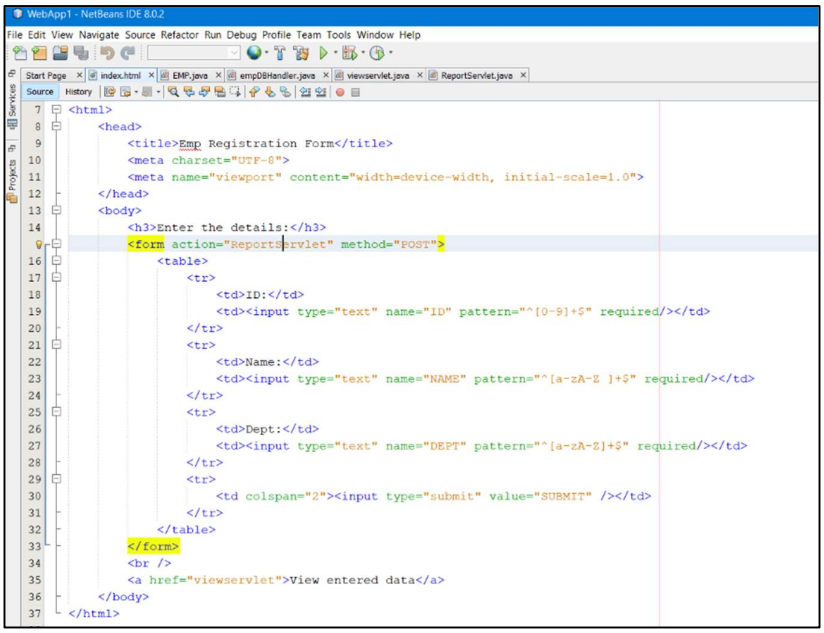
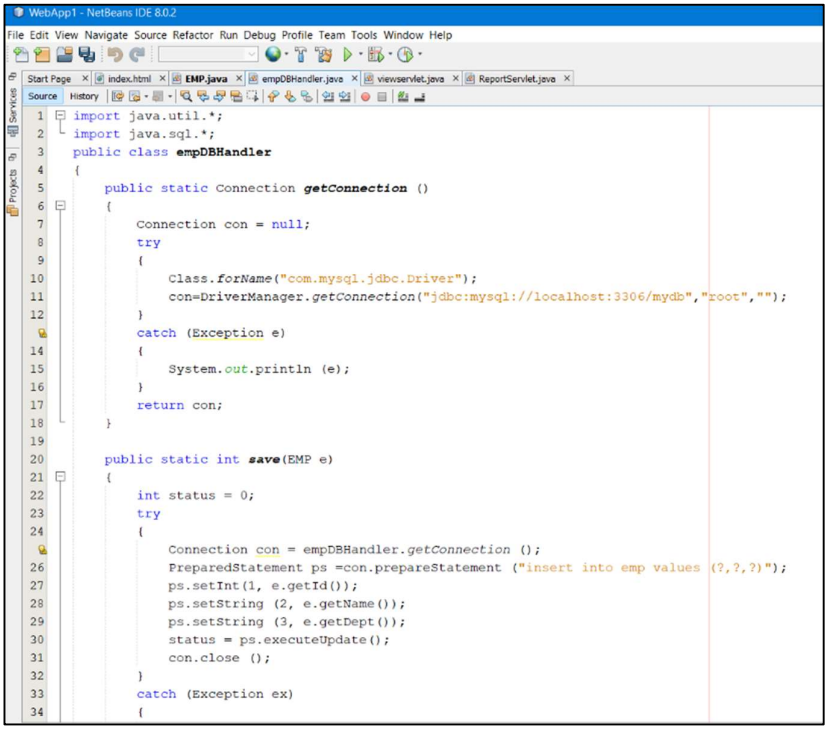
MVC Implementation

Technology used: Java

VIEW: index.html



CONTROLLER: empDBHandler.java

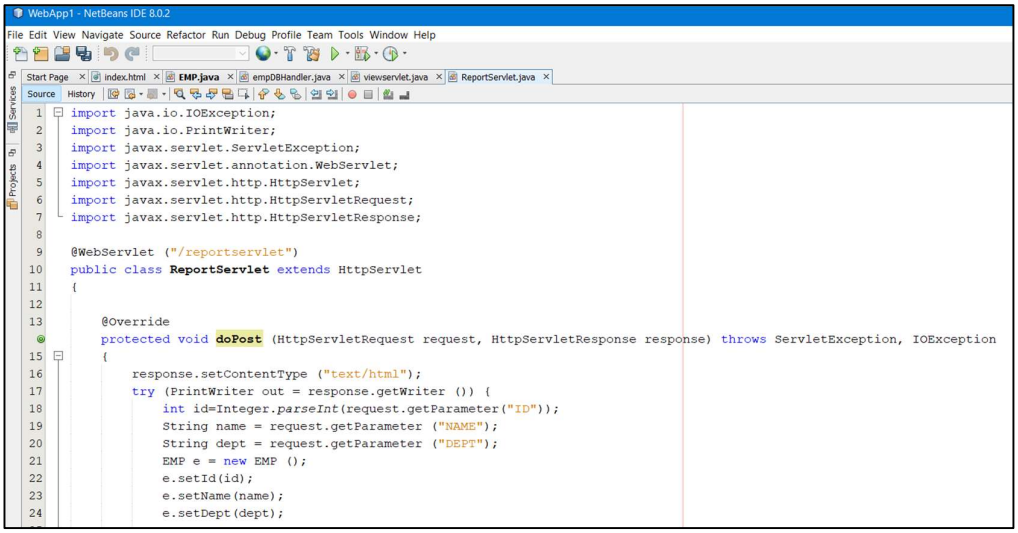


```
        }
        catch (Exception ex)
        {
            ex.printStackTrace ();
        }
        return status;
    }

    public static List < EMP > getAllEmployees ()
    {
        List<EMP> list = new ArrayList<EMP>();
        try
        {
            Connection con = empDBHandler.getConnection ();
            PreparedStatement ps = con.prepareStatement ("select * from emp");
            ResultSet rs = ps.executeQuery ();
            while (rs.next ())
            {
                EMP e = new EMP ();
                e.setId (rs.getInt (1));
                e.setName (rs.getString (2));
                e.setDept (rs.getString (3));

                list.add (e);
            }
            con.close ();
        }
        catch (Exception e)
        {
            e.printStackTrace ();
        }
        return list;
    }
}
```

MODEL: EMP.java

```
public class EMP {
    //@NotNull
    private int id;
    private String name, dept;
    public int getId ()
    {
        //if(id.equals("")){
        //  JOptionPane.showMessageDialog(null, "ID is mandatory!");//}
        //else{
        return id;
        //}
    }
    public String getName ()
    {
        return name;
    }
    public String getDept ()
    {
        return dept;
    }

    public void setId (int id)
    {
        this.id = id;
    }
    public void setName (String name)
    {
        this.name = name;
    }
    public void setDept (String dept)
    {
        this.dept = dept;
    }
}
```

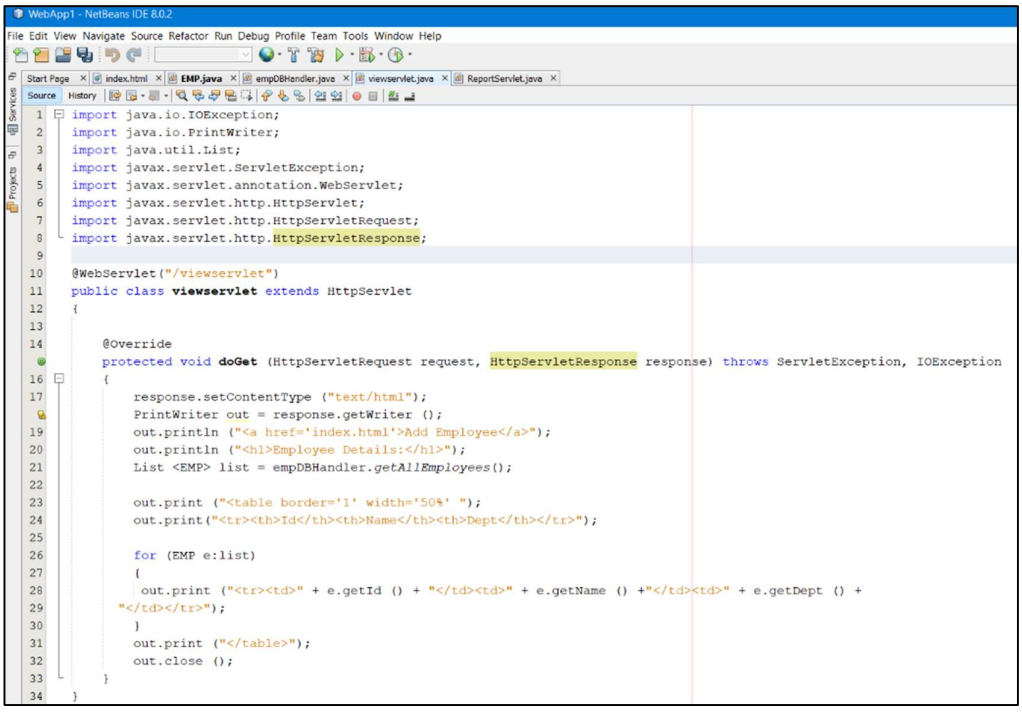
VIEW: ReportServlet.java



```
import java.io.IOException;
import java.io.PrintWriter;
import javax.servlet.ServletException;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;

@WebServlet ("/reportservlet")
public class ReportServlet extends HttpServlet
{

    @Override
    protected void doPost (HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException
    {
        response.setContentType ("text/html");
        try (PrintWriter out = response.getWriter ()) {
            int id=Integer.parseInt(request.getParameter("ID"));
            String name = request.getParameter ("NAME");
            String dept = request.getParameter ("DEPT");
            EMP e = new EMP ();
            e.setId(id);
            e.setName(name);
            e.setDept(dept);
```

```
            e.setDept(dept);

            int status = empDBHandler.save (e);
            if (status > 0)
            {
                out.print ("<p>Record saved successfully!</p>");
                out.print("<a href=\"viewservlet\">View Employee Details</a>");
                //request.getRequestDispatcher ("index.html").include(request, response);
            }
            else
            {
                out.println ("Sorry! unable to save record");
            }
        }
    }
}
```

VIEW: viewservlet.java



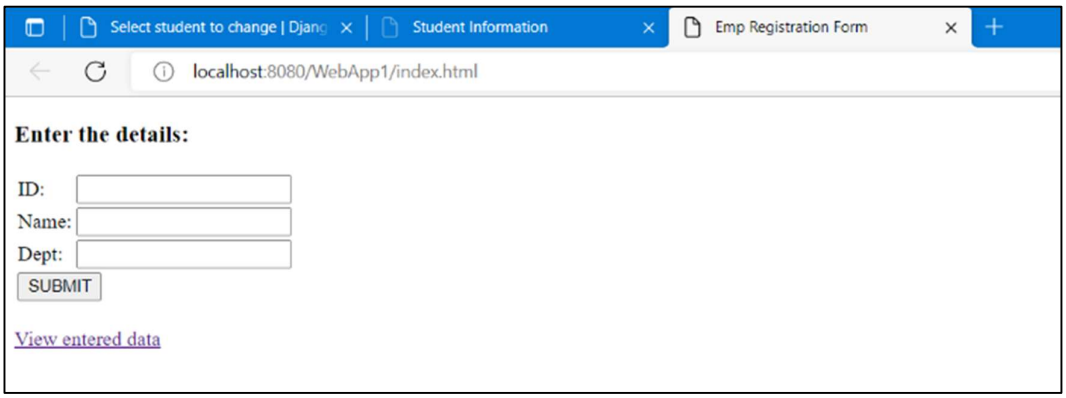
```
import java.io.IOException;
import java.io.PrintWriter;
import java.util.List;
import javax.servlet.ServletException;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;

@WebServlet("/viewservlet")
public class viewservlet extends HttpServlet
{

    @Override
    protected void doGet (HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException
    {
        response.setContentType ("text/html");
        PrintWriter out = response.getWriter ();
        out.println ("<a href='index.html'>Add Employee</a>");
        out.println ("<h1>Employee Details:</h1>");
        List <EMP> list = empDBHandler.getAllEmployees();

        out.print ("<table border='1' width='50%' ");
        out.print("<tr><th>Id</th><th>Name</th><th>Dept</th></tr>");

        for (EMP e:list)
        {
         out.print ("<tr><td>" + e.getId () + "</td><td>" + e.getName () +"</td><td>" + e.getDept () +
      "</td></tr>");
        }
        out.print ("</table>");
        out.close ();
    }
}
```

FLOW OF MVC:

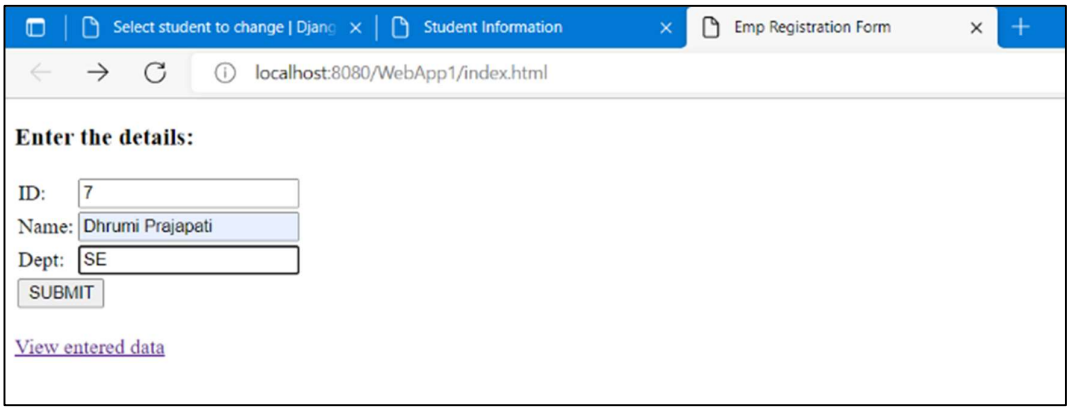
The user enters the data from index file, so Controller (empDBHandler.java) will interact with the Model (EMP.java) to entering those data into database. Based on the data entered, the Controller will interact with the View (ReportServlet.java) and message is displayed according to the successful or failed registration of data. If the data are stored successfully then the message and link to see the entered details, will be provided at the View (viewservlet.java) page.

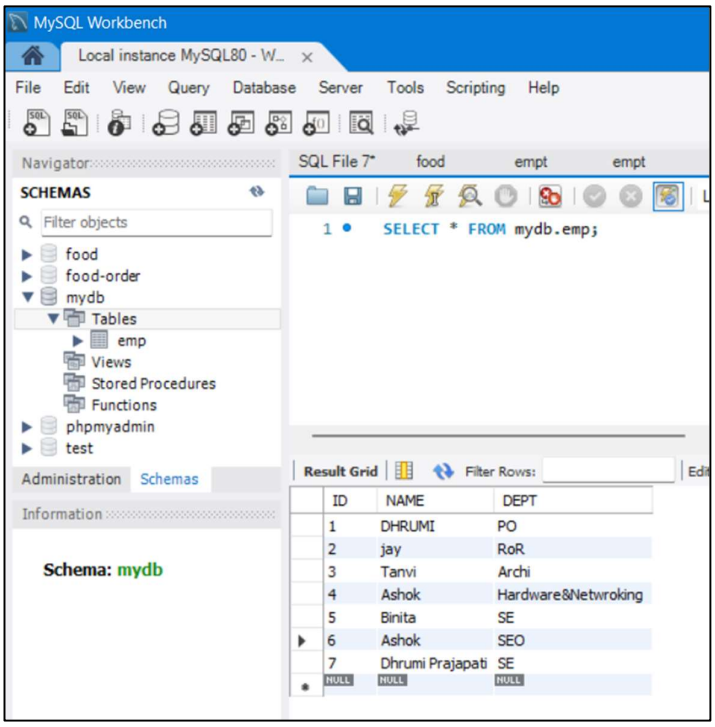
OUTPUT:

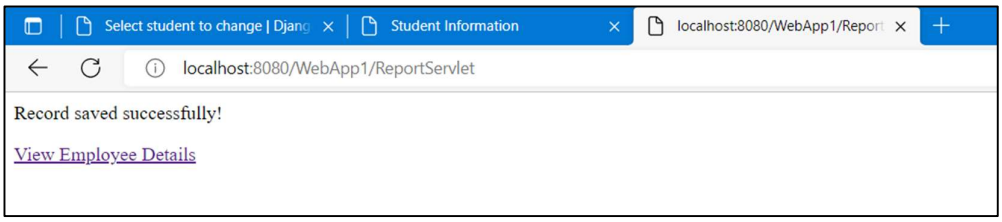
As we run index.html file, the Employee Registration Form will be displayed. User will enter the data in it.



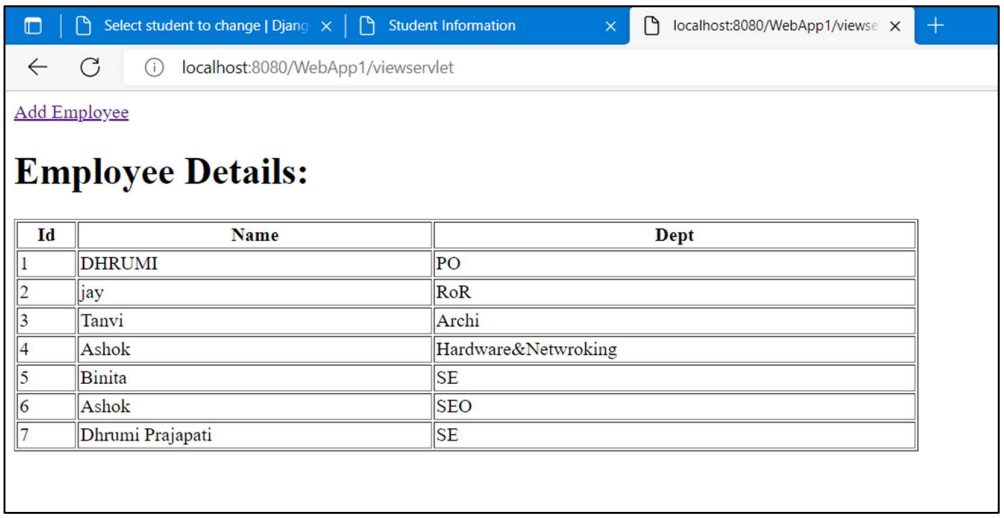
If the user have entered the correct format of data then, after clicking the SUBMIT button the data will be stored in the database at the backend side. And a message will be displayed to the user that “Record saved successfully!”. If user enters data with already used ID then, “Sorry! Unable to save record.” message will be displayed.



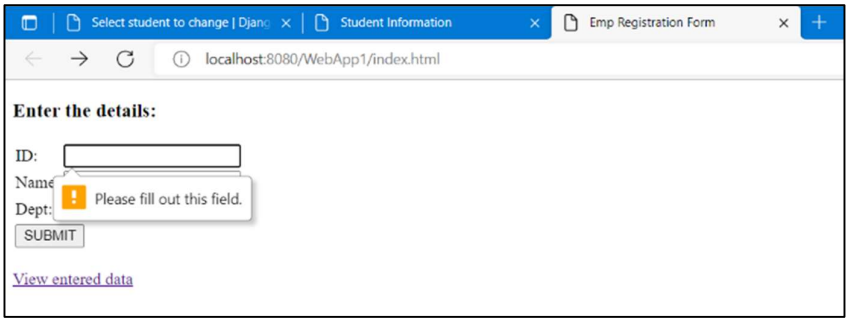


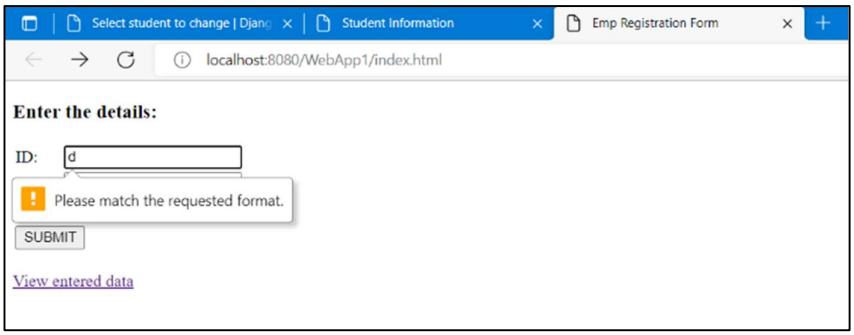


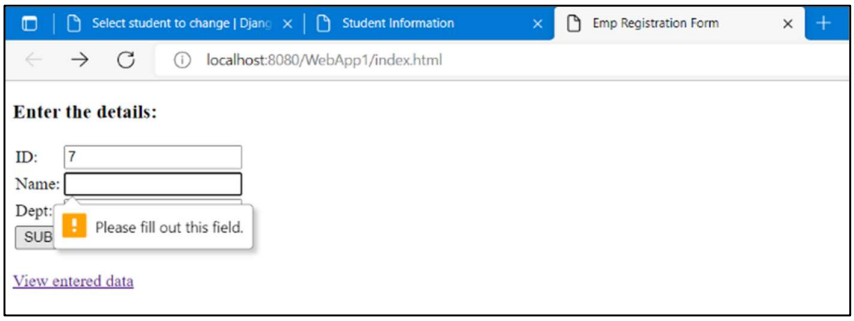
By clicking on the link all the details of employees will be displayed.

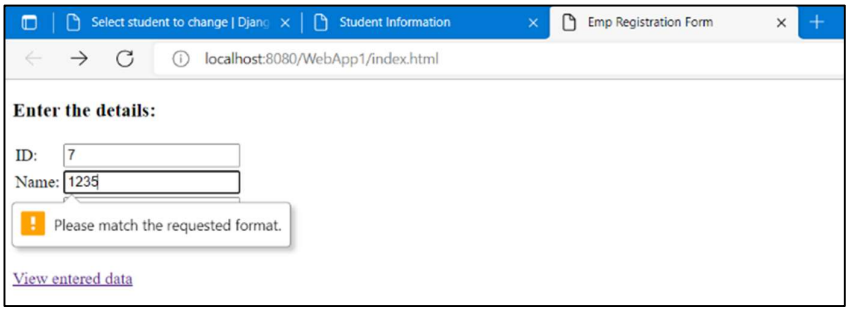


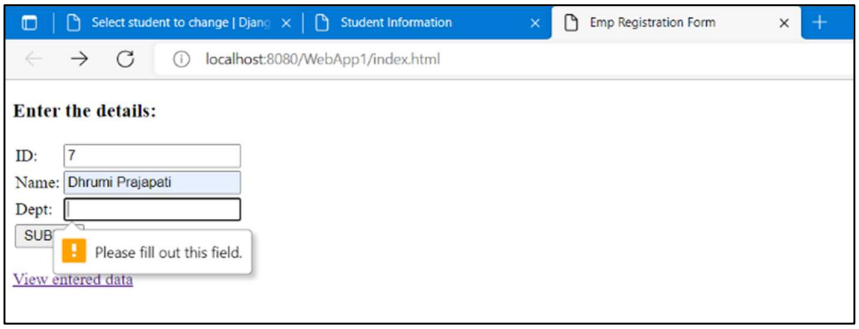
VALIDATIONS:

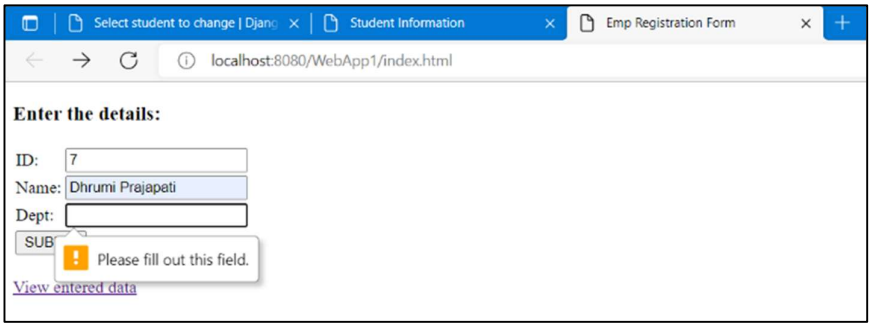


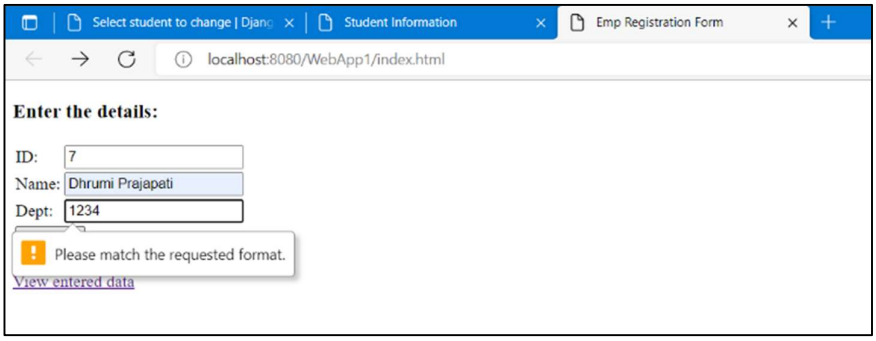









Select student to change | Djang
Student Information
Emp Registration Form
localhost:8080/WebApp1/index.html
Enter the details:
ID: 7
Name: Dhrumi Prajapati
Dept:
SUB
Please fill out this field.
View entered data


Select student to change | Djang
Student Information
Emp Registration Form
localhost:8080/WebApp1/index.html
Enter the details:
ID: 7
Name: Dhrumi Prajapati
Dept: 1234
Please match the requested format.
View entered data