



SRI RAMACHANDRA
INSTITUTE OF HIGHER EDUCATION AND RESEARCH
(Category - I Deemed to be University) Porur, Chennai
SRI RAMACHANDRA ENGINEERING AND TECHNOLOGY

CSE 280 ADVANCE JAVA

STUDENT WORK BOOK

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Quarter : Q6
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Academic Year : 2020-2021

Date: 19-11-2020

Question 1:

Write a program to solve quadratic equation

Program:

```
import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;
import java.sql.*;

public class Day4 extends HttpServlet {
    public void init() throws ServletException {
    }
    public void doGet(HttpServletRequest request, HttpServletResponse
response)
        throws ServletException, IOException {
        double secondRoot = 0, firstRoot = 0;
        int a=Integer.parseInt(request.getParameter("p1"));
        int b=Integer.parseInt(request.getParameter("p2"));
        int c=Integer.parseInt(request.getParameter("p3"));
        double determinant = (b*b)-(4*a*c);
        double sqrt = Math.sqrt(determinant);
        response.setContentType("text/html");
        PrintWriter out = response.getWriter();
        if(determinant>0){
            firstRoot = (-b + sqrt)/(2*a);
            secondRoot = (-b - sqrt)/(2*a);
            out.println("Roots are :: "+ firstRoot +" and "+secondRoot);
        }else if(determinant == 0){
            out.println("Root is :: "+(-b + sqrt)/(2*a));
        }
        public void destroy() {    } }
```

Output:



← → ↻ ⓘ localhost:8080/Servlets/Day4.html

Enter a

Enter b

Enter c

Roots are :: -0.1330058199773533 and -1.3669941800226466

Date: 19-11-2020

Question 2:

Find the LCM of two numbers

Program:

```
import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;
import java.sql.*;

public class D2 extends HttpServlet {

    public void init() throws ServletException {
    }

    public void doGet(HttpServletRequest request, HttpServletResponse
response)
        throws ServletException, IOException {
        int a=Integer.parseInt(request.getParameter("p1"));
        int b=Integer.parseInt(request.getParameter("p2"));
        int lcm;
        response.setContentType("text/html");
```

```

        PrintWriter out = response.getWriter();
lcm = (a > b) ? a : b;

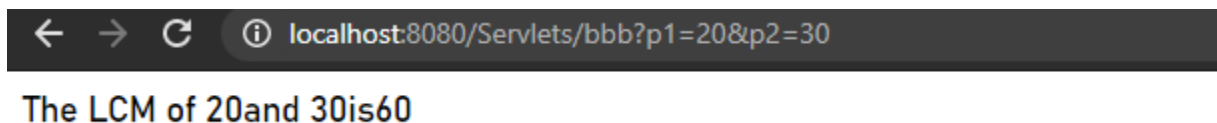
// Always true
while(true) {
    if( lcm % a == 0 && lcm % b == 0 ) {
        out.println("<html><body>The LCM of " +a+ "and "+b + "is" +lcm+
"<br></body></html>");
        break;
    }
    ++lcm;
}
}
public void destroy() {
}
}

```

Output:



A screenshot of a web browser window. The address bar shows 'localhost:8080/Servlets/Day4.html'. The page content includes two input fields: 'Enter a' with the value '20' and 'Enter b' with the value '30'. Below these fields is a button labeled 'Click'.



A screenshot of a web browser window. The address bar shows 'localhost:8080/Servlets/bbb?p1=20&p2=30'. The page content displays the text 'The LCM of 20and 30is60'.

Date: 19-11-2020

Question 3:

Find the HCF of two numbers

Program:

```
import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;
import java.sql.*;

public class D3 extends HttpServlet {

    public void init() throws ServletException {
    }

    public void doGet(HttpServletRequest request, HttpServletResponse
response)
        throws ServletException, IOException {
        int n1=Integer.parseInt(request.getParameter("p1"));
        int n2=Integer.parseInt(request.getParameter("p2"));
        response.setContentType("text/html");
        PrintWriter out = response.getWriter();
        int gcd=1;
        for(int i = 1; i <= n1 && i <= n2; ++i)
        {
            // Checks if i is factor of both integers
            if(n1 % i==0 && n2 % i==0)
                gcd = i;
        }

        out.println("<html><body>The HCF of " +n1+ "and "+n2 + "is" +gcd+
"<br></body></html>");
```

```

    }
    public void destroy() {
    }
}

```

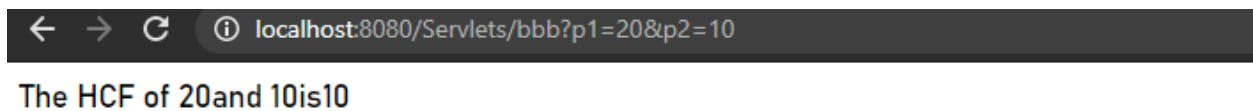
Output:



localhost:8080/Servlets/Day4.html

Enter a

Enter b



localhost:8080/Servlets/bbb?p1=20&p2=10

The HCF of 20and 10is10

Date: 19-11-2020

Question 4:

Find the sum of natural numbers in a given interval

Program:

```

import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;
import java.sql.*;

public class D4 extends HttpServlet {

    public void init() throws ServletException {
    }
}

```

```

    public void doGet(HttpServletRequest request, HttpServletResponse
response)
        throws ServletException, IOException {
        int a=Integer.parseInt(request.getParameter("p1"));
        response.setContentType("text/html");
        PrintWriter out = response.getWriter();

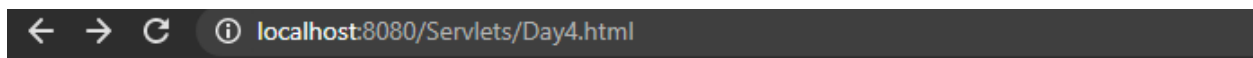
int sum=0;

for(int i = 1; i <= a; ++i)
    {
        sum += i;
    }
    out.println("<html><body>sum is " +sum+ "</body></html>");

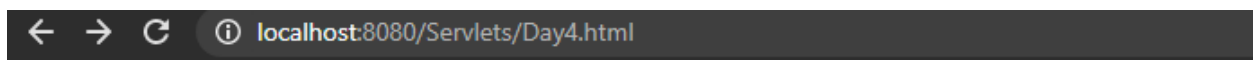
}
    public void destroy() {
    }
}

```

Output:



Enter a



Enter a

Date: 19-11-2020

Question 5:

```
import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;
import java.sql.*;

public class D6 extends HttpServlet {

    public void init() throws ServletException {
    }

    public void doGet(HttpServletRequest request, HttpServletResponse
response)
        throws ServletException, IOException {
        int a=Integer.parseInt(request.getParameter("p1"));
        int expo=Integer.parseInt(request.getParameter("p2"));
        long result = 1;

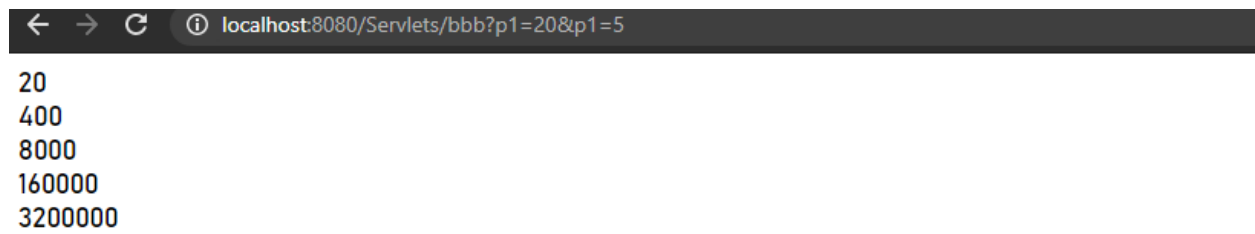
        response.setContentType("text/html");
        PrintWriter out = response.getWriter();

        for(int i = 1; i <= expo; ++i)
        {
            result *= a;
            out.println( +result+ "<br></body></html>");
        }
        public void destroy() {
        }
    }
}
```


Output:



A screenshot of a web browser window. The address bar shows 'localhost:8080/Servlets/Day4.html'. Below the address bar, there are two input fields. The first is labeled 'Enter base for power series :' and contains the value '20'. The second is labeled 'Enter Exponent for power series :' and contains the value '5'. Below these fields is a button labeled 'Click'.



A screenshot of a web browser window. The address bar shows 'localhost:8080/Servlets/bbb?p1=20&p1=5'. Below the address bar, the output of the calculation is displayed as a list of numbers: 20, 400, 8000, 160000, and 3200000.