Experiment 3.1

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Semester: 5th	Subject Name : PBLJ Lab

1.Aim: Create a palindrome creator application for making a longest possible palindrome out of given input string.

2.Software/Hardware Requirements: VS Code or Eclipse

3. Algorithm/ PsuedoCode:

STEP 1- Create a index.jsp file in a webapp directory.

STEP 2 - Create a package named as fun and create a java file named as functions.java .

STEP 3 - functions.java file contains the logic for checking the palindromic substring .

STEP 4- At Last start the server and display the output on the web browser.

STEP 5- EXIT

CODE:

Index.jsp

```
<%@ page language="java" contentType="text/html; charset=ISO-8859-1"    pageEncoding="ISO-8859-1"%>
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Insert title here</title>
<style>    body{
     background: linear-gradient(45deg, red, blue);       backgroung-size:
cover;       color: white;       align-items: center;
   }    h1{
     text-align:center;
   }    .fall{
     border: 2px solid orange;background: blue;       padding: 5px;
max-width: 500px;       height: 100px;       margin: auto;       font-
size: 19px;
   }    input{
     width: 250px;
   }    button{
     position: relative;       left: 170px;
     margin: 10px; width: 60px;height:30px;
cursor:pointer;border-radius:5px;
   }    button:hover{
color:white;       background:
black;
   }
</style>
</head>
<body>
     <h1>find the Longest Palindromic Substring</h1>
     <form class="fall" name="funcitons"
action="<%=request.getContextPath()%>/functions" method="post">
          Enter the Palindromic String: <input class="check" type="text" name="pal" size="50"><br>
          <button type="submit">Submit</button>
          <button type="reset">Reset</button>
     </form>
     <h1> longest Palindromic SubString <br/> <%=request.getAttribute("ans")
%></h1>
</body> </html>
```

Functions.java

```
package fun;

 import java.io.IOException; import

javax.servlet.ServletException; import

javax.servlet.annotation.WebServlet; import

javax.servlet.http.HttpServlet; import

javax.servlet.http.HttpServletRequest; import

javax.servlet.http.HttpServletResponse;
```

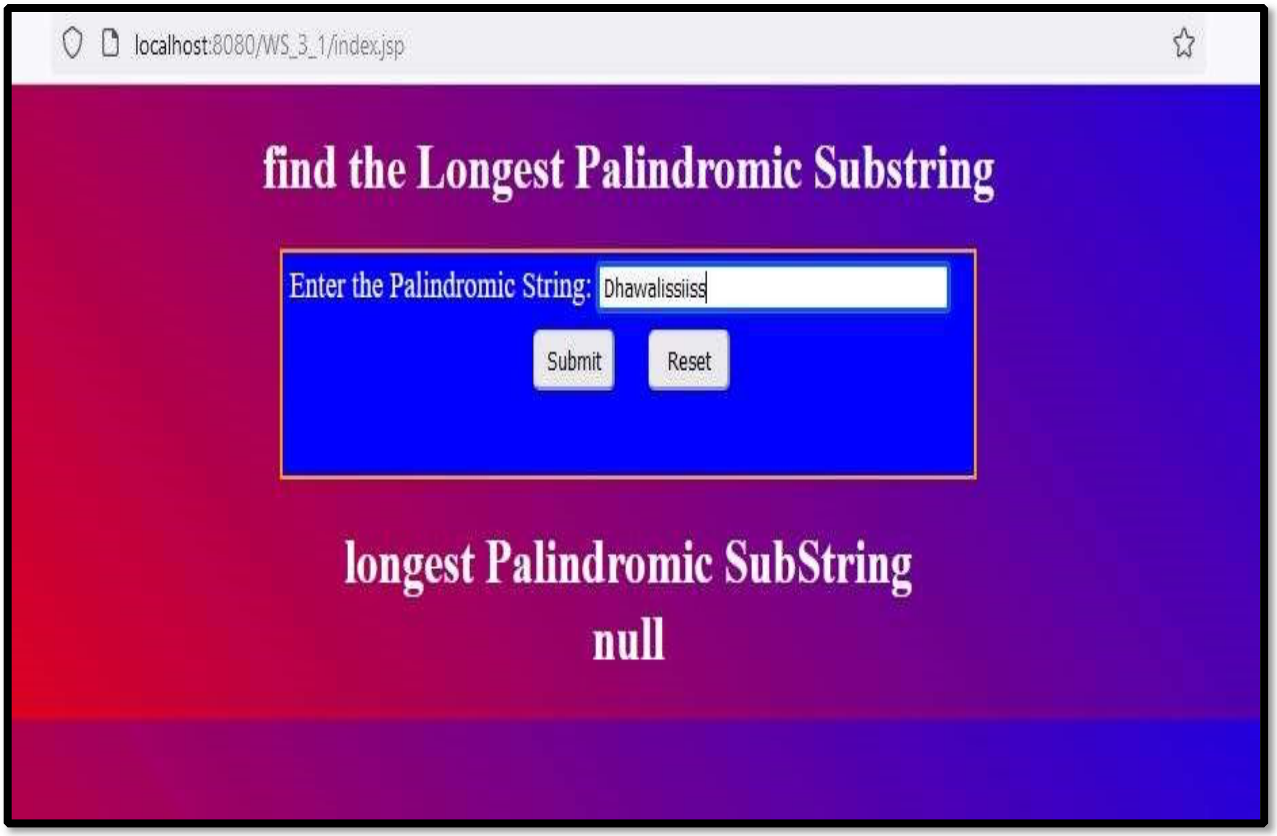
```
/**
 * Servlet implementation class functions
 */
@WebServlet(name="functions",urlPatterns={"/functions"}) public class functions
extends HttpServlet {
    protected void doPost(HttpServletRequest request, HttpServletResponse response) throws
ServletException, IOException {
        String a=request.getParameter("pal");
//      String fun=request.getParameter("fun");
        try {
//            System.out.println(a+fun);
             int n=a.length();
             String ans;
             if(n<=1) {
                 ans=a;
                   request.setAttribute("ans",ans);

         request.getRequestDispatcher("index.jsp").forward(request,response);
            }
            else {
                int len=1,s=0;
        int low,high;
                  for(int i=1;i<n;i++) {
                    low=i-1;
            high=i+1;
                       while(high<n&&a.charAt(high)==a.charAt(i)) {
                        high++;
```

```
                                          }
                                               while(high<n&&a.charAt(low)==a.charAt(i)) {
                                                  low++;
                                          }
                                           while(low>=0 && high<n &&
a.charAt(low)==a.charAt(high)) {
                                                  low--;
                         high++;
                                          }
                                          int length=high-low-1;
                 if(len<length) {
len=length;                                              s=low+1;
```

```
                                                    }
                                            }
                                                 ans=a.substring(s,s+len);
                          request.setAttribute("ans",ans);
request.getRequestDispatcher("index.jsp").forward(request,response);
                              }
                        }catch(Exception e) {
                                   System.out.println(e);
                      }
            }
}
```

OUTPUT:



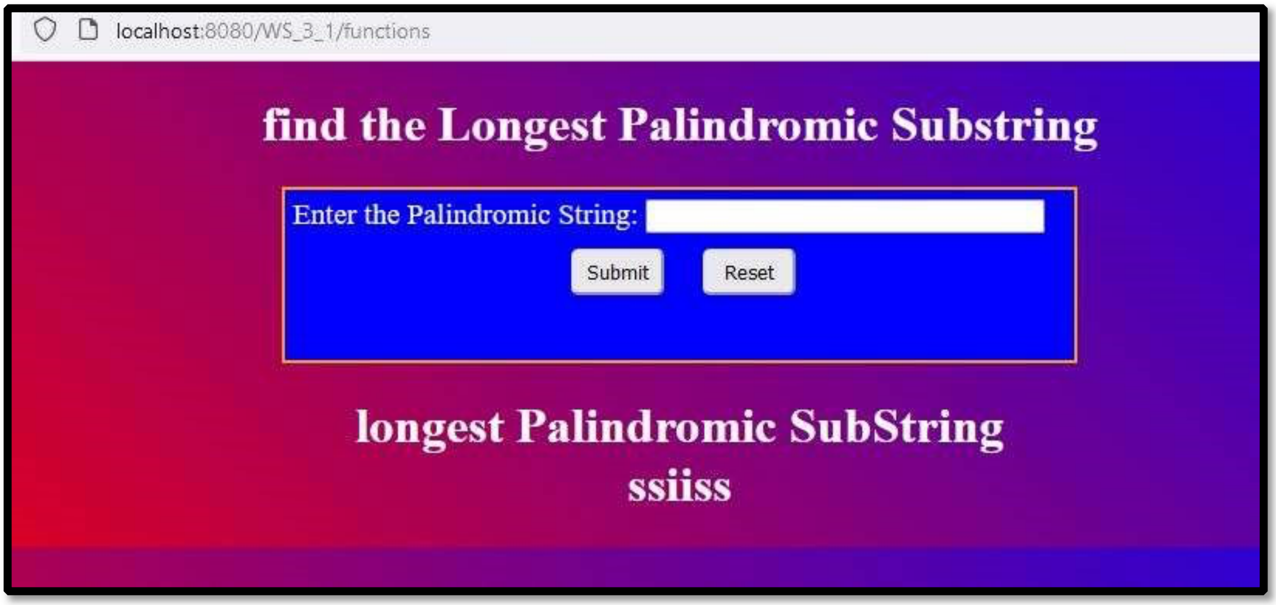
localhost:8080/WS_3_1/index.jsp

find the Longest Palindromic Substring

Enter the Palindromic String: Dhawalissiiss

longest Palindromic SubString

null



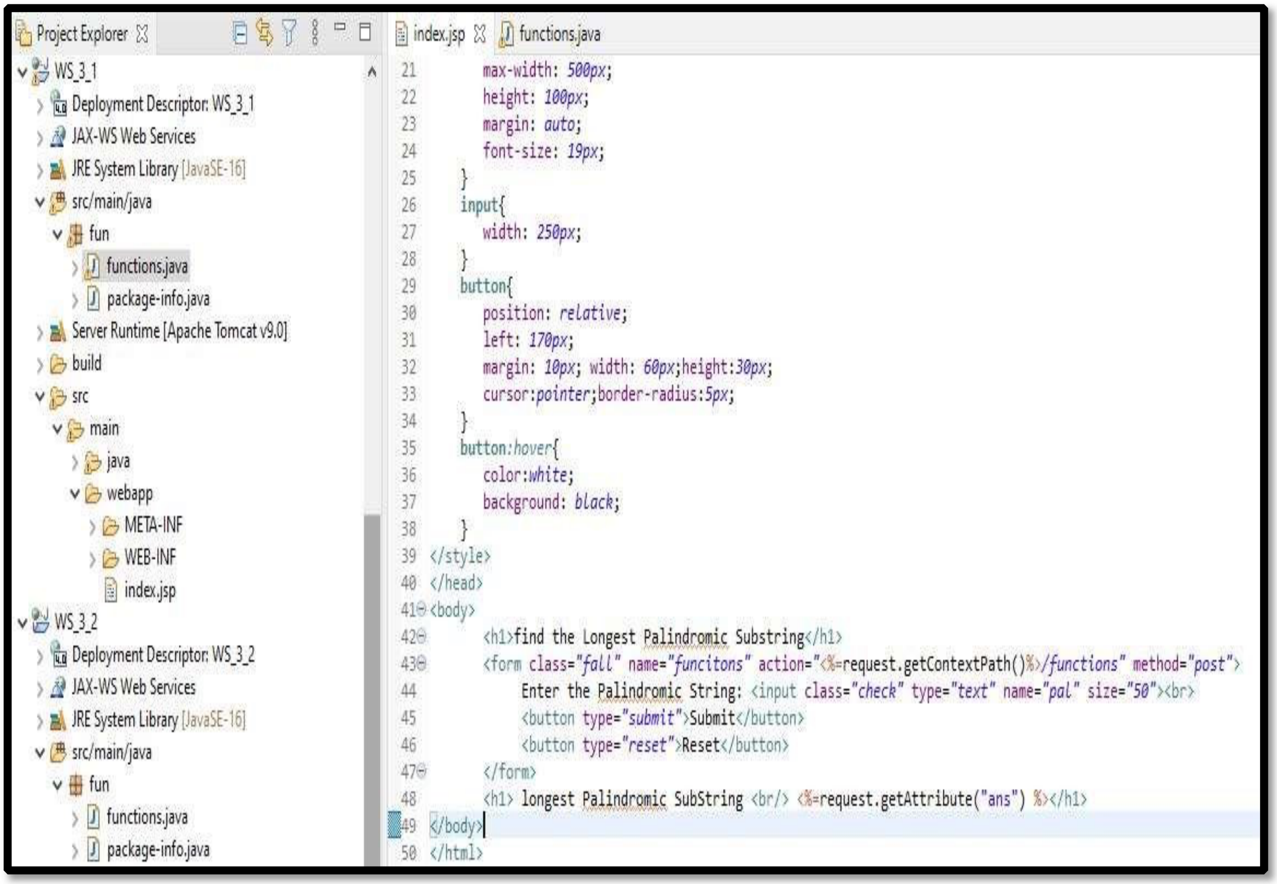
localhost:8080/WS_3_1/functions

find the Longest Palindromic Substring

Enter the Palindromic String:

longest Palindromic SubString

ssiiss



```
            max-width: 500px;
            height: 100px;
            margin: auto;
            font-size: 19px;
        }
        input{
            width: 250px;
        }
        button{
            position: relative;
            left: 170px;
            margin: 10px; width: 60px;height:30px;
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        </form>
        <h1> longest Palindromic SubString <br/> <%=request.getAttribute("ans") %></h1>
</body>
</html>
```

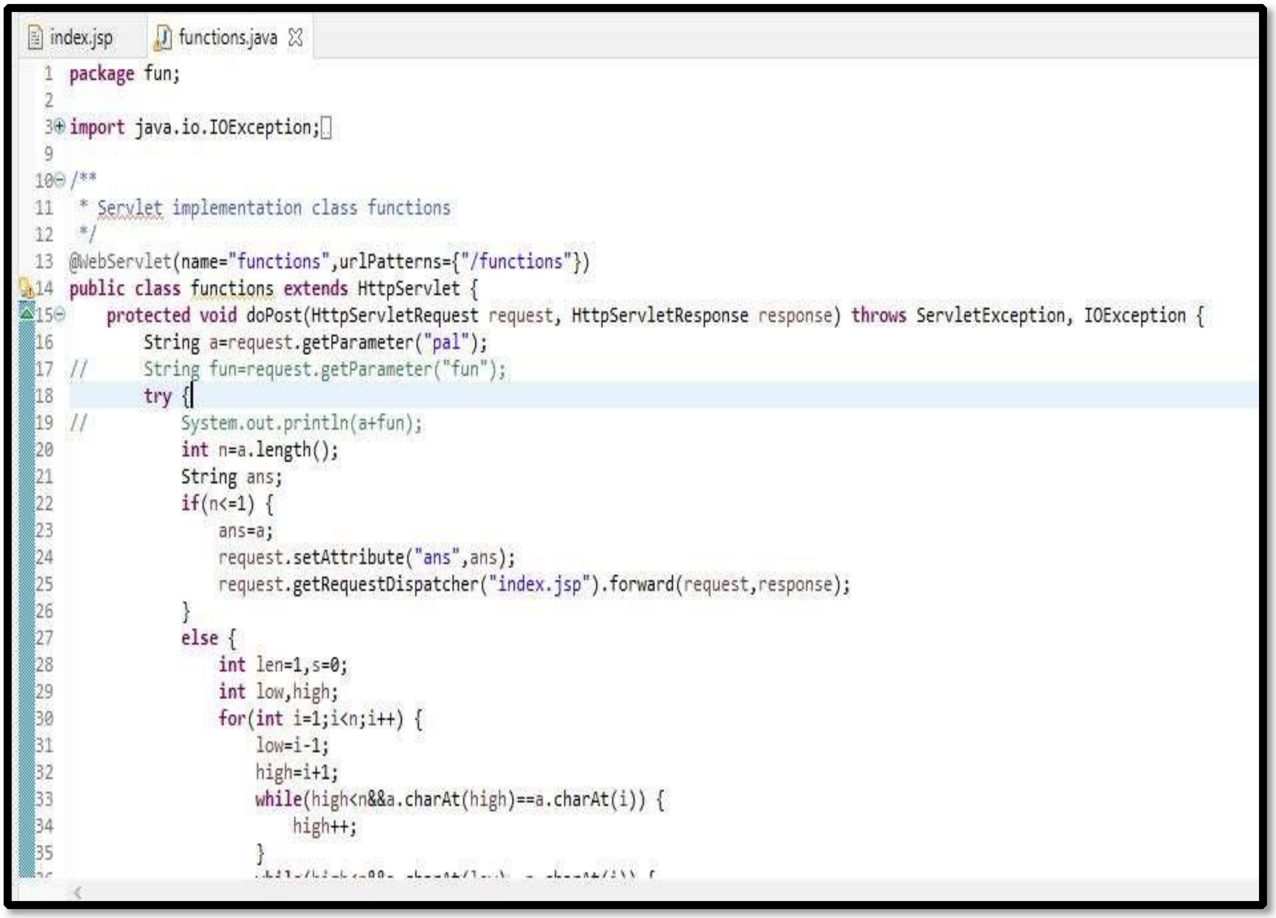

```
package fun;

import java.io.IOException;

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 */
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public class functions extends HttpServlet {
    protected void doPost(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException {
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//      String fun=request.getParameter("fun");
        try {
//          System.out.println(a+fun);
            int n=a.length();
            String ans;
            if(n<=1) {
                ans=a;
                request.setAttribute("ans",ans);
                request.getRequestDispatcher("index.jsp").forward(request,response);
            }
            else {
                int len=1,s=0;
                int low,high;
                for(int i=1;i<n;i++) {
                    low=i-1;
                    high=i+1;
                    while(high<n&&a.charAt(high)==a.charAt(i)) {
                        high++;
                    }
```

Learning outcomes (What I have learnt):

1. Learn About the servlet
2. Learn about jsp and dynamic web project
3. Learn about the tomcat server and its integrations with the java.