



CHANDIGARH UNIVERSITY

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UNIVERSITY INSTITUTE OF ENGINEERING

Department of Computer Science & Engineering

Subject Name:

Subject Code: 20CSP 321

Submitted to:

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Submitted by:

Name: Rajiv Paul

UID:20BCS1812

Section:20BCS_WM-702

Group: A

INDEX

Ex. No	List of Experiments	Date	Conduct (MM: 12)	Viva (MM: 10)	Record (MM: 8)	Total (MM: 30)	Remarks/Signature
1.1	Create an application to save the employees information using arrays	16/8/22					
1.2	Design and implement a simple inventory control system for a small video rental store	26/8/22					
1.3	Calculate interest based on the type of the account and the status of the account holder. The rates of interest changes according to the amount (greater than or less than 1 crore), age of account holder (General or Senior citizen) and number of days if the type of account is FD or RD.	6/9/22					
2.1	Create a program to set view of Keys from Java Hashtable.	16/9/22					
2.2	Create a program to show the usage of set of collection interface.	4/10/22					
2.3	Write a program to perform the basic operations like insert delete display and search in list. List contains string object items where the operation are to be performed.	30/9/22					
2.4	Create a menu based java application with the following options i) add an employee ii) display all iii) exit	11/10/22					

3.1	Create a palindrome creator application for making a longest possible palindrome out of given input string	01/11/22					
3.2							
3.3							

Experiment 3.1

Student Name:Rajiv Paul

UID:20BCS1812

Branch:CSE

Section/Group:702A

Semester: 5th

Date of Performance: 01/11/2022

Subject Name:PBLJ Lab

Subject Code: 20CSP 321

1. Aim:

Create a palindrome creator application for making a longest possible palindrome out of given input string

2. Requirements:

Software:

IntelliJ IDEA, JDK, MacOS, Netbeans

Hardware:

Macbook(Laptop)

Ram:4GB(Minimum)

Processor: M1

3. 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);
        background-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);
    }

}

}

```

4. Output:

localhost:8080/WS_3_1/index.jsp

find the Longest Palindromic Substring

Enter the Palindromic String:

longest Palindromic SubString
null

localhost:8080/WS_3_1/functions

find the Longest Palindromic Substring

Enter the Palindromic String:

longest Palindromic SubString
ssiiss

Learning outcomes (What I have learnt):

- 1.** Learnt about the Servlet .
- 2.** Learnt about jsp and dynamic web project .
- 3.** Learnt about the tomcat server and its integrations with the java.