

# CSE 280 ADVANCE JAVA

**STUDENT WORK BOOK**

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| **Year** | **:** | II |
| **Quarter** | **:** | Q6 |
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| **Academic Year** | **:** | 2020-2021 |

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**Questions:**

1. Write a program to calculate simple interest and compound interest
2. Write a program to convert kilometers into centimeters and vice versa
3. Write a program to find a number is prime or not
4. Write a program to check if a number is Armstrong number.
5. Write a program to convert Celsius to Fahrenheit.

**Program:**

**HTML:**

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1.0">

<title>Document</title>

</head>

<body>

<form action="q1" method="get">

<input type="text" placeholder="Principal" name = "p" /><br>

<input type="text" placeholder="Rate" name = "r" /><br>

<input type="text" placeholder ="Time" name = "t" /><br>

<button type="submit">Calculate</button>

</form>

<br>

<form action="q2" method="get">

<input type="text" placeholder="km" name = "km" /><br>

<input type="text" placeholder="cm" name = "cm" /><br>

<button type="submit">Convert</button>

</form>

<br>

<form action="q3" method="get">

<input type="text" name = "num" placeholder="Enter number"/><br>

<button type="submit">Check</button>

</form>

<br>

<form action="q4" method="get">

<input type="text" name = "no" placeholder="Enter number"/><br>

<button type="submit">Check</button>

</form>

<br>

<form action="q5" method="get">

<input type="text" name = "cel" placeholder="Enter celcius"/><br>

<button type="submit">Convert</button>

</form>

</body>

</html>

**XML:**

?xml version="1.0" encoding="UTF-8"?>

<web-app>

<servlet>

<servlet-name>q1</servlet-name>

<servlet-class>q1</servlet-class>

</servlet>

<servlet-mapping>

<servlet-name>q1</servlet-name>

<url-pattern>/q1</url-pattern>

</servlet-mapping>

<servlet>

<servlet-name>q2</servlet-name>

<servlet-class>q2</servlet-class>

</servlet>

<servlet-mapping>

<servlet-name>q2</servlet-name>

<url-pattern>/q2</url-pattern>

</servlet-mapping>

<servlet>

<servlet-name>q3</servlet-name>

<servlet-class>q3</servlet-class>

</servlet>

<servlet-mapping>

<servlet-name>q3</servlet-name>

<url-pattern>/q3</url-pattern>

</servlet-mapping>

<servlet>

<servlet-name>q4</servlet-name>

<servlet-class>q4</servlet-class>

</servlet>

<servlet-mapping>

<servlet-name>q4</servlet-name>

<url-pattern>/q4</url-pattern>

</servlet-mapping>

<servlet>

<servlet-name>q5</servlet-name>

<servlet-class>q5</servlet-class>

</servlet>

<servlet-mapping>

<servlet-name>q5</servlet-name>

<url-pattern>/q5</url-pattern>

</servlet-mapping>

</web-app>

**JAVA SERVLETS:**

import java.io.\*; import javax.servlet.\*;

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

public class q1 extends HttpServlet {

public void init() throws ServletException {

}

public void doGet(HttpServletRequest request, HttpServletResponse response) t hrows ServletException, IOException {

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

double p = Double.parseDouble(request.getParameter("p")); double r = Double.parseDouble(request.getParameter("r")); double t = Double.parseDouble(request.getParameter("t")); double si = p\*r\*t/100;

double ci = (p\*Math.pow((1+0.01\*r),t))-p; out.println("<html><body>");

out.println("<p>The simple interest is: Rs."+si+"</p>"); out.println("<p>The compound interest is: Rs."+ci+"</p>"); out.println("</body></html>");

}

public void destroy() {

}

}

import java.io.\*; import javax.servlet.\*;

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

public class q2 extends HttpServlet {

public void init() throws ServletException {

}

public void doGet(HttpServletRequest request, HttpServletResponse response) t hrows ServletException, IOException {

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

double km = Double.parseDouble(request.getParameter("km")); double cm = Double.parseDouble(request.getParameter("cm")); double c1 = km \* 100000;

double c2 = cm / 100000; out.println("<html><body>");

out.println("<p>The km is converted to:"+c1+" cm</p>"); out.println("<p>The cm is: Rs."+c2+" km</p>"); out.println("</body></html>");

}

public void destroy() {

}

}

import java.io.\*; import javax.servlet.\*;

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

public class q3 extends HttpServlet {

public void init() throws ServletException {

}

public void doGet(HttpServletRequest request, HttpServletResponse response) t hrows ServletException, IOException {

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

int num = Integer.parseInt(request.getParameter("num")); int count = 0;

for(int i=1; i<=num/2; i++){ if(num%i == 0){

count ++ ;

}

}

out.println("<html><body>"); if(count == 1){

out.println("<p>The number is prime number</p>");

}

else{

out.println("<p>The number is not prime number</p>");

}

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

}

public void destroy() {

}

}

import java.io.\*; import javax.servlet.\*;

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

public class q4 extends HttpServlet {

public void init() throws ServletException {

}

public void doGet(HttpServletRequest request, HttpServletResponse response) t hrows ServletException, IOException {

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

int no = Integer.parseInt(request.getParameter("no")); out.println("<html><body>");

int r, sum = 0, temp = no; while (no > 0) {

r = no % 10; no /= 10;

sum += r \* r \* r;

}

if (temp == sum) {

out.println("<p>" + temp + " is an armstrong</p>");

} else {

out.println("<p>" + temp + " is not an armstrong</p>");

}

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

}

public void destroy() {

}

}

import java.io.\*; import javax.servlet.\*;

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

public class q5 extends HttpServlet {

public void init() throws ServletException {

}

public void doGet(HttpServletRequest request, HttpServletResponse response) t hrows ServletException, IOException {

response.setContentType("text/html"); PrintWriter out = response.getWriter(); out.println("<html><body");

float cel = Float.parseFloat(request.getParameter("cel")); float fahr = (cel \* 9/5) + 32 ;

out.println("<p>The fahrenheit equivalent is: "+fahr+"</p>"); out.println("</body></html>");

}

public void destroy() {

}

}

**Output:**











