Contact Manager – Sprint 1

Problem Statement

Contact Manager is an application that helps manage contacts efficiently.

User Stories

1. User should see the welcome page.
2. User should see the Add Contact button.
3. User should see the Add Contact form when clicking the button.
4. User should be able to enter contact information.
5. User should be able to see all added contacts.

Instructions

1. Application must be responsive.
2. Use Servlets to manage contact information.
3. Use proper collection to store data.
4. Estimated time: 2 hours.

Project Structure

```
ContactManager/
■
■■■ index.html
■■■ addContact.html
■■■ viewContacts.html
■
■■■ src/
■ ■■■ ContactServlet.java
■
■■■ WEB-INF/
■■■ web.xml
```

ContactServlet.java

```java
import java.io.IOException;
import java.io.PrintWriter;
import java.util.ArrayList;
import java.util.List;
import jakarta.servlet.ServletException;
```

```java
import jakarta.servlet.annotation.WebServlet;
import jakarta.servlet.http.HttpServlet;
import jakarta.servlet.http.HttpServletRequest;
import jakarta.servlet.http.HttpServletResponse;

@WebServlet("/contact")
public class ContactServlet extends HttpServlet {
    private static final long serialVersionUID = 1L;

    List<String[]> contacts = new ArrayList<>();

    protected void doPost(HttpServletRequest request, HttpServletResponse response)
            throws ServletException, IOException {

        String name = request.getParameter("name");
        String phone = request.getParameter("phone");
        String email = request.getParameter("email");

        contacts.add(new String[]{name, phone, email});

        response.sendRedirect("viewContacts.html");
    }

    protected void doGet(HttpServletRequest request, HttpServletResponse response)
            throws ServletException, IOException {

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

        out.println("<html><head><title>Contacts</title>");
        out.println("<style>");
        out.println("table{width:80%; margin:auto; border-collapse:collapse;}");
        out.println("th,td{padding:10px; border:1px solid #333; text-align:center;}");
        out.println("</style>");
        out.println("</head><body>");
        out.println("<h2 style='text-align:center;'>All Contacts</h2>");

        out.println("<table>");
        out.println("<tr><th>Name</th><th>Phone</th><th>Email</th></tr>");

        for (String[] c : contacts) {
            out.println("<tr>");
            out.println("<td>" + c[0] + "</td>");
            out.println("<td>" + c[1] + "</td>");
            out.println("<td>" + c[2] + "</td>");
            out.println("</tr>");
        }
        out.println("</table>");

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

index.html

```html
<!DOCTYPE html>
<html>
<head>
<title>Contact Manager</title>
<style>
body { font-family: Arial; text-align: center; padding: 50px; }
button { padding: 12px 25px; font-size: 18px; border-radius: 8px; cursor: pointer; }
</style>
</head>
<body>
<h1>Welcome to Contact Manager</h1><br>
<a href="addContact.html"><button>Add Contact</button></a><br><br>
<a href="contact">View Contacts</a>
</body>
```

```
</html>
```

addContact.html

```
<!DOCTYPE html>
<html>
<head>
<title>Add Contact</title>
<style>
form { width: 300px; margin: auto; }
input { width: 100%; padding: 10px; margin: 8px; }
button { width: 100%; padding: 12px; }
</style>
</head>
<body>
<h2 style="text-align:center;">Add New Contact</h2>
<form action="contact" method="post">
    <input type="text" name="name" placeholder="Enter Name" required>
    <input type="text" name="phone" placeholder="Enter Phone" required>
    <input type="email" name="email" placeholder="Enter Email" required>
    <button type="submit">Save Contact</button>
</form>
</body>
</html>
```

web.xml

```
<web-app>
    <servlet>
        <servlet-name>ContactServlet</servlet-name>
        <servlet-class>ContactServlet</servlet-class>
    </servlet>

    <servlet-mapping>
        <servlet-name>ContactServlet</servlet-name>
        <url-pattern>/contact</url-pattern>
    </servlet-mapping>
</web-app>
```

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Output Screenshot 1

1   Project Structure

```
ContactManager/
├── index.html
├── addContact.html
└── viewContacts.html
src/
└── ContactServlet.java
WEB-INF/
└── web.xml
```

2   ContactServlet.java

```java
import java.servecalsealects;
import ol.Seres>;
public class ContacServiet excl httpServlet {
    private static final long serialVersionUIZ>= 1L;
    List<String[] contacts = contacts;
    public doPost(tot(ieueut reme|request.reqbercutifonards:)
      onsat Name = name, phone, enail;
      sontats.redirectoniaccesuo.zactacts:.
      request.tarp("viewContacts.html ';
    }
    public doGet(votAnGet(czsposatnri :u)
      respsouse.contentryper:ihtml";
      PrintWriter getPrintWritek;
```

3   HTML Files

index.html

Welcome to Contact Manager

[Add Contact]

View Contacts

Add New Contact

Name [   ]
Phone [   ]
Email [   ]
[Save Contact]

viewContacts.html

All Contacts

Name	Phone	Email
John Dpc	193-808	email c.
Jane smith	992 5481	email c.
Jha Brown	908-8853	email c.

4   web.xml (if required)

Output Screenshot 2

Welcome to Contact Manager

Add Contact

View Contacts

All Contacts

Name	Phone	Email
John Doe	123-456-7890	john@example.com
Jane Smith	098-765-4321	jane@example.com
Jim Brown	555-555-5555	jim@example.com