**Day 3 Home work:**

**Program :**

**//Note : Each of the class file is named as code then code 1 then code2 and so on..**

//Students should upload a single PDF file

//The following programs should be done by using servlets

//1. Write a program to calculate simple interest and compound interest

import java.io.\*;

import javax.servlet.\*;

import javax.servlet.http.\*;

import java.sql.\*;

public class code extends HttpServlet {

       public void init() throws ServletException {

       }

       public void doPost(HttpServletRequest request, HttpServletResponse response)

          throws ServletException, IOException {

              response.setContentType("text/html");

              PrintWriter out = response.getWriter();

              double i=0,p=0,r=0,t=0,n=0;

              String a="";

              try {

                  p=Double.parseDouble(request.getParameter("p") );

                  r=Double.parseDouble(request.getParameter("r") );

                  t=Double.parseDouble(request.getParameter("t") );

                  a=request.getParameter("a");

                  if (a.equals("s")){

                    a="Simple Intrest : ";

                    i=(p\*t\*r)/100;

                  }

                  if (a.equals("c")){

                      a="Compound Intrest : ";

                      n=Double.parseDouble(request.getParameter("n"));

                      i=(p \* Math.pow(1 + (r / n), (n \* t))) - p ;

                  }

                }catch (Exception e) {

                  out.println("enter in all the values ");

              }

              out.println("<html><body>"+ a + i +"</body></html>");

       }

       public void destroy() {

       }

    }

//2. Write a program to convert kilometers into centimeters and vice versa

import java.io.\*;

import javax.servlet.\*;

import javax.servlet.http.\*;

import java.sql.\*;

public class code1 extends HttpServlet {

       public void init() throws ServletException {

       }

       public void doPost(HttpServletRequest request, HttpServletResponse response)

          throws ServletException, IOException {

              response.setContentType("text/html");

              PrintWriter out = response.getWriter();

              double k=0,c=0;

              String a=" ";

              try {

                  a=request.getParameter("a");

                  c=Double.parseDouble(request.getParameter("c") );

                  if (a.equals("c")){

                    a="In Kilometers :";

                    c=c/100000;

                  }

                  if (a.equals("k")){

                    a="In Centimeters :";

                    c=c\*100000;

                  }

                }catch (Exception e) {

                  out.println("enter in all the values ");

              }

              out.println("<html><body>"+ a + c +"</body></html>");

       }

       public void destroy() {

       }

    }

//3. Write a program to find a number is prime or not

import java.io.\*;

import javax.servlet.\*;

import javax.servlet.http.\*;

import java.sql.\*;

public class code2 extends HttpServlet {

       public void init() throws ServletException {

       }

       public void doPost(HttpServletRequest request, HttpServletResponse response)

          throws ServletException, IOException {

              response.setContentType("text/html");

              PrintWriter out = response.getWriter();

              int i,m=0,flag=0;

              int n=3;

              try {

                  n=Integer.parseInt(request.getParameter("a"));

              } catch (Exception e) {

                  out.println("Technical Error occored");

              }

              m=n/2;

              if(n==0||n==1){

               out.println(n+" is not prime number");

              }else{

               for(i=2;i<=m;i++){

                if(n%i==0){

                 out.println(n+" is not prime number");

                 flag=1;

                 break;

                }

               }

               if(flag==0)  { out.println(n+" is prime number"); }

              }

            }

       public void destroy() {

       }

    }

//4. Write a program to check if a number is armstrong number.

import java.io.\*;

import javax.servlet.\*;

import javax.servlet.http.\*;

import java.sql.\*;

public class code3 extends HttpServlet {

       public void init() throws ServletException {

       }

       public void doPost(HttpServletRequest request, HttpServletResponse response)

          throws ServletException, IOException {

              response.setContentType("text/html");

              PrintWriter out = response.getWriter();

                int number = 0, originalNumber, remainder, result = 0;

                try {

                    number = Integer.parseInt(request.getParameter("a"));

                } catch (Exception e) {

                    out.println("Techinal Error");

                }

                originalNumber = number;

                while (originalNumber != 0)

                {

                remainder = originalNumber % 10;

                result += Math.pow(remainder, 3);

                originalNumber /= 10;

                }

                if(result == number)

                    out.println(number + " is an Armstrong number.");

                else

                    out.println(number + " is not an Armstrong number.");

            }

       public void destroy() {

       }

    }

//5. Write a program to convert celcius to farenheit.

import java.io.\*;

import javax.servlet.\*;

import javax.servlet.http.\*;

import java.sql.\*;

public class code4 extends HttpServlet {

       public void init() throws ServletException {

       }

       public void doPost(HttpServletRequest request, HttpServletResponse response)

          throws ServletException, IOException {

              response.setContentType("text/html");

              PrintWriter out = response.getWriter();

              double Fahrenheit=0, Celsius=0;

              String a =" ";

              try {

                a=request.getParameter("a");

                if (a.equals("c")){

                Celsius=Double.parseDouble( request.getParameter("c") );

                Fahrenheit =((Celsius\*9)/5)+32;

                out.println("Temperature in Fahrenheit is: "+Fahrenheit);

                }

                if (a.equals("k")){

                Fahrenheit=Double.parseDouble( request.getParameter("c") );

                Celsius  = ((Fahrenheit-32)\*5)/9;

                out.println("Temperature in celsius is: "+Celsius);

                }

              }catch (Exception e) {

                out.println("enter in all the values ");

            }

            }

       public void destroy() {

       }

    }

**Outputs:**

Output problem 1:

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Output problem 2:









Output problem 3:









Output problem 4:









Output problem 5:

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