBytes(n + " is not prime number.");
          }
        s.close();
    }
}
```

B) Write a java program using applet for bouncing ball, for each bounce color of ball should change randomly.

```
import java.awt.*;
import java.awt.event.*;
public class Slip3B extends Frame implements Runnable {
   private int x, y, w, h, f;
   private Color c = Color.red;
   public Slip3B() {
      setTitle("Bouncing Boll");
      setSize(400, 400);
      setVisible(true);
      w = getWidth();
      h = getHeight();
      x = (int) (Math.random() * getWidth());
      y = (int) (Math.random() * getHeight());
      Thread t = new Thread(this);
      t.start();
   }
   public void run() {
      while (true) {
         switch (f) {
            case 0:
               y++;
               if (y > h - 50) {
                     c = new Color((int) (Math.random() * 256), (int)
            (Math.random() * 256),(int) (Math.random() * 256));
```

```
                    f = 1;
                }
                break;
            case 1:
                y--;
                if (y < 0) {
                    c = new Color((int) (Math.random() * 256), (int)
(Math.random() * 256),(int) (Math.random() * 256));
                    f = 0;
                }
        }
        repaint();
        try {
            Thread.sleep(10);
        } catch (Exception e) {
        }
    }
  }
  public void paint(Graphics g) {
    super.paint(g);
    g.setColor(c);
    g.fillOval(x, y, 20, 20);
  }
public static void main(String args[]) {
    new Slip3B();
  }
```

Slip 4

A) Write a Java Program to delete details of students whose initial character of their name is ‘S’

```
import java.sql.*;
class Slip4A {
   public static void main(String args[]) throws Exception
{
       Connection con;
       Statement stmt;
       Class.forName("com.mysql.jdbc.Driver");
    System.out..println("Driver Loded");
       con =
DriverManager.getConnection("jdbc:mysql://localhost:3306/bcadb",
"root", "");
  System.out.println("connection established");
  con.setAutoCommit(false);
 stmt = con.createStatement();
  int n = stmt.executeUpdate("delete from student where sname like 'S%'");
 con.setAutoCommit(true);
 System.out.println(n + " rows deleted..");
 con.close();
   }
}
```

B) Write a SERVLET program that provides information about a HTTP request from a client, such as IP address and browser type. The servlet also provides information about the server on which the servlet is running, such as the operating system type, and the names of currently loaded servlets.

```
import java.io.*;
import java.util.*;
import javax.servlet.*;
import javax.servlet.http.*;
public class infoservlet extends HttpServlet {
  public void doPost(HttpServletRequest req, HttpServletResponse res)
throws IOException, ServletException{
res.setContentType("text/html");
 PrintWriter out=res.getWriter();
out.println("<html>");
out.println("<body>");
out.println("servlet context"+getServletContext().getServerInfo()+"<br>");
out.println("Server Name:"+req.getServerName()+"<br>");
out.println("Remote Address:"+req.getRemoteAddr()+ "<br>");
out.println("Remote user:"+req.getRemoteUser()+ "<br>");
out.println("Server port:"+req.getServerPort()+ "<br>");
out.println("Remote Host:"+req.getRemoteHost()+ "<br>");
out.println("Local Name:"+req.getLocalName()+ "<br>");
out.println("browser Information"+req.getHeader("User-Agent"));
out.println("OS Name:"+System.getProperty("os.name")+ "<br>");
out.println("</body>");
out.println("</html>");}}
```

Slip 5

A) Write a JSP program to calculate sum of first and last digit of a given number. Display sum in Red Color with font size 18.

```
<html>
<body>
<form method=post action="slip7-1.jsp">
Enter Any Number : <Input type=text name=num><br><br>
<input type=submit value=Display>
</form>
</body>
</html>
```

2nd code

```
<%@page language="java"%>
<html>
<body>
<%! int n,rem,r; %>
<% n=Integer.parseInt(request.getParameter("num"));
     if(n<10)
    {
      out.println("Sum of first and last digit is   ");
%><font size=18 color=red><%= n %></font>
<%
    }
```

```
   else
   {
     rem=n%10;
     do{
              r=n%10;
              n=n/10;
          }while(n>0);
        n=rem+r;
       out.println("Sum of first and last digit is    ");
%><font size=18 color=red><%= n %></font>
<%
    }
%>
</body>
</html>
```

B) Write a java program in multithreading using applet for Traffic signal

```
import java.awt.*;
public class Slip5B extends Frame
{
   int f = 0;
    public Slip5B() {
    Signal s = new Signal();
    s.start();
    setSize(500, 500);
    setVisible(true);
   }
   public void paint(Graphics g)
 {
       switch (f) {
          case 0:
             g.setColor(Color.red);
             g.fillOval(60, 60, 50, 50);
             g.setColor(Color.black);
             g.fillOval(60, 120, 50, 50);
             g.drawOval(60, 180, 50, 50);
             break;
          case 1:
             g.setColor(Color.yellow);
             g.fillOval(60, 120, 50, 50);
             g.setColor(Color.black);
```

```
            g.fillOval(60, 60, 50, 50);
            g.drawOval(60, 180, 50, 50);
            break;
         case 2:
            g.setColor(Color.green);
            g.fillOval(60, 180, 50, 50);
            g.setColor(Color.black);
            g.fillOval(60, 120, 50, 50);
            g.drawOval(60, 60, 50, 50);
            break;
      }
   }
   class Signal extends Thread {
      public void run() {
         while (true) {
            f = (f + 1) % 3;
            repaint();
            try {
               Thread.sleep(1000);
            } catch (Exception e) {}
         }
      }
   }
  public static void main(String args[]) {
 new Slip5B();
}}
```

Slip 6

A) Write a java program to blink image on the Frame continuously.

```
import java.awt.*;
import java.awt.event.*;
class slip6_1 extends Frame implements Runnable
{
	Thread t;
	Label l1;
	int f;
	Slip8_1()
	{
		t=new Thread(this);
		t.start();
		setLayout(null);
		l1=new Label("Sumit");
		l1.setBounds(100,100,100,40);
		add(l1);
		setSize(300,300);
		setVisible(true);
		f=0;
	}
  public void run()
	{
		try
		{
```

```
                if(f==0)
                {
                        t.sleep(500);
                        l1.setText("");
                        f=1;
                }
                if(f==1)
                {
                        t.sleep(500);
                        l1.setText("Sumit");
                        f=0;
                }
            }
            catch(Exception e)
            {
                System.out.println(e);
            }
            run();
        }
        public static void main(String a[])
        {
            new Slip8_1();
        }
}
```

B) Write a SERVLET program which counts how many times a user has visited a web page. If user is visiting the page for the first time, display a welcome message. If the user is revisiting the page, display the number of times visited. (Use Cookie)

```
import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;
public class VisitCounterServlet extends HttpServlet
{
public void doGet(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException
{
        int visits = 0;
        Cookie[] c= request.getCookies();
        if (c != null)
       {
            for (int i=0;i<c.length;i++)
          {
              if (c[i].getName().equals("visitCount"))
              {
                   visits = Integer.parseInt(c[i].getValue());
               }
            }
        }
        visits++;
```

```
        Cookie v = new Cookie("visitCount", Integer.toString(visits));
        response.addCookie(v);
        response.setContentType("text/html");
        PrintWriter out = response.getWriter();
        if (visits == 1) {
            out.println("<html><head><title>Welcome</title></head><body>");
            out.println("<h2>Welcome to my website!</h2>");
            out.println("</body></html>");
        } else {
            out.println("<html><head><title>Visit
Count</title></head><body>");
            out.println("<h2>You have visited this website " + visits + "
times.</h2>");
            out.println("</body></html>");
        }
        out.close();
    }
}
```

Slip 7

A) Write a JSP script to validate given E-Mail ID.

```
<!DOCTYPE html>
<html>
<body>
<form method=get action="slip7_1.jsp" >
        Enter email id :<input type="text" name="t1"><br><br>
        <input type="submit"  value="Display">
</form>
</body>
</html>
```

2nd code

```
<%@page language="java"%>
<!DOCTYPE html>
<html>
<head>
<body>
 <font color="red">
  <%! int i,n,cnt;
  String s1;
   %>
   <% s1=request.getParameter("t1");
   n=s1.length();
```

```
    cnt=0;
    for(int i=0;i<n;i++)
     {
      char ch=s1.charAt(i);
         if(ch=='@')
         {
            cnt++;
         }
     }
     if(cnt==1){
      out.println("email valid");
      }
    else{
      out.println("email not valid");
     }
    %>
 </font>
</body>
</html>
```

B) Write a Multithreading program in java to display the number's between 1 to 100 continuously in a TextField by clicking on button. (use Runnable Interface).

```
import java.awt.event.*;
import javax.swing.*;
class printnum extends JFrame implements ActionListener, Runnable
{
        JFrame f;
        JTextField t;
        JButton b;
        Thread t1;
        printnum()
        {
                f = new JFrame();
                f.setSize(400, 400);
                f.setVisible(true);
              f.setLayout(null);
                t = new JTextField(60);
                b = new JButton("Start");
                b.addActionListener(this);
             t.setBounds(100,100,150,50);
                f.add(t);
           b.setBounds(100,150,150,50);
                f.add(b);
      t1 = new Thread(this);
       }
```

```
public void actionPerformed(ActionEvent e)
  {
          if(e.getSource()==b)
         {
        t1.start();
         }
  }
   public void run()
    {
         for(int i =1; i<=100;i++)
          {
              t.setText(""+i);
                try
                 {
                    Thread.sleep(1000);
                 }
                  catch(Exception  e){}
            }
         }
}
class slip7_2{
         public static void main(String args[])
         {
              printnum t5=new printnum();
         }
}
```

Slip 11

A) Write a java program to display IPAddress and name of client machine.

Client side program

```
import java.net.*;
class  myclient
{
public static void main(String args[ ]) throws  Exception
 {
Socket s=new Socket("localhost",4444);
System.out.println(s.getLocalPort());
System.out.println(s.getInetAddress());
 }
}
```

Server side program

```
import java.net.*;
class  myserver
{
public static void main(String args[])throws  Exception
{
ServerSocket ss=new    ServerSocket(4444);
System.out.println("server started");
Socket s=ss.accept();
System.out.println("connected to client");
 }
}
```

B) Write a Java program to display sales details of Product (PID, PName, Qty, Rate, Amount) between two selected dates. (Assume Sales table is already created).

```
package MyPackage;


import java.sql.Connection;
import java.sql.Date;
import java.sql.DriverManager;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import java.sql.SQLException;
import java.text.ParseException;
import java.text.SimpleDateFormat;
import java.util.Scanner;


public class Slip11B {
public static void main(String[] args) throws
ClassNotFoundException, SQLException, ParseException {
                // TODO Auto-generated method stub
                 Scanner scanner = new Scanner(System.in);


        System.out.println("Enter start date (yyyy-MM-dd):");
        String startDateString = scanner.nextLine();
```

```
        System.out.println("Enter end date (yyyy-MM-dd):");
        String endDateString = scanner.nextLine();
            SimpleDateFormat dateFormat = new
SimpleDateFormat("yyyy-MM-dd");
            java.util.Date utilStartDate =
dateFormat.parse(startDateString);
            java.sql.Date startDate = new
java.sql.Date(utilStartDate.getTime());
            java.util.Date utilEndDate =
dateFormat.parse(endDateString);
            java.sql.Date endDate = new
java.sql.Date(utilEndDate.getTime());
            Class.forName("com.mysql.cj.jdbc.Driver");
            System.out.println("Driver Loaded");
            Connection
c1=DriverManager.getConnection("jdbc:mysql://localhost:3306/dem
o","root","");
            System.out.println("Connection Succefullly");
PreparedStatement stmt = c1.prepareStatement("SELECT PID,
PName, Qty, Rate, Amount FROM Sales WHERE SaleDate BETWEEN ?
AND ?");
    stmt.setDate(1, new java.sql.Date(startDate.getTime()));
    stmt.setDate(2, new java.sql.Date(endDate.getTime()));
    ResultSet rs = stmt.executeQuery();

    System.out.println("Sales details between " + startDateString + "
and " + endDateString + ":");
```

```
        System.out.println("PID\tPName\tQty\tRate\tAmount");
        while (rs.next()) {
            int PID = rs.getInt("PID");
            String PName = rs.getString("PName");
            int Qty = rs.getInt("Qty");
            double Rate = rs.getDouble("Rate");
            double Amount = rs.getDouble("Amount");
            System.out.println(PID + "\t" + PName + "\t" + Qty + "\t" +
Rate + "\t" + Amount);
        }
                    c1.close();



         }

}
```

Slip 12

A) Write a java program to count the number of records in a table

```
import java.sql.*;
public class empdb
{
	public static void main(String[] args)throws Exception
	{
		Class.forName("com.mysql.cj.jdbc.Driver");
		System.out.println("driver loded");
		Connection
c1=DriverManager.getConnection("jdbc:mysql://localhost:3306/employee","ro
ot","");
		System.out.println("connection establisted");
		Statement s=c1.createStatement();
		 String str="select * from emp";
		 int i=0;
		 ResultSet rs=s.executeQuery(str);
		 while(rs.next())
		 {
			i++;

		 }
		 System.out.println("the total number of recoreds in table"+i);
	}

}
```

B) Write a program in java which will show lifecycle (creation, sleep, and dead) of a thread. Program should print randomly the name of thread and value of sleep time. The name of the thread should be hard coded through constructor. The sleep time of a thread will be a random integer in the range 0 to 4999.

```
import java.util.*;
class mth extends Thread
{
    mth(String s)
    {
        super(s);
    }
    public void run()
    {
        System.out.println(getName()+"thread is created");
        while(true)
        {
            System.out.println(this);
            int s=(int)(Math.random()*5000);
            System.out.println(getName()+"is sleeping for:"+s+"msec");
            try
            {
                Thread.sleep(s);
            }catch(Exception e){}
        }
```

```
    }
}
class slip13
{
    public static void main(String arg[])
    {
            mth t1=new mth("ABC");
            mth t2=new mth("PQR");
            t1.start();
            t2.start();
            try
            {
                    t1.join();
                    t2.join();
            }catch(Exception e)
            {}
            System.out.println(t1.getName()+"Thread Dead");
            System.out.println(t2.getName()+"Thread Dead");
    }
}
```

Slip 13

A) Write a java program to display name of currently executing Thread in multithreading.

```
class slip13_1
{
public static void main(String args[])
  {
  Thread t=new Thread();
System.out.println("current thread  is"+t.currentThread());
    }
}
```

B) Write a JSP program to display the details of College (CollegeID, Coll_Name, Address) in tabular form on browser.

```
<%@page import="java.sql.*"%>
<html>
<head>
<title>College Details</title>
</head>
<body>
<h1>College Details</h1>
<table border="1">
<tr>
<th>College ID</th>
<th>College Name</th>
<th>Address</th>
</tr>
<%
try {
   Class.forName("com.mysql.jdbc.Driver");
   Connection con =
DriverManager.getConnection("jdbc:mysql://localhost:3306/mydb", "root",
"");
   Statement stmt = con.createStatement();
   ResultSet rs = stmt.executeQuery("SELECT CollegeID, Coll_Name, Address
FROM College");
   while (rs.next()) {
      %>
      <tr>
```

```
        <td><%= rs.getInt(1) %></td>
        <td><%= rs.getString(2) %></td>
        <td><%= rs.getString(3) %></td>
        </tr>
        <%
    }
    rs.close();
    stmt.close();
    con.close();
} catch (Exception e) {
    out.println("Error: " + e.getMessage());
}
%>
</table>
</body>
</html>
```

Slip 16

A) Write a JSP script to accept username and password from user, if they are same then display “Login Successfully” message in Login.html file, otherwise display “Login Failed” Message in Error.html file.

```
<!DOCTYPE html>
<html>
<body>
<form method=get action="slip16_1.jsp" >
    Enter user Name :<input type="text" name="t1"><br><br>
        Enter password:<input type="text" name="t2"><br><br>
    <input type="submit"  value="Display">
</form>
</body>
</html>
```

2nd code

```
<%@page language="java"%>
<!DOCTYPE html>
<html>
<head>
<body>
 <font color="red">
  <%!
  String name,pwd;
   %>
```

```
   <%
name=request.getParameter("t1");
pwd=request.getParameter("t2");
    if(name.compareTo(pwd)==0)
     {
      out.println("login successful");
     }
   else
     {
      out.println("login not successful");
     }
   %>
 </font>
</body>
</html>
```

Slip 17

A) Write a java program to accept a String from user and display each vowel from a String after 3 seconds.

```
import java.io.*;
class printvowel implements  Runnable
{
       Thread t1;
      String s2;
          printvowel(String s1)
          {
          s2=s1;
         t1 = new Thread(this);
          t1.start();
          }
  public void run()
          {
  for(int i=0;i<s2.length();i++)
                    {
                   char z=s2.charAt(i);
              if (z=='a'||z=='e'|| z=='i' ||z=='u'||z=='o')
                              try
                              {
                                  System.out.println(z);
                                       Thread.sleep(3000);
                              }
                              catch(Exception  e){}
```

```
                }
        }
}
class slip17_1
{
        public static void main(String args[])throws Exception
        {
          BufferedReader br=new BufferedReader(new
InputStreamReader(System.in));
      System.out.println("Enter String");
  String str=br.readLine();
             printvowel t5=new printvowel(str);
        }
}
```

B) Write a Java program to check whether given file is present on server or not, if it is there then display its contents on client's terminal otherwise display the message "File Not Found".

Client side program

```
import java.net.*;
import java.io.*;
 public class Client
 {
   public static void main(String[] args) throws IOException {
Socket s = new Socket("localhost", 5400);
 DataInputStream dis = new DataInputStream(s.getInputStream());
  System.out.print("result = ");
 System.out.print(dis.readUTF());
     }
     }
```

Server side program

```
import java.io.*;
import java.net.*;
import java.util.*;
public class Server
 {
   public static void main(String[] args) throws Exception
 {
```

```
        ServerSocket ss = new ServerSocket(5400);
        while (true) {
           Socket s = ss.accept();
           System.out.println("Server Started");
           DataOutputStream dos = new
DataOutputStream(s.getOutputStream());
           File f = new File("temp.txt");
           if (f.exists()) {
              Scanner sc = new Scanner(f);
              while (sc.hasNextLine())
               {
                 String str = sc.nextLine();
                 dos.writeUTF(f.getName() + " = file content = " + str);
               }
           }
          else {
              String stra = "file is not Exists on SERVER";
              dos.writeUTF(" Error -- " + stra);
           }
        }
     }
}
```

Slip 19

A) Write a JSP program which accept UserName in a TextBox and greets the user according to the time on server machine.

```
<!DOCTYPE html>
<html>
<body>
<form method=get action="slip19_1.jsp" >
    Enter Name :<input type="text" name="t1"><br><br>
    <input type="submit"  value="Display">
</form>
</body>
</html>
```

2nd code

```
<%@ page language="java" import="java.util.*" %>
<%
  String name,date;
  name=request.getParameter("t1");
  Date d=new Date();
  date=d.toLocaleString();
  String s[]=date.split(" ");
  out.println(" Current date and time is:"+date);
  if(d.getHours() < 12 && s[4].equals("AM"))
```

```
{
   out.println("<br>Good Morning "+name);
}
  else
{
     if(d.getHours()==12 && s[4].equals("PM"))
     {
            out.println("<br>Good Afternoon "+name);
     }
      else
     {
            if(d.getHours()<6 && s[4].equals("PM"))
            {
                  out.println("<br>Good Afternoon "+name);
            }
            else
            {
                   if(d.getHours()>=6 && s[4].equals("PM"))
                  {
                        out.println("<br>Good Evening "+name);
                  }
            }
      }
%>
```

B) Write a Java program to display first record from student table (rno, sname, per) onto the TextFields by clicking on button. (Assume Student table is already created).

```
package MyPackage;


import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import java.sql.SQLException;
import java.util.Scanner;


public class Slip16B {


   public static void main(String[] args) {
      Scanner sc = new Scanner(System.in);


      // Accept details of students
      for (int i = 0; i < 5; i++) {
         System.out.println("Enter details for student " + (i + 1));
         System.out.println("Enter RollNumber:");
         int rollNumber = sc.nextInt();
         sc.nextLine(); // Consume newline
         System.out.println("Enter Name:");
         String name = sc.nextLine();
         System.out.println("Enter Percentage:");
```

```
        double percentage = sc.nextDouble();


        try {
            Class.forName("com.mysql.cj.jdbc.Driver");
            Connection conn =
DriverManager.getConnection("jdbc:mysql://localhost:3306/demo","root",
"");


            PreparedStatement stmt = conn.prepareStatement("INSERT INTO
Students (rno, sname, per) VALUES (?, ?, ?)");
            stmt.setInt(1, rollNumber);
            stmt.setString(2, name);
            stmt.setDouble(3, percentage);
            stmt.executeUpdate();


            conn.close();
        } catch (Exception e) {
            e.printStackTrace();
        }
    }
    try {
        Class.forName("com.mysql.cj.jdbc.Driver");
        Connection conn =
DriverManager.getConnection("jdbc:mysql://localhost:3306/demo","root",
"");


        PreparedStatement stmt = conn.prepareStatement("SELECT * FROM
Students WHERE per = (SELECT MAX(per) FROM Students)");
```

```
            ResultSet rs = stmt.executeQuery();

            if (rs.next()) {
                System.out.println("Student with highest percentage:");
                System.out.println("Roll Number: " + rs.getInt("rno"));
                System.out.println("Name: " + rs.getString("sname"));
                System.out.println("Percentage: " + rs.getDouble("per"));
            } else {
                System.out.println("No records found in the database.");
            }
            conn.close();
        } catch (SQLException | ClassNotFoundException e) {
            e.printStackTrace();
        }
    }
}
```

Slip 28

A) Write a java program for the implementation of synchronization.

```
class Table
{
 synchronized void printTable(int n)
{
  for(int i=1;i<=5;i++)
{
    System.out.println(n*i);
    try{
     Thread.sleep(400);
    }catch(Exception e){System.out.println(e);}
  }
 }
}
class MyThread1 extends Thread{
Table t;
MyThread1(Table t)
{
this.t=t;
}
public void run(){
t.printTable(5);
}
}
```

```
class MyThread2 extends Thread{
Table t;
MyThread2(Table t){
this.t=t;
}
public void run(){
t.printTable(100);
}
}
  class MyThread3 extends Thread{
Table t;
MyThread3(Table t)
{
this.t=t;
}
public void run(){
t.printTable(7);
}
}
 class TestSynchro
{
public static void main(String args[])
{
Table obj = new Table();//only one object
MyThread1 t1=new MyThread1(obj);
MyThread2 t2=new MyThread2(obj);
```

```
MyThread3 t3=new MyThread3(obj);
t1.start();
t2.start();
t3.start();
}
}
```

Slip 30

A) Write a JSP script to accept a String from a user and display it in reverse order.

```
<!DOCTYPE html>
<html>
<body>
<form method=get action="slip30_1.jsp" >
        Enter String:<input type="text" name="t1"><br><br>
        <input type="submit"  value="Display">
</form>
</body>
</html>
```

2nd code

```
<%@page language="java"%>
<!DOCTYPE html>
<html>
<head>
<body>
 <font color="red">
   <%!
 String s1;
    %>
    <%
```

```
s1=request.getParameter("t1");
StringBuffer br=new StringBuffer(s1);
  out.println("reverse string is   "+br.reverse());
   %>
 </font>
</body>
</html>
```

B) Write a java program in multithreading using applet for moving car.

```
import java.awt.*;
import java.awt.event.*;
import javax.swing.*;

public class movingcar extends JFrame implements Runnable {

    private Car car;
    private Thread thread;

    public movingcar() {
        super("Car Move");
        setSize(500, 500);
        setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        setVisible(true);

        car = new Car(100, 100);
```

```
        thread = new Thread(this);
        thread.start();
    }

    public void run() {
        while (true) {
            car.move();
            repaint();

            try {
                Thread.sleep(1000);
            } catch (InterruptedException e) {
                e.printStackTrace();
            }
        }
    }

    public void paint(Graphics g) {
        super.paint(g);
        g.drawImage(car.getImage(), car.getX(), car.getY(), null);
    }

    public static void main(String[] args) {
        new movingcar();
    }
}
```

```
class Car {

    private int x;
    private int y;
    private Image image;

    public Car(int x, int y) {
        this.x = x;
        this.y = y;
        image = new ImageIcon("car.png").getImage();
    }

    public void move() {
        x += 1;
    }
public int getX() {
        return x;
    }
public int getY() {
        return y;
    }
public Image getImage() {
        return image;
    }
}
```