Ex.No: 5	**Design a Simple web application using Servlets**
Date: 22-1-2025	

Steps:

1) Generate a Java Web Application
   a. Maven must be installed first
   b. Using VSC Java extensions, generate a Java web application using Maven

Figure 1

2) Create the home page
   a. Change index.jsp (Figure 1)

```html
<!DOCTYPE HTML>
<html>
  <head>
    <link rel="stylesheet" type ="text/css" href="../css/styles.css">
  </head>
  <div class="main">
  <h1 class = 'page-header'>Travelers Radio</h1>
  <div class="page">
    <h2>Listen along to Travelers with everyone around the world</h2>
    <audio controls src="http://127.0.0.1:12345/stream"></audio>
    <dl>
      <dt>Current Artists:</dt>
      <dd>TheRedWizard - <strong>Piano</strong></dd>
      <dd>JohnDoe - <strong>Drums</strong></dd>
      <dd>Pleg - <strong>Electric Guitar</strong></dd>
    </dl>
    <h2>
      <a href="upload">Want to upload your cover?</a>
    </h2>
    <h2>
      <a href="contributors.html">See contributors</a>
    </h2>
  </div>
  <footer>
    <p>Created by: <a href="https://github.com/TheR3dWizard">Sreeraghavan
R</a></p>
  </footer>
</div>
</html>
```

3) Create Java Servlet
    a. Create java/com/redwizard under src/main
    b. Create the Servlet class

```java
package com.redwizard;

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

import java.io.IOException;

@WebServlet("/radio")
public class HomePageServlet extends HttpServlet {
    protected void doGet(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {
      RequestDispatcher dispatcher =
request.getRequestDispatcher("HTML/pages/upload.html");
      dispatcher.forward(request, response);
    }
}
```

4) Configure pom.xml
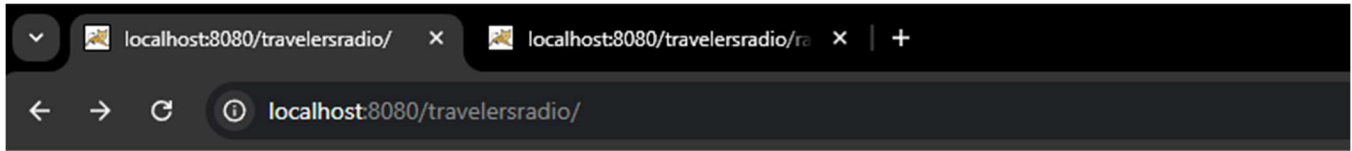   a. Add the required dependencies to pom.xml

```xml
<dependency>
    <groupId>javax.servlet</groupId>
    <artifactId>javax.servlet-api</artifactId>
    <version>3.0.1</version>
    <scope>provided</scope>
 </dependency>
```

5) Install and Setup Tomcat
6) Generate .war file
    a. Run `mvn clean package` to generate a .war file
7) Deploy server on tomcat
    a. Place .war file in webapps directory in tomcat files
    b. Run startup.bat in bin directory in tomcat files
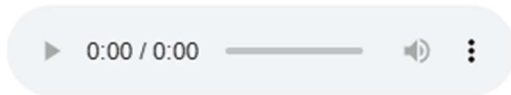
Output

localhost:8080/travelersradio

Travelers Radio

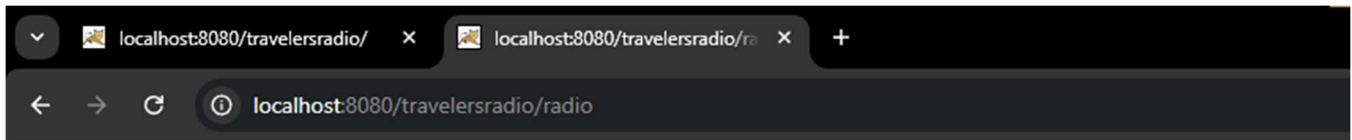## Listen along to Travelers with everyone around the world

Current Artists:
    TheRedWizard - **Piano**
    JohnDoe - **Drums**
    Pleg - **Electric Guitar**

Want to upload your cover?

See contributors

Created by: Sreeraghavan R

Upload your cover of the song here!

Choose File No file chosen   Name: [ ]   Instrument: [ ]   upload

Go back to radio

Created by: Sreeraghavan R

Result

Servlets were successfully implemented to serve html files