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WEEK – 1

Aim : Create a JDBC application which connects with an MS Access database and perform CRUD Operations.

Program :

```
package javadbc;
import java.io.*;
import java.sql.*;
public class JavaDBC {
   public static void main(String[] args)
   {
      try
      {
         Class.forName("net.ucanaccess.jdbc.UcanaccessDriver");
         // E:\venkat sai\WebDev_Program\JDBC.accdb
         Connection con = DriverManager.getConnection("jdbc:ucanaccess://E:\\venkat sai\\WebDev_Program\\JDBC.accdb");
         Statement st = con.createStatement();
         // Insert Query;
         String sqlinsert = "insert into Employee values(68, 'A. Charan', 208456732, 95000)";
         st.executeUpdate(sqlinsert);
         // update Query
         String sqlupdate = "update Employee set salary = 70000 where ID = 68";
         //st.executeUpdate(sqlupdate);
         // Delete record Query
         String sqldelete = "delete from Employee where id = 4";
```

```
        //st.executeUpdate(sqldelete);
        // Create Query
        String sqlcreate = "CREATE TABLE REGISTRATION " +
              "(id INTEGER not NULL, " +
              " first VARCHAR(255), " +
              " last VARCHAR(255), " +
              " age INTEGER, " +
              " PRIMARY KEY ( id ))";
        //st.executeUpdate(sqlcreate);
        // Select Query
        ResultSet rs = st.executeQuery("select * from Employee");
        while(rs.next())
        {
           System.out.println("Employee ID Number is: " + rs.getInt(1));
           System.out.println("Employee name is: " + rs.getString(2));
           System.out.println("Employee Mobile Number : " + rs.getInt(3));
           System.out.println("Employee Salary : " + rs.getInt(4));
           System.out.println();
        }
     }
     catch(Exception e)
     {
        System.out.println("An unknown Exception occured : \n\n" + e);
     }
  }
}
```

Output :

Select Query

Employee

ID	EmployeeNa	Mobile	Salary	Click to Add
1	Rizwanullah	34724675	45000	
2	MJNVsai	2416671	35000	
3	Ajay Kumar	4534589	87000	
4	Mounav	23000	10	
5	sai vamsi	2345667	90000	
9	sai vamsi	2345667	95000	
10	Raju Deepak	2354667	95	
11	A. Charan	208456732	95000	
(New)		0	0	

Update Query

Employee

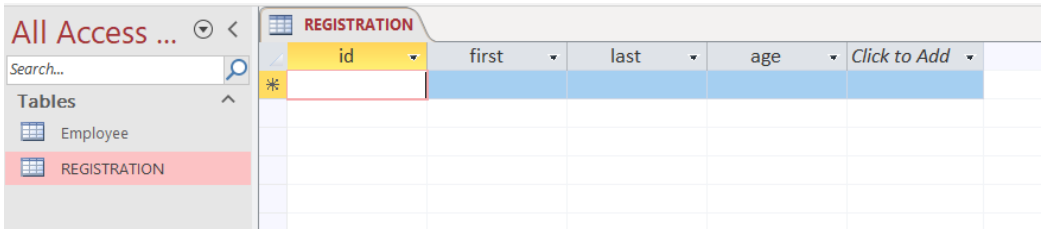
ID	EmployeeNa	Mobile	Salary	Click to Add
1	Rizwanullah	34724675	45000	
2	MJNVsai	2416671	35000	
3	Ajay Kumar	4534589	87000	
4	Mounav	23000	10	
5	sai vamsi	2345667	90000	
9	sai vamsi	2345667	95000	
10	Raju Deepak	2354667	95	
11	A. Charan	208456732	70000	
(New)		0	0	

Delete Query :

Employee

ID	EmployeeNa	Mobile	Salary	Click to Add
1	Rizwanullah	34724675	45000	
2	MJNVsai	2416671	35000	
3	Ajay Kumar	4534589	87000	
5	sai vamsi	2345667	90000	
9	sai vamsi	2345667	95000	
10	Raju Deepak	2354667	95	
11	A. Charan	208456732	70000	
(New)		0	0	

Create Query :



Result : Sucessfully Executed the Program.

Week – 2

Aim : Create a JDBC application which connects with an Mysql database and perform CRUD Operations.

Program :

```
package javadbc;
import java.io.*;
import java.sql.*;
import java.util.*;
public class MySql
{
   public static void main(String[] args)
   {
      try
      {
         Scanner s = new Scanner(System.in);
         System.out.print("Enter Eno : ");
         int a = s.nextInt();
         System.out.print("Enter Ename : ");
         String ss = s.next();

         Class.forName("com.mysql.jdbc.Driver");
         Connection con =
DriverManager.getConnection("jdbc:mysql://localhost/it","root","");
         Statement st = con.createStatement();
         // Statement is an Interface and Connection is an Child Class
```

```
//Create Database
String sqldb = "create database 208W1A12A0";
//st.executeUpdate(sqldb);

//Create table
String sqltable = "create table employee (eno int, name varchar(20))";
//st.executeUpdate(sqltable);

// Insert Records
String sqlinsert = "insert into employee values(4,'kumar')";
//st.executeUpdate(sqlinsert);
String insertdynamic = "insert into employee values("+a+", '"+ss+"')";
//st.executeUpdate(insertdynamic);

// Update Query
String sqlupdate = "update employee set name='charan' where eno=268";
//st.executeUpdate(sqlupdate);

// Delete Query
String sqldelete = "delete from employee where eno=299";
//st.executeUpdate(sqldelete);

// Select Query
ResultSet rs = st.executeQuery("select * from employee");
while(rs.next())
```

```
            System.out.println(rs.getInt(1) + "  " + rs.getString(2));
          con.close();
       }
       catch(Exception e)
       {
          System.out.println("An unknown Error occured : \n" + e);
       }
    }
}
```

Output :

Create Query :

```
mysql> show databases;
+--------------------+
| Database           |
+--------------------+
| information_schema |
| 208w1a12a0         |
| college            |
| companymail        |
| ddl                |
| it                 |
| mysql              |
| project1           |
| student            |
+--------------------+
9 rows in set (0.00 sec)
```

```
mysql> use 208w1a12a0;
Database changed
mysql> desc employee;
+-------+-------------+------+-----+---------+-------+
| Field | Type        | Null | Key | Default | Extra |
+-------+-------------+------+-----+---------+-------+
| eno   | int(11)     | YES  |     | NULL    |       |
| name  | varchar(20) | YES  |     | NULL    |       |
+-------+-------------+------+-----+---------+-------+
2 rows in set (0.08 sec)
```

Insert Query :

```
mysql> select * from employee;
+------+--------+
| eno  | name   |
+------+--------+
|  268 | A      |
|  299 | rizwan |
+------+--------+
2 rows in set (0.00 sec)

mysql>
```

Update Query :

```
mysql> select * from employee;
+------+--------+
| eno  | name   |
+------+--------+
|  268 | charan |
|  299 | rizwan |
+------+--------+
2 rows in set (0.00 sec)
```

Delete Query :

```
mysql> select * from employee;
+------+--------+
| eno  | name   |
+------+--------+
|  268 | charan |
+------+--------+
1 row in set (0.00 sec)
```

Result : Sucessfully Executed the Program.

Week – 3

Aim : Create a JDBC application and insert the records into Mysql database By using the PreparedStatement interface.

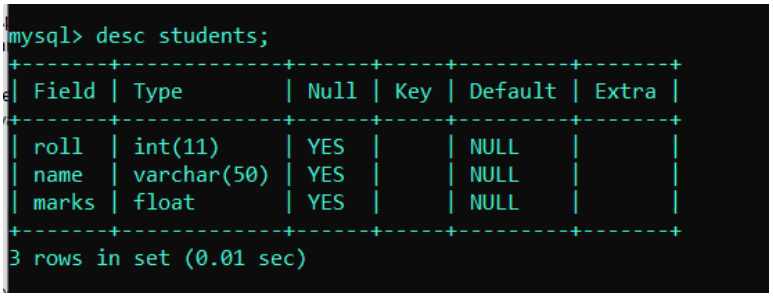
Program :

```
package javadbc;
import java.io.*;
import java.util.*;
import java.sql.*;
public class PrepState
{
   public static void main(String[] args)
   {
      try
      {
         Class.forName("com.mysql.jdbc.Driver");
         Connection con =
DriverManager.getConnection("jdbc:mysql://localhost/student","root","");
          String sqltable = "create table students(roll int, name varchar(50), marks float)";
          PreparedStatement ps = con.prepareStatement(sqltable);
          int t = ps.executeUpdate();
          System.out.println(t);

         String sqlinsert = "insert into students values(?, ?, ?)";
         PreparedStatement ps = con.prepareStatement(sqlinsert);
         ps.setInt(1, 82);
         ps.setString(2, "Sai vamsi");
         ps.setFloat(3, 95.8f);
         int i = ps.executeUpdate();
         System.out.println(i);

         String sqlres = "select * from students";
         PreparedStatement ps = con.prepareStatement(sqlres);
         ResultSet rs = ps.executeQuery();
         while(rs.next())
         {
```

```
            System.out.println("Student Roll Number : " + rs.getInt(1));
            System.out.println("Student Name : " + rs.getString(2));
            System.out.println("Student Marks : " + rs.getFloat(3));
            System.out.println();
        }
      }
      catch(Exception e)
      {
        System.out.println(e);
      }
   }
}
```

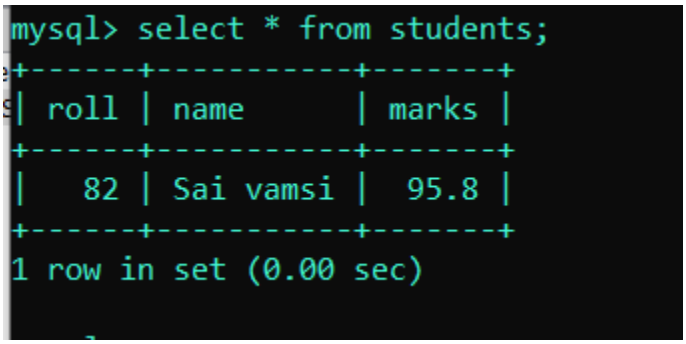
Output :

Create Query :



```
mysql> desc students;
+-------+-------------+------+-----+---------+-------+
| Field | Type        | Null | Key | Default | Extra |
+-------+-------------+------+-----+---------+-------+
| roll  | int(11)     | YES  |     | NULL    |       |
| name  | varchar(50) | YES  |     | NULL    |       |
| marks | float       | YES  |     | NULL    |       |
+-------+-------------+------+-----+---------+-------+
3 rows in set (0.01 sec)
```

Insert Query :



```
mysql> select * from students;
+------+-----------+-------+
| roll | name      | marks |
+------+-----------+-------+
|   82 | Sai vamsi |  95.8 |
+------+-----------+-------+
1 row in set (0.00 sec)
```

Result : Sucessfully Executed The Program

WEEK – 4

Aim : Create a Login Web Application which interacts with an mysql database and validates Login credentials of the user.

Program : index.html

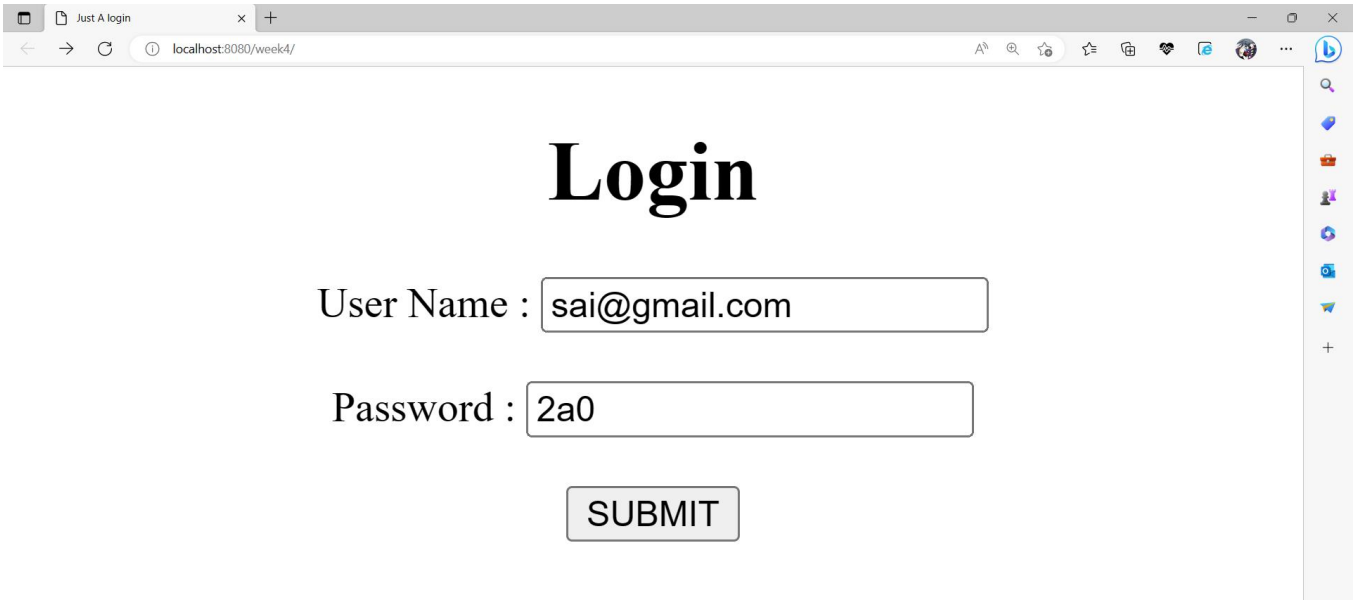
```
<html>
  <head>
    <title> Just A login </title>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
  </head>
  <body>
  <center>
    <h1> <b> Login </b> </h1>
    <form action = "Servlet1" method = "GET">
      <label for = "dfu">  User Name :  </label>
      <input type = "text" name = "u1" /> <br> <br>

      <label for = "dfp"> Password : </label>
      <input type = "text" name = "u2" /> <br> <br>

      <input type = "submit" value = "SUBMIT" />
    </form>
  </center>
  </body>
</html>
```

Program : Servlet1.java

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

public class Servlet1 extends HttpServlet
{
  @Override
```

```
   public void doGet(HttpServletRequest req,HttpServletResponse res)  throws
ServletException,IOException
   {
      res.setContentType("text/html");//setting the content type  or mine type
      PrintWriter pw = res.getWriter();//get the stream to write the data

      //writing html in the stream
      //pw.println("<html><body>");
      String s1 = req.getParameter("u1");
      String s2 = req.getParameter("u2");

      boolean status = false;

      try
      {
         Class.forName("com.mysql.jdbc.Driver");
         Connection con = DriverManager.getConnection("jdbc:mysql://localhost/it", "root",
"");

         String checksql = "select * from login where user = ? and pass = ?";
         PreparedStatement ps = con.prepareStatement(checksql);
         ps.setString(1, s1);
         ps.setString(2, s2);

         ResultSet rs = ps.executeQuery();
         while(rs.next())
         {
            status = true;
         }
         pw.print("<center> <h1> User Login Sucessfull </h1> </center>");
      }
      catch(Exception e)
      {
         e.printStackTrace();
      }
   }
}
```

Output :



Result : Sucessfully Executed The Program.

Week – 5

Aim : Create a Registration Web Application which interacts with Mysql database and Save them into the Database.

Program : index.html

```
<html>
  <head>
    <title> Registration </title>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
  </head>
  <body>
  <center>
    <h1> <b> Registration Form </b> </h1>
    <form action = "Servlet1" method = "GET">
      <h3> Full Name :   <input type = "text" name = "r1" /> </h3>
      <h3> Email ID :   <input type = "text" name = "r2" /> </h3>
      <h3> Password :   <input type = "password" name = "r3" /> </h3>

      <h3> Gender :   <input type = "radio" name = "r4" value = "male"/> Male
  <input type = "radio" name = "r4" value = "male"/> Female   <input type =
"radio" name = "r4" value = "male"/> Others </h3>

      <h3> Date Of Birth :   <input type = "date" name = "r5" /> </h3>
      <h3> City :   <input type = "text" name = "r6" /> </h3>
      <h3> State :   <input type = "text" name = "r7" /> </h3>

      <h3> Country :  
        <select name = "r8">
          <option> India </option>
          <option> USA </option>
          <option> Russia </option>
          <option> Japan </option>
          <option> Pakisthan </option>
          <option> France </option>
          <option> Germany </option>
```

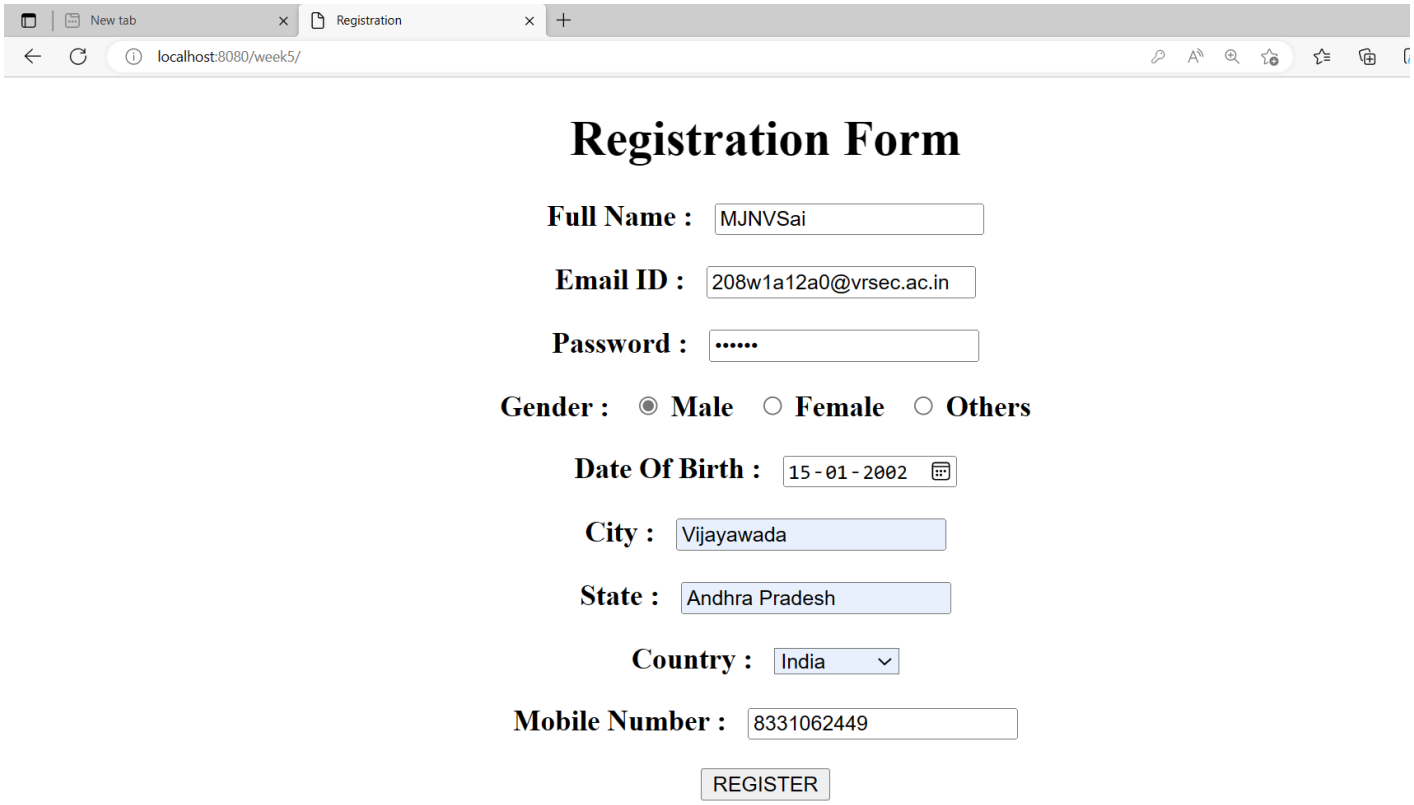
```
          </select>
        </h3>

        <h3> Mobile Number :   <input type = "text" name = "r9" /> </h3>
        <input type = "submit" value = "REGISTER" />

      </form>
   </center>
   </body>
</html>
```

Program : Servlet1.java

```
import javax.servlet.http.*;
import javax.servlet.*;
import java.io.*;
import java.sql.*;
public class Servlet1 extends HttpServlet
{
   @Override
   public void doGet(HttpServletRequest req,HttpServletResponse res)  throws
ServletException,IOException
   {
      res.setContentType("text/html");//setting the content type  or mine type
      PrintWriter pw = res.getWriter();//get the stream to write the data

      //writing html in the stream
      //pw.println("<html><body>");
      String s1 = req.getParameter("r1");
      String s2 = req.getParameter("r2");
      String s3 = req.getParameter("r3");
      String s4 = req.getParameter("r4");
      String s5 = (String)req.getParameter("r5");
      String s6 = req.getParameter("r6");
      String s7 = req.getParameter("r7");
      String s8 = req.getParameter("r8");
      String s9 = req.getParameter("r9");
```

```
      boolean status = false;

      try
      {
         Class.forName("com.mysql.jdbc.Driver");
         Connection con = DriverManager.getConnection("jdbc:mysql://localhost/it", "root",
"");

         String checksql = "insert into register values(?, ?, ?, ?, ?, ?, ?, ?, ?)";
         PreparedStatement ps = con.prepareStatement(checksql);
         ps.setString(1, s1);
         ps.setString(2, s2);
         ps.setString(3, s3);
         ps.setString(4, s4);
         ps.setString(5, s5);
         ps.setString(6, s6);
         ps.setString(7, s7);
         ps.setString(8, s8);
         ps.setString(9, s9);

         int result = ps.executeUpdate();
         while(result > 0)
         {
            status = true;
         }

         pw.print("<center> <h1> Your Registration is Sucessfull !!! </h1> </center>");
      }
      catch(Exception e)
      {
         e.printStackTrace();
      }
   }
}
```

Output :




```
mysql> select * from register;
+---------+-----------------------+----------+--------+------------+------------+----------------+---------+-------------+
| name    | email                 | password | gender | dob        | city       | state          | country | mobile      |
+---------+-----------------------+----------+--------+------------+------------+----------------+---------+-------------+
| sai     | dhfb@gmail.com        | 1234     | male   | 2023-03-16 | vijayawada | AP             | Japan   | 76476586745 |
| MJNVSai | 208w1a12a0@vrsec.ac.in | sai208   | male   | 2002-01-15 | Vijayawada | Andhra Pradesh | India   | 8331062449  |
+---------+-----------------------+----------+--------+------------+------------+----------------+---------+-------------+
2 rows in set (0.00 sec)

mysql>
```

Result : Sucessfully Executed The Program.

WEEK - 6

Aim : Create a Web application in which user enters an Employee Number and fetch the Employee Information and print it on servlet Page.

Program : Index.html

```
<html>
  <head>
    <title> Assignment 1 </title>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
  </head>
  <body>
  <center>
    <form action = "Servlet1" method = "GET">
      <h1> <b> Employee Details </b> </h1>
      <label for = "em"> Enter a Employee Number : </label>
      <input type = "text" name = "id" /> <br> <br>
      <input type = "submit" value = "SUBMIT" />
    </form>
  </center>
  </body>
</html>
```

Program : Servlet1.java

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

public class Servlet1 extends HttpServlet
{
  @Override
  public void doGet(HttpServletRequest req,HttpServletResponse res)  throws
ServletException,IOException
  {
    res.setContentType("text/html");   //setting the content type  or mine type
```

```
      PrintWriter pw=res.getWriter();     //get the stream to write the data

      int id = Integer.parseInt(req.getParameter("id"));

      try
      {
         Class.forName("com.mysql.jdbc.Driver");
         Connection con = DriverManager.getConnection("jdbc:mysql://localhost/it", "root",
"");

         PreparedStatement ps = con.prepareStatement("select * from javaemployee where
id = ?");
         ps.setInt(1, id);

         ResultSet rs = ps.executeQuery();
         while(rs.next())
         {
            pw.println("<center>");
            pw.println("<h1> Employeee Id : " + rs.getInt(1) + "</h1> <br> <br>");
            pw.println("<h1> Employeee Name : " + rs.getString(2) + "</h1> <br> <br>");
            pw.println("<h1> Employeee City : " + rs.getString(3) + "</h1> <br> <br>");
            pw.println("<h1> Employeee Company : " + rs.getString(4) + "</h1> <br> <br>");
            pw.println("<h1> Employeee Salary : " + rs.getFloat(5) + " Lakhs </h1> <br> <br>");
            pw.println("</center>");
         }
      }
      catch(Exception e)
      {
         pw.println("An unexcepted Error Occured");
      }
   }
}
```

Output :

Employee Details

Enter a Employee Number : 3

SUBMIT

Employeee Id : 3

Employeee Name : charan

Employeee City : krishna

Employeee Company : avantal

Employeee Salary : 98.99 Lakhs

Aim : Create a Web Application that provides a web program to an end User and he should be able to get the details in the form when it is Entered provide the update control on the form to update the Employee information in the database.

Program : Index.html

```
<html>
  <head>
    <title> Assignment 2 </title>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
  </head>
  <body>
  <center>
    <h1> <b> Book Details </b> </h1>
    <form action = "Servlet1" method = "GET">
      <label for = "is"> Enter Book ISBN Number : </label>
      <input type = "text" name = "isbn" /> <br> <br>
      <input type = "submit" value = "SUBMIT" />
    </form>
  </center>
  </body>
</html>
```

Program : Book.html

```
<html>
  <head>
    <title> Book Details </title>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
  </head>
  <body>
  <center>
    <form action = "Servlet2" method = "GET">
      <h1> <b> Update Book Details In Database </b> </h1>
      <label for = "is1"> Enter ISBN Number : </label>
```

```
        <input type="text" name="is1" /> <br> <br>

        <label for = "au1"> Enter Book Name : </label>
        <input type="text" name="au1" /> <br> <br>

        <label for = "bo1"> Enter Book Price : </label>
        <input type="text" name="bo1" /> <br> <br>

        <input type = "submit" value = "UPDATE" />
      </form>
   </center>
   </body>
</html>
```

Program : Servlet1.java

```
import java.io.IOException;
import java.io.PrintWriter;
import javax.servlet.ServletException;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import java.io.*;
import java.sql.*;
public class Servlet1 extends HttpServlet
{
   @Override
   protected void doGet(HttpServletRequest request, HttpServletResponse response) throws
ServletException, IOException
   {
      response.setContentType("text/html");        //setting the content type
      PrintWriter pw = response.getWriter();       //get the stream to write the data

      int isbn = Integer.parseInt(request.getParameter("isbn"));

      try
      {
         Class.forName("com.mysql.jdbc.Driver");
```

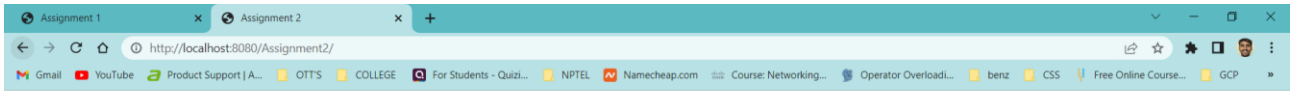
```
        Connection con = DriverManager.getConnection("jdbc:mysql://localhost/it", "root",
"");

        PreparedStatement ps = con.prepareStatement("select * from newbook where isbn =
?");
        ps.setInt(1, isbn);
        ResultSet rs = ps.executeQuery();

        while(rs.next())
        {
           pw.println("<center>");
           pw.println("<h1> Book ISBN Number : " + rs.getInt(1) + "</h1> <br> <br>");
           pw.println("<h1> Book Name : " + rs.getString(2) + "</h1> <br> <br>");
           pw.println("<h1> Book Price : " + rs.getFloat(3) + "</h1> <br> <br>");
           pw.println("</center>");
        }

        pw.println("<center>");
        //pw.println("<h1> Execution Completed </h1>");


        pw.println("<br> <br>");
        pw.println("<form action = 'book.html'>");
        pw.println("<input type = 'submit' value = 'EDIT' />");
        pw.println("</form>");
        pw.println("</center>");
     }
     catch(Exception e)
     {
        pw.println(e);
     }
   }
}
```

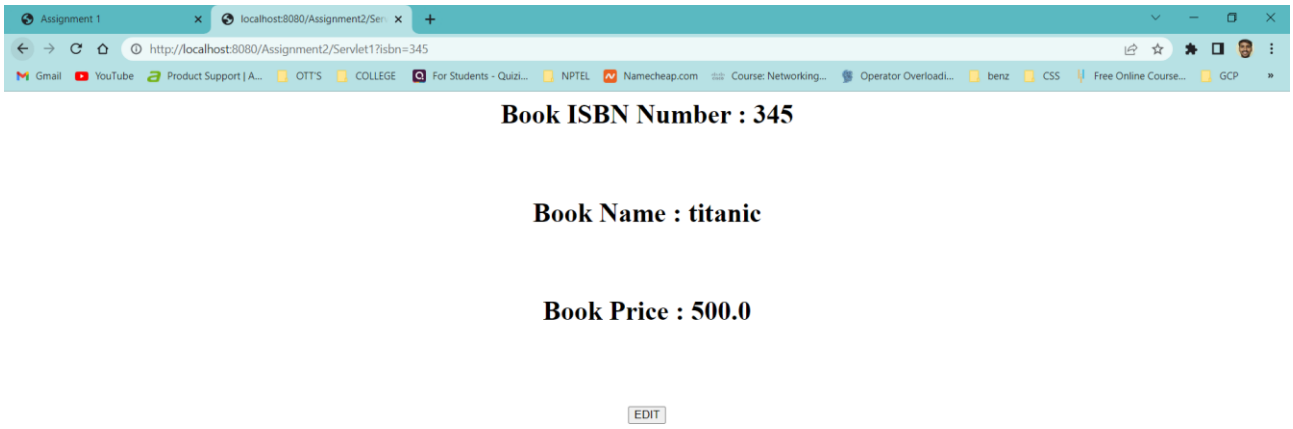
Program : Servlet2.java

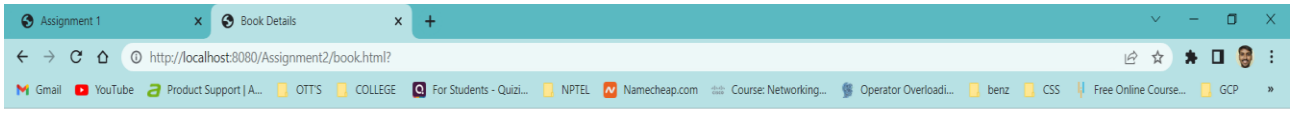
```
import java.io.IOException;
import java.io.PrintWriter;
import javax.servlet.ServletException;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import java.io.*;
import java.sql.*;
public class Servlet2 extends HttpServlet
{
   @Override
   protected void doGet(HttpServletRequest request, HttpServletResponse response) throws
ServletException, IOException
   {
      response.setContentType("text/html");        //setting the content type
      PrintWriter pw = response.getWriter();       //get the stream to write the data

      int isbn = Integer.parseInt(request.getParameter("is1"));
      String author = request.getParameter("au1");
      float price = Float.parseFloat(request.getParameter("bo1"));

      try
      {
         Class.forName("com.mysql.jdbc.Driver");
         Connection con = DriverManager.getConnection("jdbc:mysql://localhost/it", "root",
"");

         PreparedStatement ps = con.prepareStatement("update newbook set name = ?, price
= ? where isbn = ?");
         ps.setInt(3, isbn);
         ps.setString(1, author);
         ps.setFloat(2, price);

         int check = ps.executeUpdate();

         Statement st = con.createStatement();
```

```
        ResultSet rs = st.executeQuery("select * from newbook");

        while(rs.next())
        {
           pw.println("<center>");
           pw.println("<h1> Book ISBN Number : " + rs.getInt(1) + "</h1> <br> <br>");
           pw.println("<h1> Book Name : " + rs.getString(2) + "</h1> <br> <br>");
           pw.println("<h1> Book Price : " + rs.getFloat(3) + "</h1> <br> <br>");
           pw.println("<hr>");
           pw.println("</center>");
        }

        pw.println("<center>");
        pw.println("<h1> Execution Completed </h1>");
        pw.println("<br> <br>");
        pw.println("<form action = 'index.html'>");
        pw.println("<input type = 'submit' value = 'Search' />");
        pw.println("</form>");
        pw.println("</center>");
     }
     catch(Exception e)
     {
        pw.println(e);
     }
   }
}
```

Output :


Assignment 1
Assignment 2
http://localhost:8080/Assignment2/
Gmail
YouTube
Product Support | A...
OTT'S
COLLEGE
For Students - Quizi...
NPTEL
Namecheap.com
Course: Networking...
Operator Overloadi...
benz
CSS
Free Online Course...
GCP
Book Details
Enter Book ISBN Number : 345
SUBMIT


Assignment 1
http://localhost:8080/Assignment2/Servlet1?isbn=345
Gmail
YouTube
Product Support | A...
OTT'S
COLLEGE
For Students - Quizi...
NPTEL
Namecheap.com
Course: Networking...
Operator Overloadi...
benz
CSS
Free Online Course...
GCP
Book ISBN Number : 345
Book Name : titanic
Book Price : 500.0
EDIT



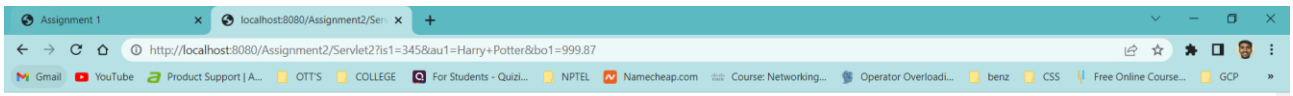
Update Book Details In Database

Enter ISBN Number : 345

Enter Book Name : Harry Potter

Enter Book Price : 999.87

UPDATE



Book Price : 698.99

Book ISBN Number : 345

Book Name : Harry Potter

Book Price : 999.87

Book ISBN Number : 420

Book Name : UHV

WEEK – 7

Aim : Create a Web application in which user enter the details of the Book are isbn, book name, book cost in the web form insert those Details as a new record in the database using servlets.

Program : Index.html

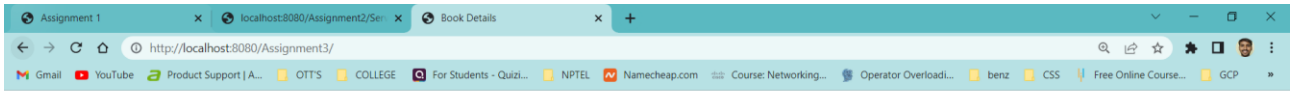
```
<html>
  <head>
    <title> Book Details </title>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
  </head>
  <body>
  <center>
    <form action = "Servlet1" method = "GET">
      <h1> <b> Insert New Record Into Database </b> </h1>
      <label for = "is1"> Enter Book ISBN Number : </label>
      <input type="text" name="is1" /> <br> <br>

      <label for = "au1"> Enter Book Name : </label>
      <input type="text" name="au1" /> <br> <br>

      <label for = "bo1"> Enter Book Price : </label>
      <input type="text" name="bo1" /> <br> <br>

      <input type = "submit" value = "SUBMIT" />
    </form>
  </center>
  </body>
</html>
```

Program : Servlet1.java

```
import java.io.IOException;
import java.io.PrintWriter;
import javax.servlet.ServletException;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import java.io.*;
import java.sql.*;
public class Servlet1 extends HttpServlet
{
   @Override
   protected void doGet(HttpServletRequest request, HttpServletResponse response) throws
ServletException, IOException
   {
      response.setContentType("text/html");        //setting the content type
      PrintWriter pw = response.getWriter();       //get the stream to write the data

      int isbn = Integer.parseInt(request.getParameter("is1"));
      String name = request.getParameter("au1");
      float price = Float.parseFloat(request.getParameter("bo1"));

      try
      {
         Class.forName("com.mysql.jdbc.Driver");
         Connection con = DriverManager.getConnection("jdbc:mysql://localhost/it", "root",
"");

         PreparedStatement ps = con.prepareStatement("insert into newbook values(?, ?, ?)");
         ps.setInt(1, isbn);
         ps.setString(2, name);
         ps.setFloat(3, price);

         int check = ps.executeUpdate();

         Statement st = con.createStatement();
         ResultSet rs = st.executeQuery("select * from newbook");
```

```
        while(rs.next())
        {
           pw.println("<center>");
           pw.println("<h1> Book ISBN Number : " + rs.getInt(1) + "</h1> <br> <br>");
           pw.println("<h1> Book Name : " + rs.getString(2) + "</h1> <br> <br>");
           pw.println("<h1> Book Price : " + rs.getFloat(3) + "</h1> <br> <br>");
           pw.println("<hr>");
           pw.println("</center>");
        }

        pw.println("<center>");
        pw.println("<h1> Execution Completed </h1>");
        pw.println("<br> <br>");
        pw.println("<form action = 'index.html'>");
        pw.println("<input type = 'submit' value = 'New Record' />");
        pw.println("</form>");
        pw.println("</center>");
     }
     catch(Exception e)
     {
        pw.println(e);
     }
   }
}
```

Output :



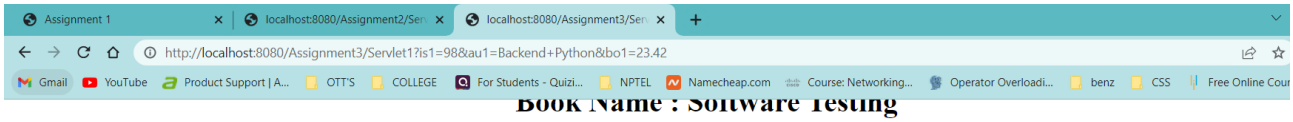
Insert New Record Into Database

Enter Book ISBN Number : 98

Enter Book Name : Backend Python

Enter Book Price : 23.42

SUBMIT



Book Name : Software Testing

Book Price : 50.99

Book ISBN Number : 98

Book Name : Backend Python

Book Price : 23.42

Aim : Create a Web application that gives a web form for the end user in Which end user enters the salary range . server should sent to the Employee details whose salary are beyond the range.

Program : Index.html

```
<html>
  <head>
    <title> Assignment - 4 </title>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
  </head>
  <body>
  <center>
    <form action = "Servlet1" method = "GET">
      <h1> <b> Range Of Salary </b> </h1>
      <label for = "mny"> Enter The Range Of Salary : </label>
      <input type = "text" name = "sal" /> <br> <br>
      <input type = "submit" value = "SUBMIT" />
    </form>
  </center>
  </body>
</html>
```

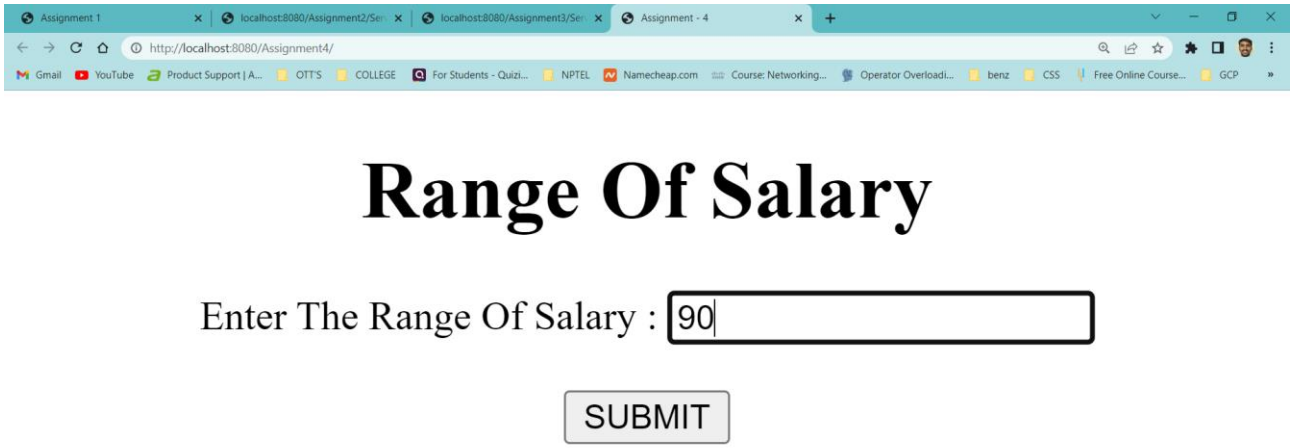
Program : Servlet1.java

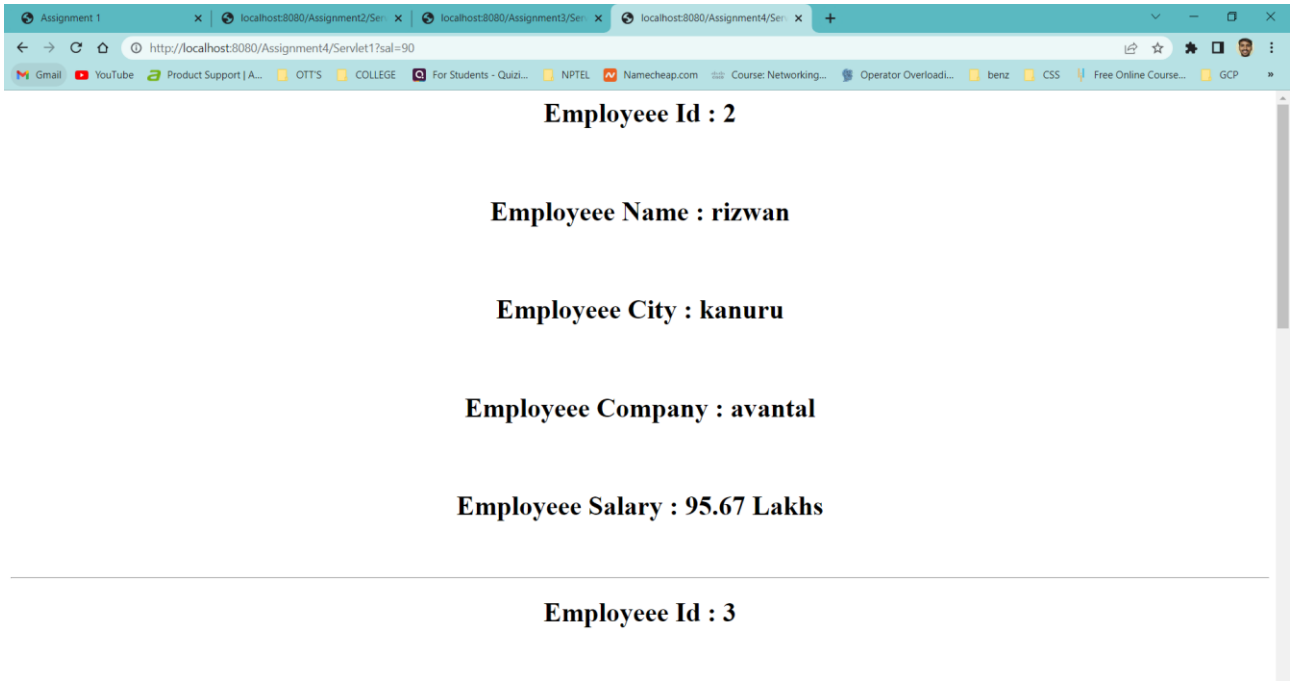
```
import java.io.IOException;
import java.io.PrintWriter;
import javax.servlet.ServletException;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import java.io.*;
import java.sql.*;
public class Servlet1 extends HttpServlet
{
  @Override
```

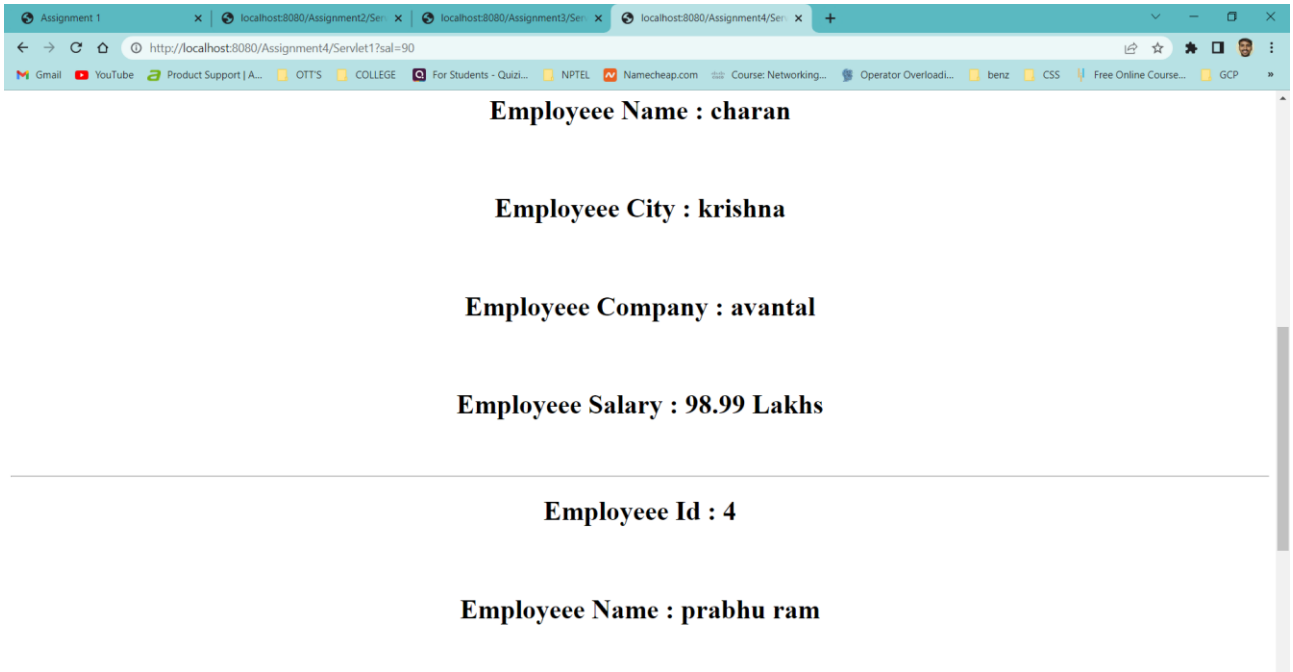
```
  protected void doGet(HttpServletRequest request, HttpServletResponse response) throws
ServletException, IOException
  {
    response.setContentType("text/html");        //setting the content type
    PrintWriter pw = response.getWriter();       //get the stream to write the data

    int range = Integer.parseInt(request.getParameter("sal"));

    try
    {
      Class.forName("com.mysql.jdbc.Driver");
      Connection con = DriverManager.getConnection("jdbc:mysql://localhost/it", "root",
"");

      PreparedStatement ps = con.prepareStatement("select * from javaemployee where
salary >= ?");
      ps.setInt(1, range);


      ResultSet rs = ps.executeQuery();

      while(rs.next())
      {
        pw.println("<center>");
        pw.println("<h1> Employeee Id : " + rs.getInt(1) + "</h1> <br> <br>");
        pw.println("<h1> Employeee Name : " + rs.getString(2) + "</h1> <br> <br>");
        pw.println("<h1> Employeee City : " + rs.getString(3) + "</h1> <br> <br>");
        pw.println("<h1> Employeee Company : " + rs.getString(4) + "</h1> <br> <br>");
        pw.println("<h1> Employeee Salary : " + rs.getFloat(5) + " Lakhs </h1> <br> <br>");
        pw.println("<hr>");
        pw.println("</center>");
      }

      pw.println("<center>");
      //pw.println("<h1> Execution Completed </h1>");
      pw.println("<br> <br>");
      pw.println("<form action = 'index.html'>");
```

```
        pw.println("<input type = 'submit' value = 'HOME' />");
        pw.println("</form>");
        pw.println("</center>");
      }
      catch(Exception e)
      {
        pw.println(e);
      }
   }
}
```

Output :




Assignment 1
localhost:8080/Assignment2/Ser
localhost:8080/Assignment3/Ser
localhost:8080/Assignment4/Ser
http://localhost:8080/Assignment4/Servlet1?sal=90
Gmail
YouTube
Product Support | A...
OTT'S
COLLEGE
For Students - Quizi...
NPTEL
Namecheap.com
Course: Networking...
Operator Overloadi...
benz
CSS
Free Online Course...
GCP
Employeee Id : 2
Employeee Name : rizwan
Employeee City : kanuru
Employeee Company : avantal
Employeee Salary : 95.67 Lakhs
Employeee Id : 3


Assignment 1
localhost:8080/Assignment2/Ser
localhost:8080/Assignment3/Ser
localhost:8080/Assignment4/Ser
http://localhost:8080/Assignment4/Servlet1?sal=90
Gmail
YouTube
Product Support | A...
OTT'S
COLLEGE
For Students - Quizi...
NPTEL
Namecheap.com
Course: Networking...
Operator Overloadi...
benz
CSS
Free Online Course...
GCP
Employeee Name : charan
Employeee City : krishna
Employeee Company : avantal
Employeee Salary : 98.99 Lakhs
Employeee Id : 4
Employeee Name : prabhu ram

WEEK – 8

Aim : Create a web application for the Login and Logout Form using Servlets and cookies where cookies stores the user information In the web browser.

Program : index.html

```
<html>
  <head>
    <title> Login & Logout Using Cookies </title>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
  </head>
  <body>
  <center>
    <a href="login.html"> Login </a>|
      <a href="LogoutServlet"> Logout </a>|
      <a href="ProfileServlet"> Profile </a>
    <hr>
  </center>
  </body>
</html>
```

Program : link.html

```
<html>
  <head>
    <title> Link Web Page </title>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
  </head>
  <body>
  <center>
    <a href="login.html"> Login </a>|
      <a href="LogoutServlet"> Logout </a>|
      <a href="ProfileServlet"> Profile </a>
    <hr>
  </center>
  </body>  </html>
```

Program : login.html

```
<html>
  <head>
    <title>Login Web Page</title>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
  </head>
  <body bgcolor = "#ff8080">
    <center>
    <form action = "LoginServlet" method = "POST">
      <h1> <strong> Login & Logout Using Cookies </strong> </h1>
      <label for="un"> Enter Your Name : </label>
      <input type = "text" name = "un" size = "25"/> <br> <br>
      <label for="up"> Enter Your Password : </label>
      <input type = "password" name = "up" /> <br> <br>
      <input type = "submit" value = "Login" />
    </form>
    </center>
  </body>
</html>
```

Program : LoginServlet.java

```
import java.io.IOException;
import java.io.PrintWriter;
import javax.servlet.ServletException;
import javax.servlet.http.Cookie;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
public class LoginServlet extends HttpServlet
{
  protected void doPost(HttpServletRequest request, HttpServletResponse response)
throws ServletException, IOException
  {
    response.setContentType("text/html");
    PrintWriter out = response.getWriter();
```

```
      request.getRequestDispatcher("link.html").include(request, response);

      String s1 = request.getParameter("un");
      String s2 = request.getParameter("up");

      if(s2.equals("admin"))
      {
         out.println("You Are Sucessfully Login");
         out.println("<br> Welcome " + s1);

         Cookie ck = new Cookie("name", s1);
         response.addCookie(ck);
      }
      else
      {
         out.println("Error !!! UserName Or password Must be Wrong Please Check It Again ");
         request.getRequestDispatcher("login.html").include(request, response);
      }
      out.close();
   }

}
```

Program : LogoutServlet.java

```
import java.io.IOException;
import java.io.PrintWriter;
import javax.servlet.ServletException;
import javax.servlet.http.Cookie;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
public class LogoutServlet extends HttpServlet
{
   protected void doGet(HttpServletRequest request, HttpServletResponse response) throws
ServletException, IOException
   {
```

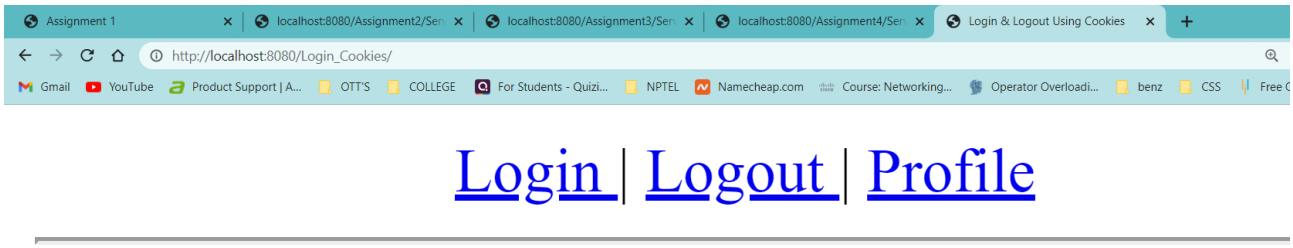
```
    response.setContentType("text/html");
    PrintWriter out = response.getWriter();

    request.getRequestDispatcher("link.html").include(request, response);
    Cookie ck = new Cookie("name", "");
    ck.setMaxAge(0);
    response.addCookie(ck);

    out.println("You are Sucessfully Logout")   }   }
```

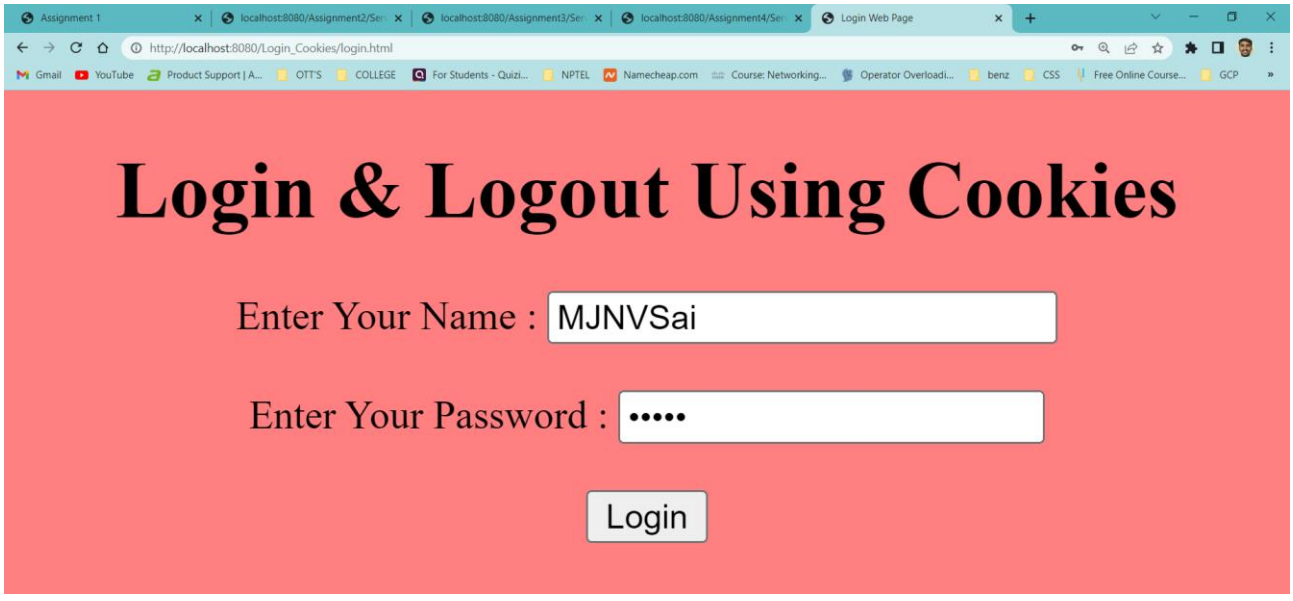
Program : ProfileServlet.java

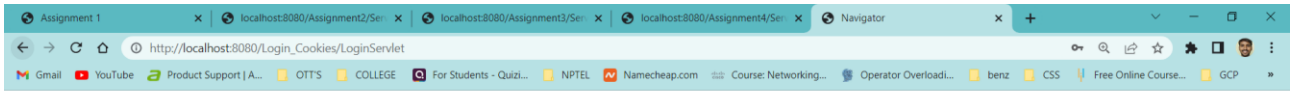
```
import java.io.IOException;
import java.io.PrintWriter;
import javax.servlet.ServletException;
import javax.servlet.http.Cookie;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
public class ProfileServlet extends HttpServlet
{
   protected void doGet(HttpServletRequest request, HttpServletResponse response) throws
ServletException, IOException
   {
      response.setContentType("text/html");
      PrintWriter out = response.getWriter();

      request.getRequestDispatcher("link.html").include(request, response);
      Cookie ck[] = request.getCookies();

      if(ck != null)
      {
         String name = ck[0].getValue();
         if(!name.equals("") || name != null)
         {
            out.println("<b> Welcome to Profile </b> ");
            out.println("Welcome" + name);
         }
```

```
        }
        else
        {
           out.println("Please Login First");
           request.getRequestDispatcher("login.html").include(request, response);
        }
        out.close();
    }
}
```

Output :

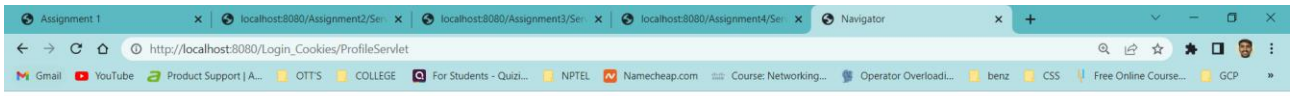






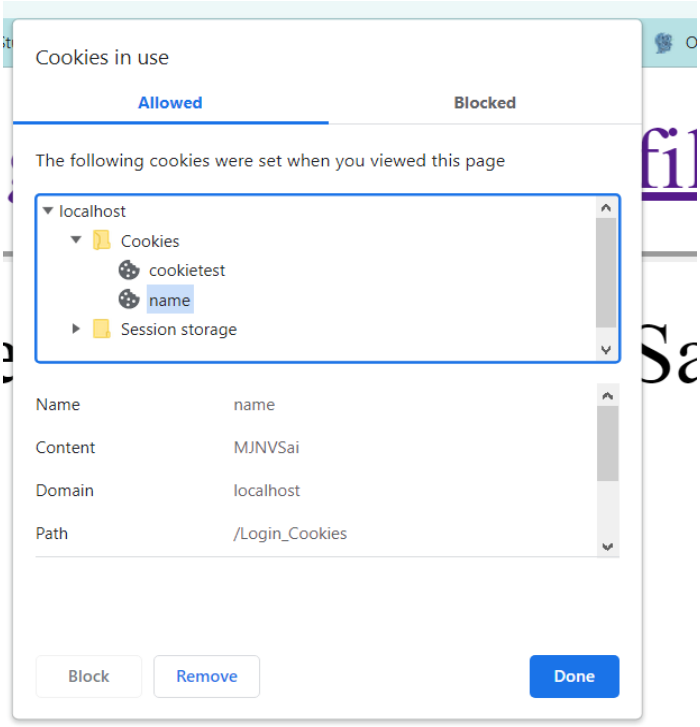
Login | Logout | Profile

You Are Sucessfully Login
Welcome MJNVSai



Login | Logout | Profile

Welcome to Profile WelcomeMJNVSai



Aim : Create a web application in which, a web form allows the end user To perform online transfer of funds from savings account to the Current account and it will update in the database also.

Program : index.html

```
<html>
  <head>
    <title> Banking Application </title>
  </head>
  <body>
  <center>
    <h1> <b> <i> Online Fund Transfer Interface </i> </b> </h1>
    <form action = "Transfer" method = "POST">
      <label for = "sbno"> Enter Savings A/C Number : </label>
      <input type="text" name="sbno" required /> <br> <br>
      <label for = "cbno"> Enter Current A/C Number : </label>
      <input type="text" name="cbno" required /> <br> <br>
      <label for = "amount"> Enter Transfer : </label>
      <input type="text" name="amount" required /> <br> <br>
      <input type="submit" value="TRANSFER"/>
    </form>
  </center>
  </body>
</html>
```

Program : web.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<web-app version="3.1" xmlns="http://xmlns.jcp.org/xml/ns/javaee"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://xmlns.jcp.org/xml/ns/javaee
http://xmlns.jcp.org/xml/ns/javaee/web-app_3_1.xsd">

  <servlet>
    <servlet-name>Transfer</servlet-name>
    <servlet-class>Transfer</servlet-class>
```

```
    <init-param>
      <param-name>Driver</param-name>
      <param-value>com.mysql.jdbc.Driver</param-value>
    </init-param>

    <init-param>
      <param-name>DriverUrl</param-name>
      <param-value>jdbc:mysql://localhost/it</param-value>
    </init-param>

    <init-param>
      <param-name>Username</param-name>
      <param-value>root</param-value>
    </init-param>

    <init-param>
      <param-name>Password</param-name>
      <param-value></param-value>
    </init-param>
  </servlet>

  <servlet-mapping>
    <servlet-name>Transfer</servlet-name>
    <url-pattern>/Transfer</url-pattern>
  </servlet-mapping>

  <session-config>
    <session-timeout>
      30
    </session-timeout>
  </session-config>
</web-app>
```

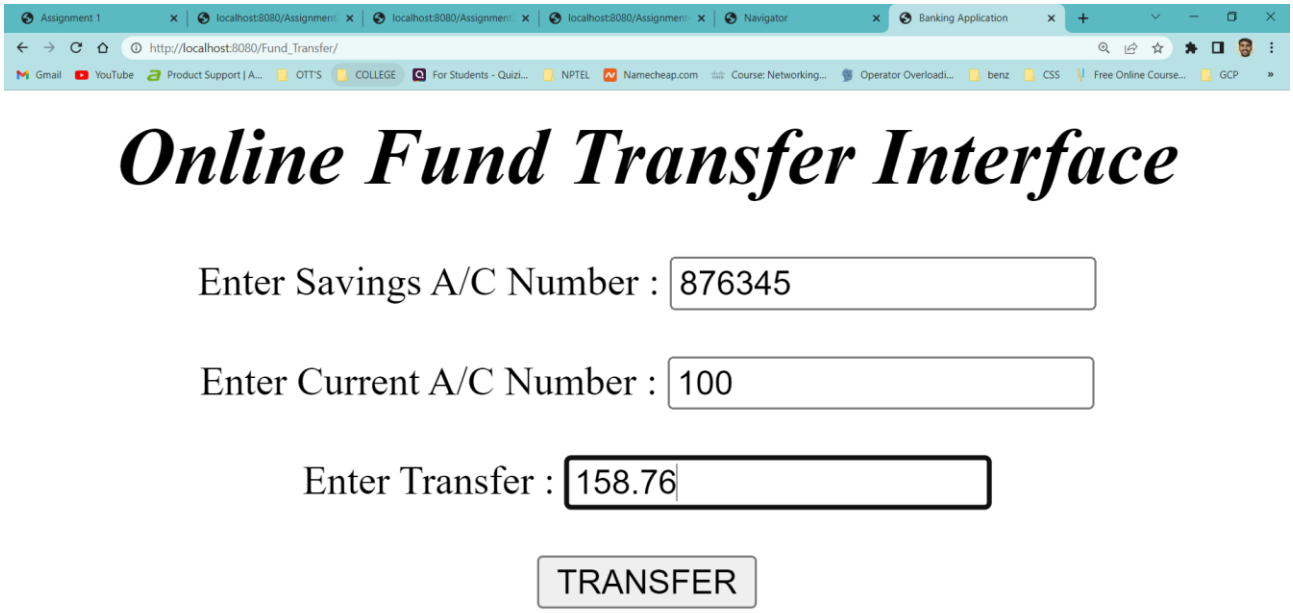
Program : Transfer.java

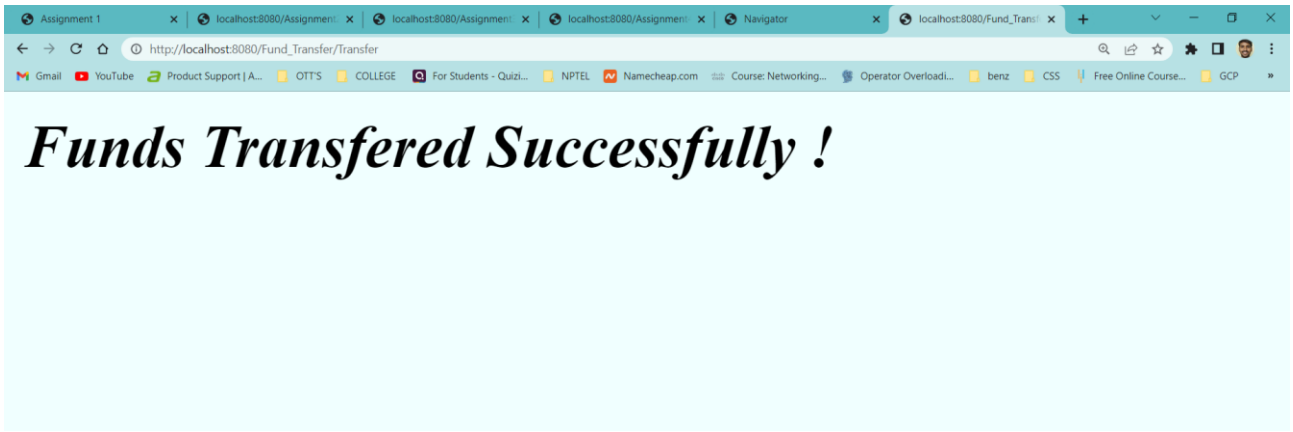
```
import java.io.*;
import java.sql.*;
import java.lang.*;
import java.util.*;
import javax.servlet.*;
import javax.servlet.http.*;
//main code starts from here
public class Transfer extends HttpServlet
{

   Connection con;
   public void init(ServletConfig config) throws ServletException
   {
    try
    {
     String driver = config.getInitParameter("Driver");
     String url = config.getInitParameter("DriverUrl");
     String user = config.getInitParameter("Username");
     String pwd = config.getInitParameter("Password");

     Class.forName(driver);
     con = DriverManager.getConnection(url, user, pwd);
    }
    catch(Exception e)
    {
     System.out.println(e);
    }
   }
   public void doPost(HttpServletRequest req,HttpServletResponse res) throws
ServletException,IOException
   {
    Statement st = null;
    int sbaccno = Integer.parseInt(req.getParameter("sbno"));
    int caccno = Integer.parseInt(req.getParameter("cbno"));
    float amount = Float.parseFloat(req.getParameter("amount"));
```

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

    out.println("<html>");
    out.println("<body bgcolor='azure'>");
    try
    {
     st = con.createStatement();
     String sql1 = "update savings set balance = balance-" +amount+ "where accno="
+sbaccno;
     String sql2 = "update current set balance = balance+" +amount+ "where accno="
+caccno;

     if(sbaccno != caccno)
     {
        st.executeUpdate(sql1);
        st.executeUpdate(sql2);
        out.println("<h2> <b> <i> Funds Transfered Successfully ! </i> </b> </h2>");
     }
     else
     {
      out.println("Saving or Current Bank Account Number was incorrect. Please check and
try again ! <a href='index.html'> Click here </a>");
     }


    }
    catch(Exception e)
    {
     System.out.println(e);
    }
    finally
    {
     try
     {
      if(st!=null)
      {
```

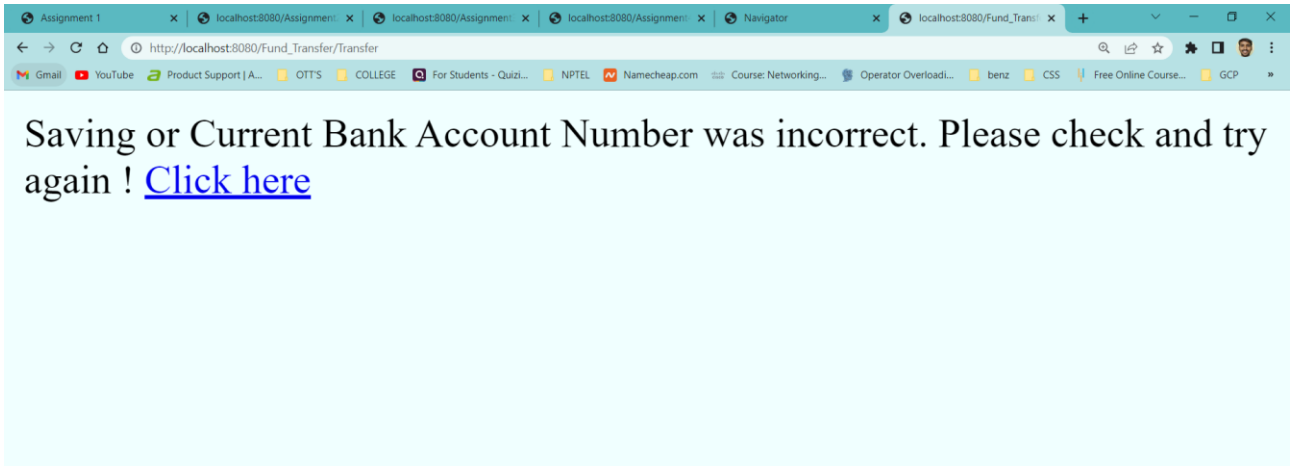
```
        st.close();
       }
      }
      catch(Exception e)
      {
       e.printStackTrace();
      }
    }
    out.println("</body>");
    out.println("</html>");
  }
  public void destroy()
  {
    try
    {
     if(con!=null)
     {
       con.close();
     }
    }
    catch(Exception e)
    {
      e.printStackTrace();
    }
  }

}
```

Output :





Invalid Input :



WEEK – 9

Aim : Create a Web Application Which Shows the product code and product quantity on User side of an web page and create a session in which session holds the product Code and quatity of that product

Program : index.html

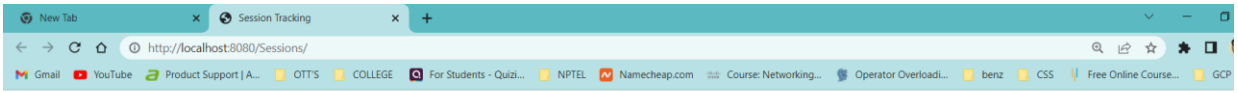
```
<html>
  <head>
    <title> Session Tracking </title>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
  </head>
  <body>
  <center>
    <h1> Welcome to The Shopping Mall </h1>

    <form action = "Servlet1" method = "GET">
      <label for = "a1"> Select Product Code : </label>
      <select name = "pCode">
        <option value = 101> 101
        <option value = 102> 102
        <option value = 103> 103
        <option value = 104> 104
        <option value = 105> 105
      </select> <br> <br>

      <label for = "a2"> Product Quantity : </label>
      <input type = "text" name = "qty" /> <br> <br>
      <input type = "submit" name = "submit" value = "ADD ITEM" />
      <input type = "submit" name = "submit" value = "REMOVE ITEM" />
      <input type = "submit" name = "submit" value = "SHOW ITEMS" />
      <input type = "submit" name = "submit" value = "PAY AMOUNT" />
      <input type = "submit" name = "submit" value = "LOGOUT" />
    </form>
  </center>
  </body>  </html>
```

Program : Servlet1.java

```
import java.io.*;
import javax.servlet.*;
import java.util.*;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import javax.servlet.http.HttpSession;

public class Servlet1 extends HttpServlet
{
   HttpSession session;
   String pCode, qty, clickButton;

   public void doGet(HttpServletRequest req, HttpServletResponse res) throws
ServletException, IOException
   {
      res.setContentType("text/html");
      PrintWriter pw = res.getWriter();
      session = req.getSession(true);
      clickButton = req.getParameter("submit");

      if(clickButton.equals("ADD ITEM"))
      {
         pCode = req.getParameter("pCode");
         qty = req.getParameter("qty");

         if(!pCode.equals("") || qty.equals(""))
         {
            session.setAttribute(pCode, qty);
            res.sendRedirect("./index.html");
         }
      }
      else if(clickButton.equals("REMOVE ITEM"))
      {
         pCode = req.getParameter("pCode");
```

```
            session.removeAttribute(pCode);
            res.sendRedirect("./index.html");
        }
        else if(clickButton.equals("SHOW ITEMS"))
        {
            Enumeration e = session.getAttributeNames();
            if(e.hasMoreElements())
            {
                pw.println("<h1> Your Shopping Cart Items </h1>");
                while(e.hasMoreElements())
                {
                    String code = (String)e.nextElement();
                    pw.println("<h1> Product Code : " + code + "</h1>");
                    pw.println("<h1> Quantity : " + session.getAttribute(code) + "</h1>");
                }
            }
            else
            {
                pw.println("<h1> No Items Please </h1>");
            }
        }
        else if(clickButton.equals("LOGOUT"))
        {
            session.invalidate();
            res.sendRedirect("./index.html");
        }
        else if(clickButton.equals("PAY AMOUNT"))
        {
            pw.println("<h1> Payment Logic Goes Here </h1>");
        }
        pw.close();
    }
}
```

Output :

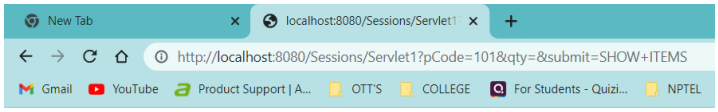


Welcome to The Shopping Mall

Select Product Code : 101

Product Quantity : 435

ADD ITEM | REMOVE ITEM | SHOW ITEMS | PAY AMOUNT | LOGOUT



Your Shopping Cart Items

Product Code : 101

Quantity : 435

Product Code : 102

Quantity : 500

Product Code : 103

Quantity : 999

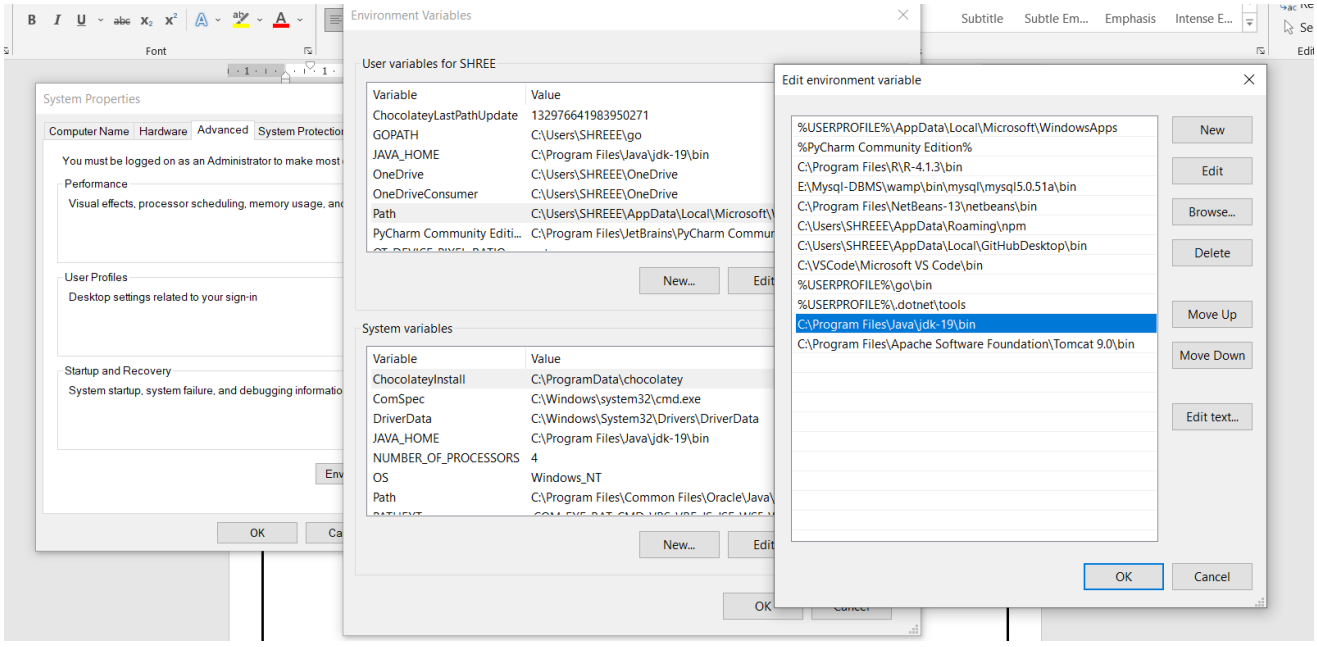
Result : Sucessfully Executed The Program.

WEEK – 10

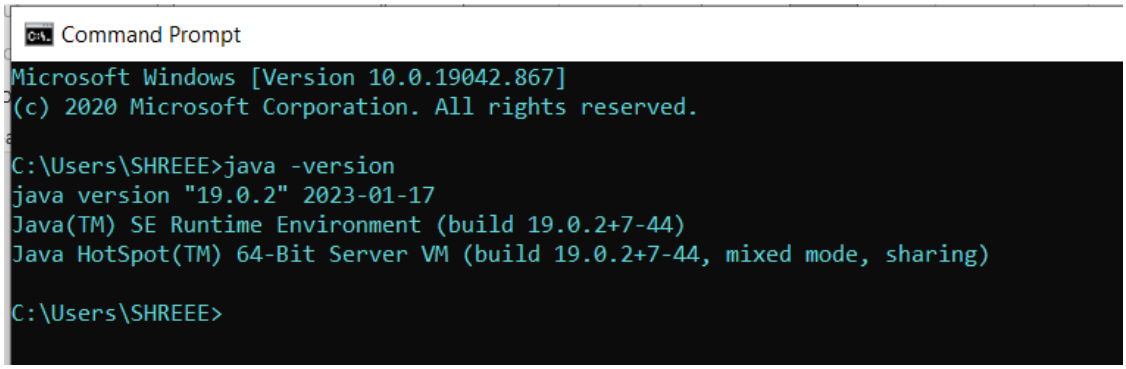
Aim : Installation of The Spring Boot Software

Procedure :

1. First You have install Java Version 19 or above
2. Go to link https://www.oracle.com/java/technologies/downloads/ . Click on JDK Download for Java download JDK 19.
3. Next, Accept License Agreement
4. Download Java 19 JDK for your version 32 bit or JDK download 64 bit.
5. When you click on the Installation link the popup will be open. Click on I reviewed and accept the Oracle Technology Network License Agreement for Oracle Java SE development kit and you will be redirected to the login page. If you don't have an oracle account you can easily sign up by adding basics details of yours.
6. You will be required to create an Oracle Account to start Java 19 download of the file.
7. Once the Java JDK 8 download is complete, run the exe for install JDK. Click Next
8. Click on Windows Button and Type "Environmental variables " and then press enter
9. And again click on "environmental variables" button and then add an path of the your jdk version .
10. Add your jdk path to the user varibles section .
11. Your jdk path will be like this "C://program files/java/jdk - 19/bin/ " in windows operating system.

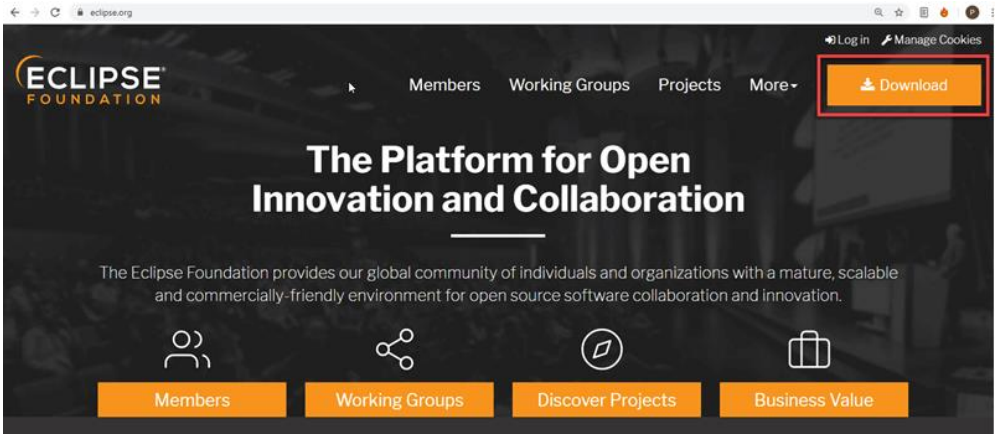


12. Now check in windows command prompt and type “java -version” you get your jdk and Jre veresions.

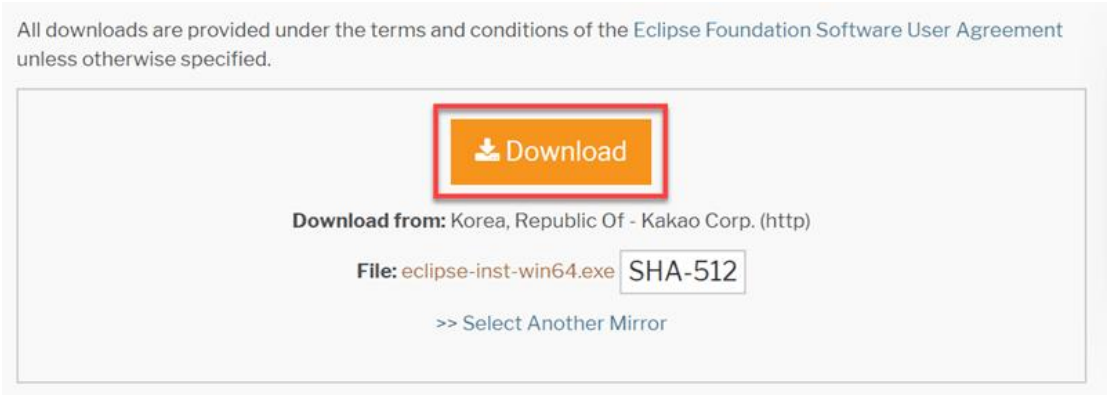


Now, Eclipse Installation :

1. Installing Eclipse
2. Open your browser and type https://www.eclipse.org/
3. And then click on download button.

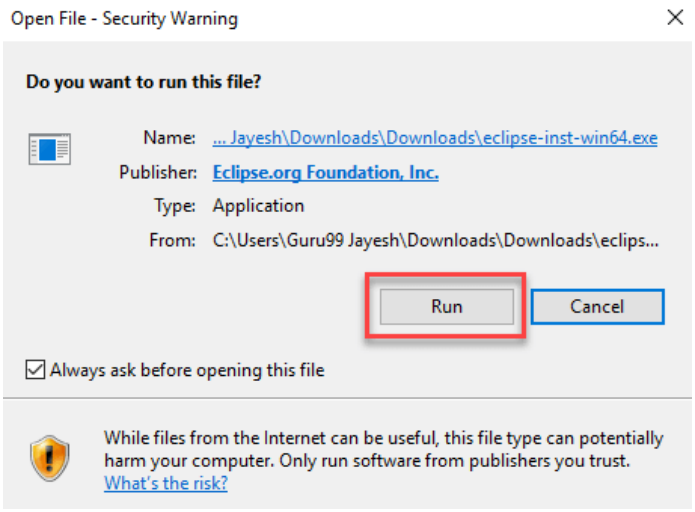


4. Based on your click on 32-bit version or 64-bit version.

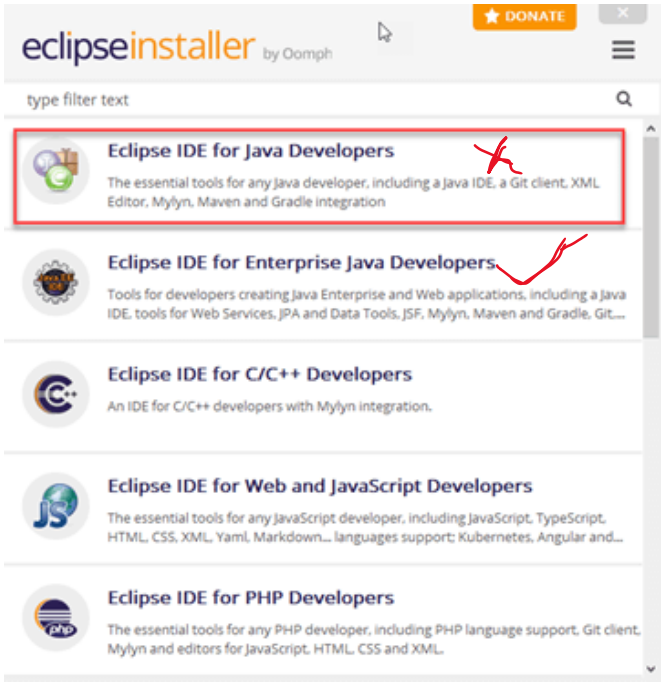


5. Now in downloads folder double click on that .exe file to run it.

6. And then click on run button.

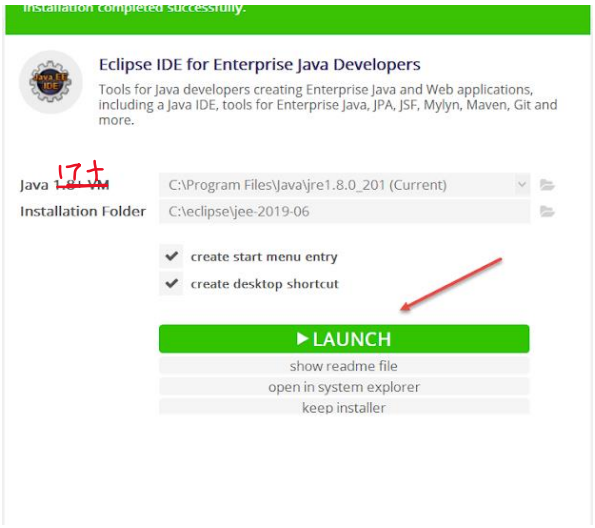


7. Click on “eclipse ide for java developers”

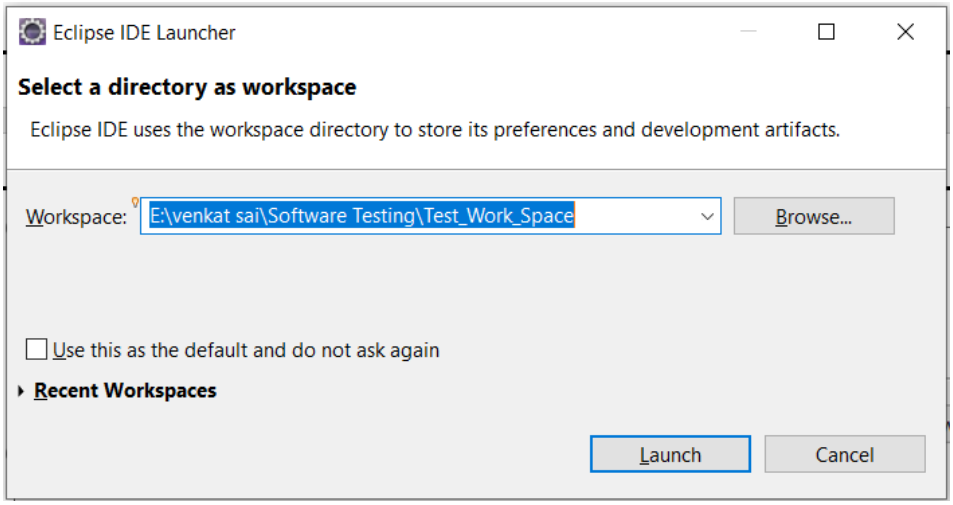


8. Click on “INSTALL” button

9. Click on “Launch Button”

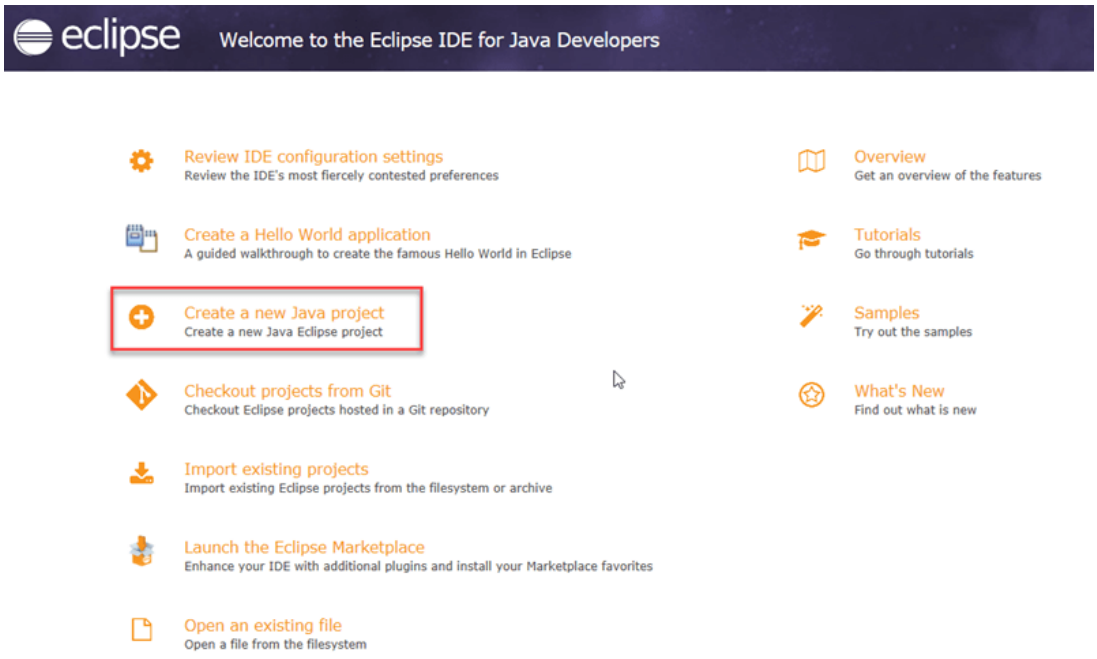


10.



11.

12.The Final Output after the installation will be like below picture.



Result : Sucessfully Executed The Program.

WEEK – 11

Aim : Create a Class Customer with four fields cno, cname,cmail and caddress. Use parameterised constructor to set the values and write the getters to retrieve the data. Override the toString( ) method too. Create another CustomerController to return list of all objects as an array(the end point is /customers). Test the classes using Spring Boot.

Program – 1:

CDetails.java

```
package com.example.CustomerApplication;

public class CDetails

{

private String cno, cname, cmail, caddress;

public String getCno()

{

return cno;

}

public void setCno(String cno)

{

this.cno = cno;

}

public String getCname()

{

return cname;
```

```
}
public void setCname(String cname)

{
this.cname = cname;
}

public String getCmail()

{

return cmail;

}

public void setCmail(String cmail)

{

this.cmail = cmail;

}

public String getCaddress()

{

return caddress;

}

public void setCaddress(String caddress)

{

this.caddress = caddress;

}

public CDetails(String cno, String cname, String cmail, String caddress)
```

```
{

super(); this.cno = cno;
this.cname = cname; this.cmail = cmail; this.caddress = caddress;
}

}
```

Program – 2:

CustomerApplication.java

```
package com.example.CustomerApplication;

import org.springframework.boot.SpringApplication;
import  org.springframework.boot.autoconfigure.SpringBootApplication;

@SpringBootApplication
public class CustomerApplication {

public static void main(String[] args) { SpringApplication.run(CustomerApplication.class,
args);
}

}
```

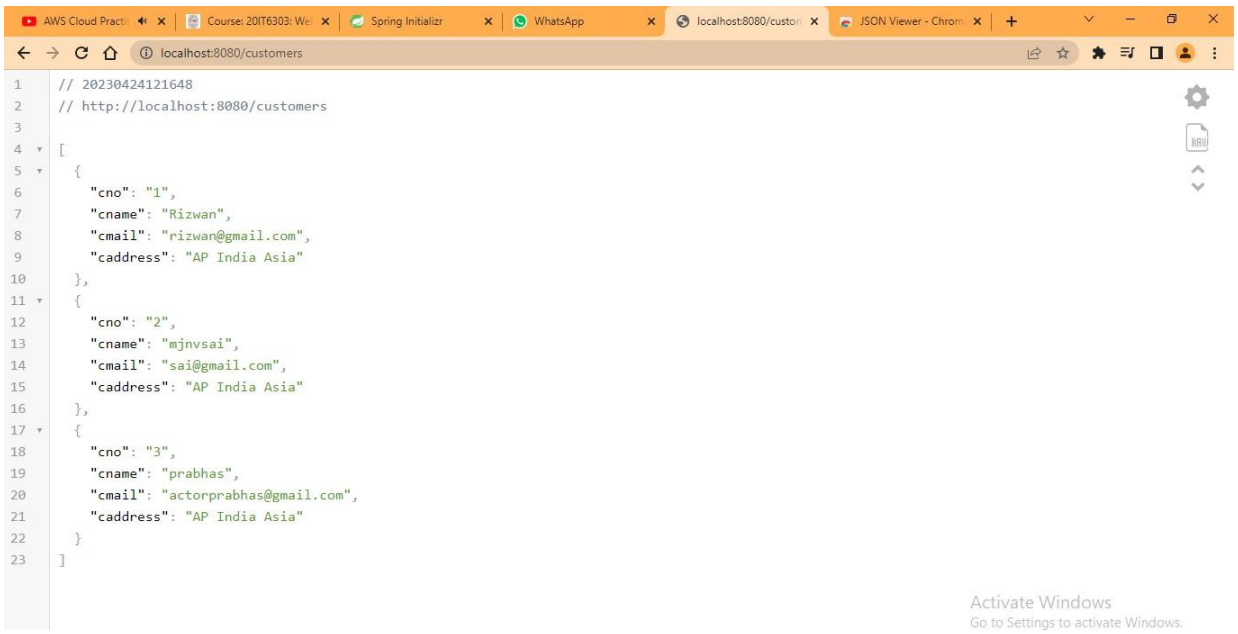
Program – 3:

CCustomer.java

```
package com.example.HomeAssignment4;

import java.util.Arrays;

import java.util.List;

import org.springframework.web.bind.annotation.RequestMapping; import
org.springframework.web.bind.annotation.RestController; @RestController
public class CController
```

```
{

@RequestMapping("/customers")

public List<CDetails> retrieveAllCourses()

{
return Arrays.asList(

new CDetails("1", "Rizwan", "rizwan@gmail.com", "AP India Asia"),
new CDetails("2", "mjnvsai", "sai@gmail.com", "AP India Asia"),

new CDetails("3", "prabhas", "actorprabhas@gmail.com", "AP India Asia")

); } }
```

Output :



Result : Sucessfully Executed The program.

WEEK – 12

Aim : Create a Class Customer with four fields cno, cname,cmail and caddress.
Create a constructor, setters and getters.
Create a CustomerService class to insert the Customer details into the in-memory database and retrieve Customer information.
Test the application as a Spring Boot Application.

Program – 1: CDetails.java

```
package com.example.CustomerDetails;
public class CDetails
{
	private String cno, cname, cmail, caddress;

	public String getCno()
	{
		return cno;
	}
	public void setCno(String cno)
	{
		this.cno = cno;
	}

	public String getCname()
	{
		return cname;
	}
	public void setCname(String cname)
	{
		this.cname = cname;
	}

	public String getCmail()
	{
		return cmail;
	}
	public void setCmail(String cmail)
	{
```

```
		this.cmail = cmail;
	}

	public String getCaddress()
	{
		return caddress;
	}
	public void setCaddress(String caddress)
	{
		this.caddress = caddress;
	}

	public CDetails(String cno, String cname, String cmail, String caddress)
	{
		super();
		this.cno = cno;
		this.cname = cname;
		this.cmail = cmail;
		this.caddress = caddress;
	}
}
```

Program – 2: CService.java

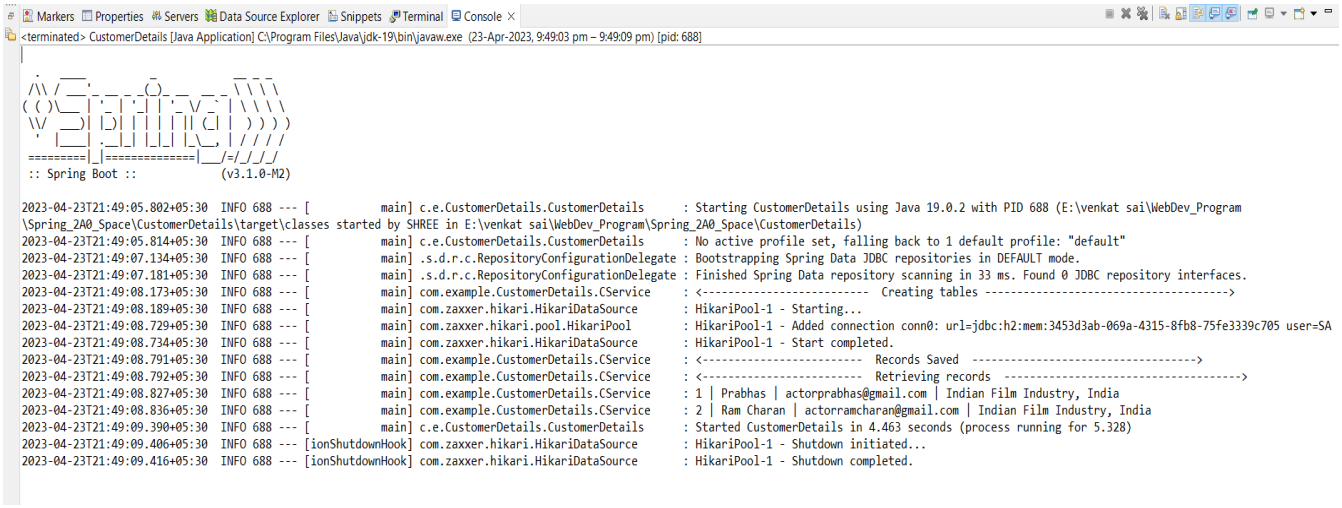
```
package com.example.CustomerDetails;
import java.util.ArrayList;
import java.util.List;
import org.slf4j.Logger;
import org.slf4j.LoggerFactory;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.jdbc.core.JdbcTemplate;
import org.springframework.stereotype.Service;


import javax.annotation.PostConstruct;

@Service
public class CService
```

```
{
	private static final Logger log = LoggerFactory.getLogger(CService.class);

	@Autowired
	JdbcTemplate jdbcTemplate;

	@PostConstruct
	public void postConstruct()
	{
		CDetails cd1 = new CDetails("1", "Prabhas", "actorprabhas@gmail.com",
"Indian Film Industry, India");
		CDetails cd2 = new CDetails("2", "Ram Charan", "actorramcharan@gmail.com",
"Indian Film Industry, India");

		List<CDetails> customers = new ArrayList<>();
		customers.add(cd1);
		customers.add(cd2);

		log.info("<-------------------------  Creating tables ------------------------------------>");
		jdbcTemplate.execute("DROP TABLE Customer IF EXISTS");
		jdbcTemplate.execute("CREATE TABLE Customer(" + " cno varchar(255), cname
varchar(255), cmail varchar(255), caddress varchar(255))");

		customers.forEach(i->jdbcTemplate.update("INSERT INTO Customer VALUES (?,
?, ?, ?)", i.getCno(), i.getCname(), i.getCmail(), i.getCaddress()));
		log.info("<-------------------------  Records Saved  ---------------------------------->");

		//retrieve saved records.
		log.info("<-------------------------  Retrieving records  ----------------------------------
>");
		customers = jdbcTemplate.query("select * from Customer", (rs, rowNum)->
new CDetails(rs.getString("cno"), rs.getString("cname"), rs.getString("cmail"),
rs.getString("caddress")));
		customers.forEach(i -> log.info(i.getCno() + " | " + i.getCname() + " | " +
i.getCmail() + " | " + i.getCaddress()));
	}
}
```

Program – 3: CustomerDetails.java

```
package com.example.CustomerDetails;
import org.springframework.boot.SpringApplication;
import org.springframework.boot.autoconfigure.SpringBootApplication;
@SpringBootApplication
public class CustomerDetails
{
	public static void main(String[] args)
	{
		SpringApplication.run(CustomerDetails.class, args);
	}
}
```

Output :



```
Markers Properties Servers Data Source Explorer Snippets Terminal Console ×
<terminated> CustomerDetails [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (23-Apr-2023, 9:49:03 pm – 9:49:09 pm) [pid: 688]

  .   ____          _            __ _ _
 /\\ / ___'_ __ _ _(_)_ __  __ _ \ \ \ \
( ( )\___ | '_ | '_| | '_ \/ _` | \ \ \ \
 \\/  ___)| |_)| | | | | || (_| |  ) ) ) )
  '  |____| .__|_| |_|_| |_\__, | / / / /
 =========|_|==============|___/=/_/_/_/
 :: Spring Boot ::                (v3.1.0-M2)

2023-04-23T21:49:05.802+05:30  INFO 688 --- [           main] c.e.CustomerDetails.CustomerDetails      : Starting CustomerDetails using Java 19.0.2 with PID 688 (E:\venkat sai\WebDev_Program
\Spring_2A0_Space\CustomerDetails\target\classes started by SHREE in E:\venkat sai\WebDev_Program\Spring_2A0_Space\CustomerDetails)
2023-04-23T21:49:05.814+05:30  INFO 688 --- [           main] c.e.CustomerDetails.CustomerDetails      : No active profile set, falling back to 1 default profile: "default"
2023-04-23T21:49:07.134+05:30  INFO 688 --- [           main] .s.d.r.c.RepositoryConfigurationDelegate : Bootstrapping Spring Data JDBC repositories in DEFAULT mode.
2023-04-23T21:49:07.181+05:30  INFO 688 --- [           main] .s.d.r.c.RepositoryConfigurationDelegate : Finished Spring Data repository scanning in 33 ms. Found 0 JDBC repository interfaces.
2023-04-23T21:49:08.173+05:30  INFO 688 --- [           main] com.example.CustomerDetails.CService     : <-------------------------  Creating tables ------------------------------------->
2023-04-23T21:49:08.189+05:30  INFO 688 --- [           main] com.zaxxer.hikari.HikariDataSource       : HikariPool-1 - Starting...
2023-04-23T21:49:08.729+05:30  INFO 688 --- [           main] com.zaxxer.hikari.pool.HikariPool        : HikariPool-1 - Added connection conn0: url=jdbc:h2:mem:3453d3ab-069a-4315-8fb8-75fe3339c705 user=SA
2023-04-23T21:49:08.734+05:30  INFO 688 --- [           main] com.zaxxer.hikari.HikariDataSource       : HikariPool-1 - Start completed.
2023-04-23T21:49:08.791+05:30  INFO 688 --- [           main] com.example.CustomerDetails.CService     : <-------------------------  Records Saved  ------------------------------------->
2023-04-23T21:49:08.792+05:30  INFO 688 --- [           main] com.example.CustomerDetails.CService     : <-------------------------  Retrieving records  ------------------------------------->
2023-04-23T21:49:08.827+05:30  INFO 688 --- [           main] com.example.CustomerDetails.CService     : 1 | Prabhas | actorprabhas@gmail.com | Indian Film Industry, India
2023-04-23T21:49:08.836+05:30  INFO 688 --- [           main] com.example.CustomerDetails.CService     : 2 | Ram Charan | actorramcharan@gmail.com | Indian Film Industry, India
2023-04-23T21:49:09.390+05:30  INFO 688 --- [           main] c.e.CustomerDetails.CustomerDetails      : Started CustomerDetails in 4.463 seconds (process running for 5.328)
2023-04-23T21:49:09.406+05:30  INFO 688 --- [ionShutdownHook] com.zaxxer.hikari.HikariDataSource       : HikariPool-1 - Shutdown initiated...
2023-04-23T21:49:09.416+05:30  INFO 688 --- [ionShutdownHook] com.zaxxer.hikari.HikariDataSource       : HikariPool-1 - Shutdown completed.
```

Result : Sucessfully Executed The program.

WEEK – 13

Aim : Implement the @Bean Programs in Spring Boot Application.

Program – 1 : AnnotationApplication.java

```
package com.example.AnnotationsApplication;
import com.example.AnnotationsApplication.*;
import com.example.AnnotationsApplication.ITDept;
import org.springframework.boot.SpringApplication;
import org.springframework.boot.autoconfigure.SpringBootApplication;
import org.springframework.context.ApplicationContext;
import org.springframework.context.ConfigurableApplicationContext;
import org.springframework.context.annotation.AnnotationConfigApplicationContext;
@SpringBootApplication
public class AnnotationsApplication {
        public static void main(String[] args) {
                ConfigurableApplicationContext
context=SpringApplication.run(AnnotationsApplication.class,args);
                ITDept ob=context.getBean(ITDept.class);
                System.out.println(ob.getDept());
        }

}
```

Program – 2 : AppConfig.java

```
package com.example.AnnotationsApplication;

import org.springframework.context.annotation.Bean;
import org.springframework.context.annotation.Configuration;
@Configuration
public class AppConfig{
@Bean
public Dept getDept(){
return new ITDept();
}}
```

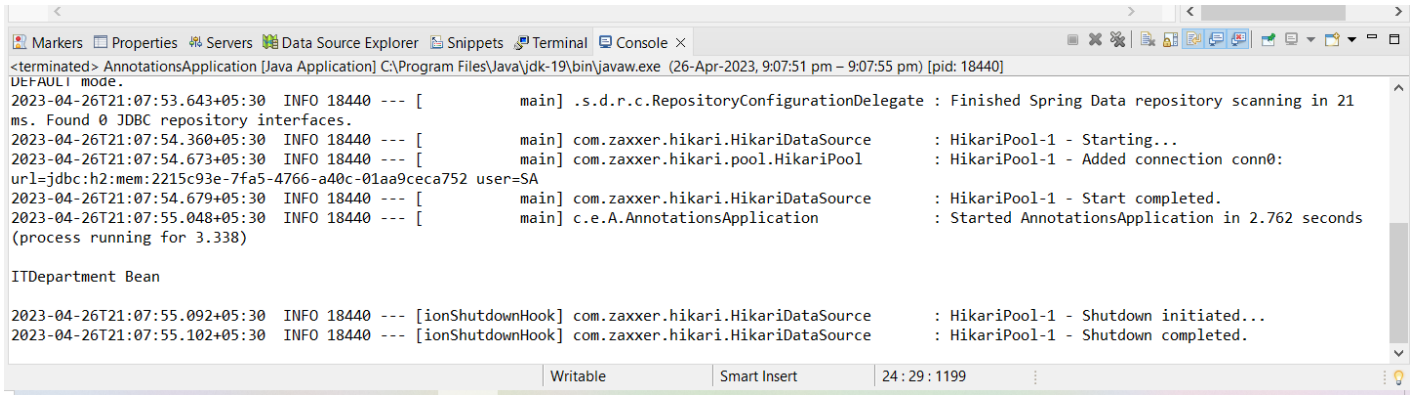
Program – 3 : Dept.java

```
package com.example.AnnotationsApplication;
public interface Dept {
        String getDept();  }
```

Program – 4 : ItDept.java

```
package com.example.AnnotationsApplication;
import com.example.AnnotationsApplication.Dept;
public class ITDept implements Dept{
public String getDept(){
return "ITDepartment Bean";
} }
```

Output :



Result : Sucessfully Executed The program.

Aim : implement @Autowired Constructer Injection Program in Spring Boot Application.

Program – 1 : ItDept.java

```
package com.example.AutowiredConstructor;
import org.springframework.stereotype.Component;
@Component
public class ItDept
{
	public String getDept()
	{
		return "This Is IT Department in Constructor Injection";
	}
}
```

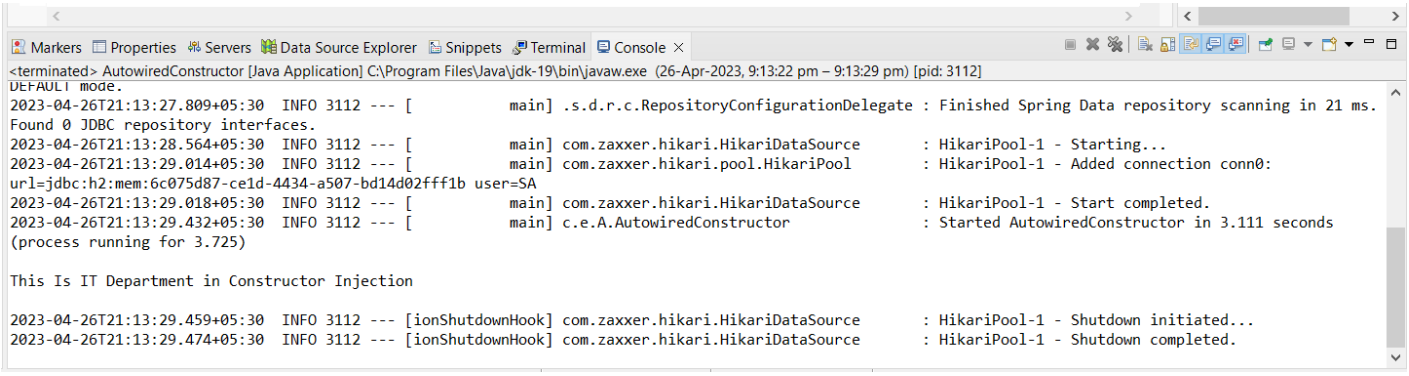
Program – 2 : DeptController.java

```
package com.example.AutowiredConstructor;

import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.stereotype.Component;

@Component
public class DeptController
{
	private ItDept ob;

	@Autowired
	public DeptController(ItDept ob)
	{
		this.ob = ob;
	}

	public String getDept()
	{
		return ob.getDept();
	}
}
```

Program – 3 : AutowiredConstructor.java

```
package com.example.AutowiredConstructor;
import org.springframework.boot.SpringApplication;
import org.springframework.boot.autoconfigure.SpringBootApplication;
import org.springframework.context.ApplicationContext;
import org.springframework.context.ConfigurableApplicationContext;
import org.springframework.context.annotation.AnnotationConfigApplicationContext;
@SpringBootApplication
public class AutowiredConstructor  {
        public static void main(String[] args) {
                ConfigurableApplicationContext
context=SpringApplication.run(AutowiredConstructor.class,args);
                DeptController ob1 = (DeptController)context.getBean(DeptController.class);
                System.out.println(ob1.getDept()); } }
```

Output :



Result : Sucessfully Executed The Program.

WEEK – 14

Aim : implement @Autowired Setter Injection Program in Spring Boot Application.

Program – 1 : ItDept.java

```
package com.example.AutowiredSetter;
import org.springframework.stereotype.Component;
@Component
public class ItDept
{
	public String getDept()
	{
		return "This Is IT Department in Setter Injection";
	} }
```

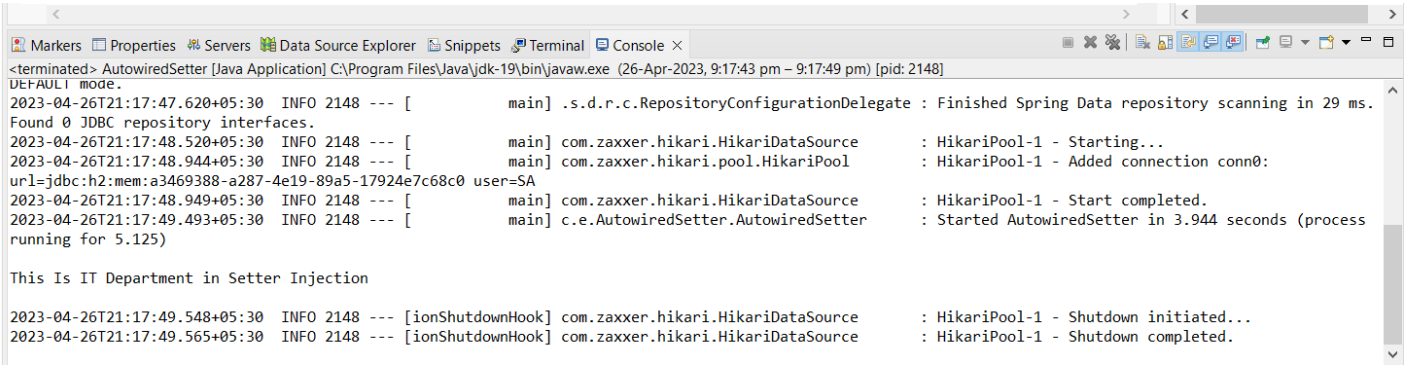
Program – 2 : DeptController.java

```
package com.example.AutowiredSetter;

import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.stereotype.Component;

@Component
public class DeptController
{
	private ItDept ob;

	@Autowired
	public void setDept(ItDept ob)
	{
		this.ob = ob;
	}

	public String getDept()
	{
		return ob.getDept();
	}
}
```

Program – 3 : AutowiredSetter.java

```
package com.example.AutowiredSetter;
import org.springframework.boot.SpringApplication;
import org.springframework.boot.autoconfigure.SpringBootApplication;
import org.springframework.context.ApplicationContext;
import org.springframework.context.ConfigurableApplicationContext;
import org.springframework.context.annotation.AnnotationConfigApplicationContext;
@SpringBootApplication
public class AutowiredSetter  {
        public static void main(String[] args) {
                ConfigurableApplicationContext
context=SpringApplication.run(AutowiredSetter.class,args);
                DeptController ob1 = (DeptController)context.getBean(DeptController.class);
                System.out.println(ob1.getDept()); } }
```

Output :



Result : Sucessfully Executed the program.

Aim : implement @Autowired Field Injection Program in Spring Boot Application.

Program – 1 : ItDept.java

```
package com.example. AutowiredFieldInjection;
import org.springframework.stereotype.Component;
@Component
public class ItDept
{
	public String getDept()
	{
		return "This Is IT Department in Field Injection";
	} }
```

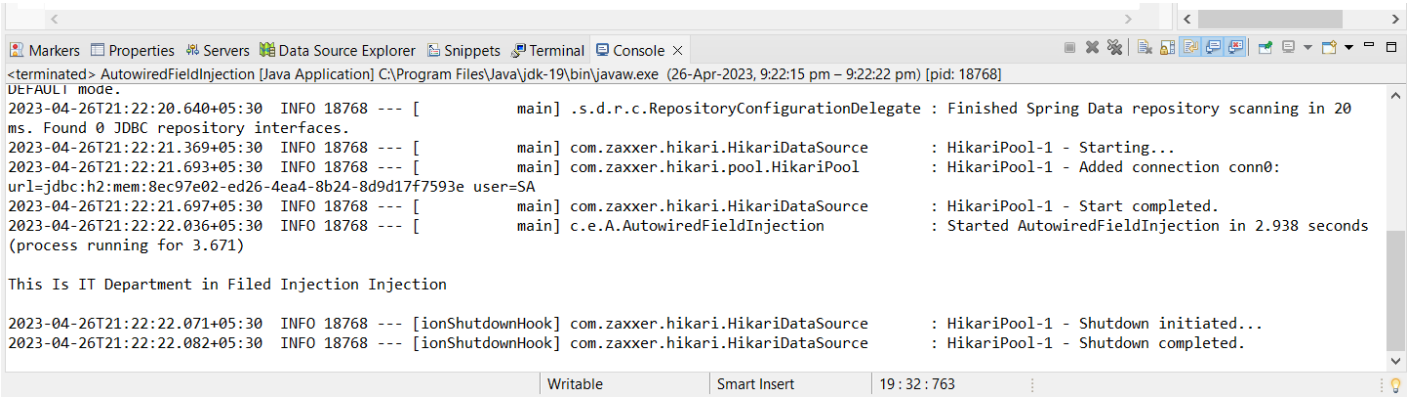
Program – 2 : DeptController.java

```
package com.example. AutowiredFieldInjection;

import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.stereotype.Component;

@Component
public class DeptController
{
	 @Autowired
	private ItDept ob;

	public String getDept()
	{
		return ob.getDept();
	}
}
```

Program – 3 : AutowiredFieldInjection.java

```
package com.example. AutowiredFieldInjection;
import org.springframework.boot.SpringApplication;
import org.springframework.boot.autoconfigure.SpringBootApplication;
import org.springframework.context.ApplicationContext;
import org.springframework.context.ConfigurableApplicationContext;
import org.springframework.context.annotation.AnnotationConfigApplicationContext;
@SpringBootApplication
public class AutowiredFieldInjection  {
        public static void main(String[] args) {
                ConfigurableApplicationContext
context=SpringApplication.run(AutowiredFieldInjection.class,args);
                DeptController ob1 = (DeptController)context.getBean(DeptController.class);
                System.out.println(ob1.getDept()); } }
```

Output :



Result : Sucessfully Executed The program.

WEEK – 15

Aim : implement the @Qualifer Annotation Program in Spring Boot Application.

Program – 1: ItDept.java

```
package com.example.QualifierAnnotation;
import org.springframework.stereotype.Component;
@Component
public class ItDept implements Dept
{
	@Override
	public String getDept()
	{
		return "This is IT Department in VRSEC";
	}
}
```

Program – 2 : CseDept.java

```
package com.example.QualifierAnnotation;
import org.springframework.stereotype.Component;
@Component
public class CseDept implements Dept{
	@Override
	public String getDept(){
		return "This is CSE Department in VRSEC";
	} }
```

Program – 3 : Dept.java

```
package com.example.QualifierAnnotation;

public interface Dept
{

	String getDept();
}
```

Program – 4 : DeptController.java

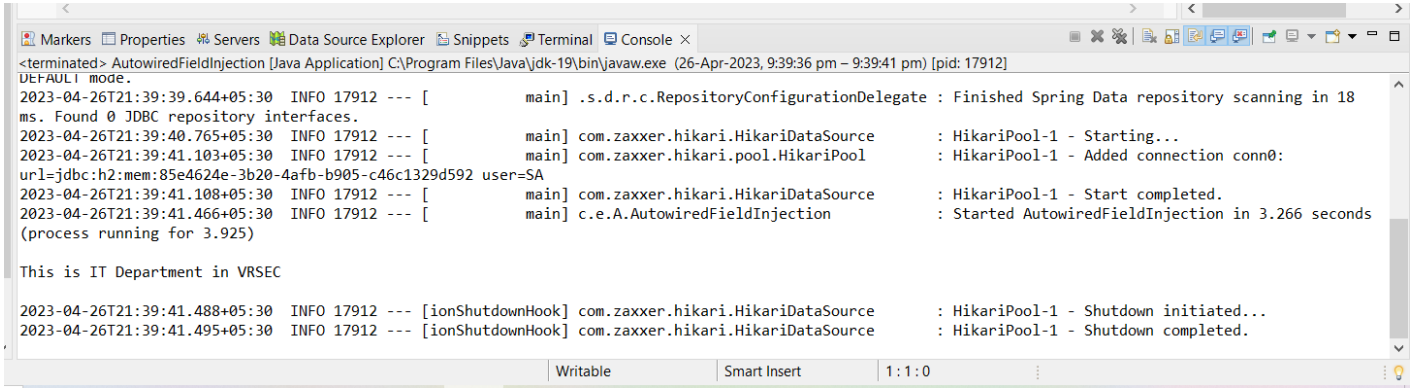
```
package com.example.QualifierAnnotation;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.beans.factory.annotation.Qualifier;
import org.springframework.context.annotation.Bean;
import org.springframework.stereotype.Component;
@Component
public class DeptController
{
	private Dept ob;
	@Autowired
	public DeptController(@Qualifier("ItDept")Dept ob)
	{
		this.ob = ob;
	}
	public String getDept()
	{
		return ob.getDept();
	}
}
```

Program – 5 : QualifierAnnotation.java

```
package com.example.QualifierAnnotation;

import org.springframework.boot.SpringApplication;
import org.springframework.boot.autoconfigure.SpringBootApplication;
import org.springframework.context.ApplicationContext;
import org.springframework.context.ConfigurableApplicationContext;
import org.springframework.context.annotation.AnnotationConfigApplicationContext;

@SpringBootApplication
public class QualifierAnnotation
{

	public static void main(String[] args)
	{
```

```
        ConfigurableApplicationContext
context=SpringApplication.run(QualifierAnnotation.class,args);
        DeptController ob1 = (DeptController)context.getBean(DeptController.class);
        System.out.println("\n");
        System.out.println(ob1.getDept());
        System.out.println("\n");
    }

}
```

Output :



Result : Sucessfully Executed The program.

Aim : Implement the @Primary Annotation Program in Spring Boot Application

Program – 1 : Dept.java

```
package com.example.PrimaryAnnotation;
public interface Dept
{
	String getDept();
}
```

Program – 2 : ItDept.java

```
package com.example.PrimaryAnnotation;
import org.springframework.stereotype.Component;
@Component
public class ItDept implements Dept  {
	@Override
	public String getDept()  {
		return "This is IT Department in VRSEC";
	} }
```

Program – 3 : CseDept.java

```
package com.example.PrimaryAnnotation;

import org.springframework.context.annotation.Primary;
import org.springframework.stereotype.Component;

@Component
@Primary
public class CseDept implements Dept
{
	@Override
	public String getDept()
	{
		return "Primary Annotation , This is CSE Department in VRSEC";
	}
}
```

Program – 4 : DeptController.java

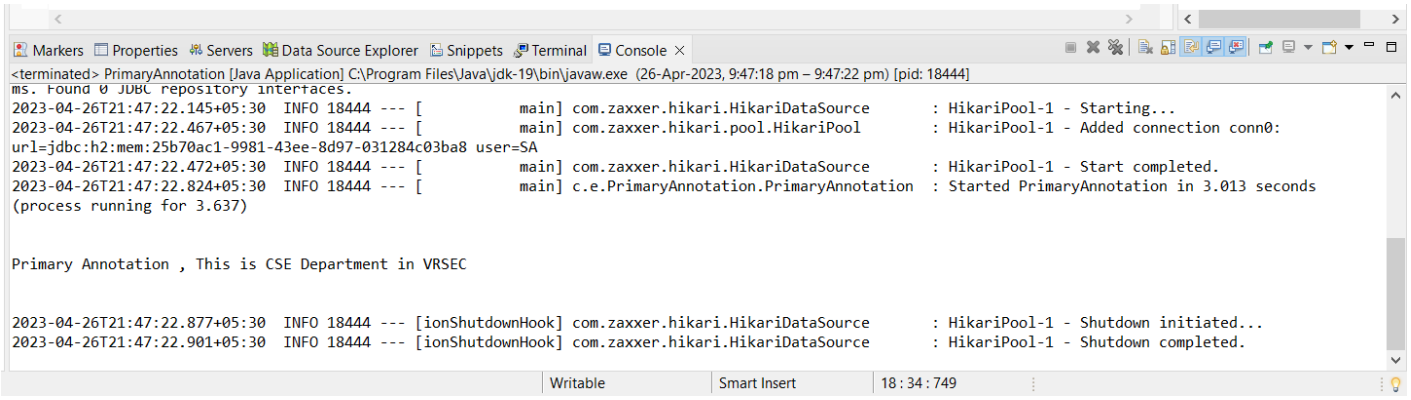
```
package com.example.PrimaryAnnotation;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.beans.factory.annotation.Qualifier;
import org.springframework.context.annotation.Bean;
import org.springframework.stereotype.Component;

@Component
public class DeptController
{
	private Dept ob;

	@Autowired
	public DeptController(Dept ob)
	{
		this.ob = ob;
	}

	public String getDept()
	{
		return ob.getDept();
	}
}
```

Program – 5 : PrimaryAnnotation.java

```
package com.example.PrimaryAnnotation;

import org.springframework.boot.SpringApplication;
import org.springframework.boot.autoconfigure.SpringBootApplication;
import org.springframework.context.ApplicationContext;
import org.springframework.context.ConfigurableApplicationContext;
import org.springframework.context.annotation.AnnotationConfigApplicationContext;

@SpringBootApplication
public class PrimaryAnnotation
{
	public static void main(String[] args)
```

```
        {
                ConfigurableApplicationContext
context=SpringApplication.run(PrimaryAnnotation.class,args);
                DeptController ob1 = (DeptController)context.getBean(DeptController.class);
                System.out.println("\n");
                System.out.println(ob1.getDept());
                System.out.println("\n");
        }
}
```

Output :



Result : Sucessfully Executed The program.