



**Programme Name: B.SC. (H) COMPUTER
SCIENCE (SEMESTER – V)**

**Paper Title: SOFTWARE ENGINEERING
PRACTICAL**

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JAVA

QUES1-

Main.java

```
package com.q1;
import java .util.Scanner;
public class Main
{
    public static void main(String[] args)
    {
        int ch;
        Account bk=new Account(2000);
        Scanner sc=new Scanner(System.in);
        System.out.println("1.Existing account");
        System.out.println("2.Bank ");
        ch=sc.nextInt();

        if(ch==1)
        {
            bk.createexist();
        }
        else
        {
            bk.menu();
        }
    }
}
```

Account.java

```
package com.q1;
import java.util.ArrayList;
import java.util.Random;
import java.util.Scanner;
public class Account
{
    Random no=new Random();
    private int acc;
```

```
private int bal;
private String name;
private ArrayList<Account> accounts=new ArrayList<Account>()
```

```
    Account(int x)
    {
acc=x;
bal=0;
        accounts.add(new Account("ankur",acc));
        acc++;
        accounts.add(new Account("keshav",acc));
        acc++;
    }
```

```
    Account(String name,int acc)
    {
this.name=name;
this.acc=acc;
bal=0;
    }
```

```
public void createexist()
{
    int ch;
    do{
        System.out.println("--- Menu ---");
        System.out.println("1.Get Balance");
        System.out.println("2.Withdraw from bank");
        System.out.println("3.Deposit in Account");
        System.out.println("4.Go to bank menu");
        System.out.println("Enter Your Choice:");

        Scanner sc = new Scanner(System.in);
        ch = sc.nextInt();
        switch(ch)
        {
case 1: this.getBal();
            break;
            case 2: this.withdrawl();
                break;
case 3: this.deposit();
            break;
            case 4: menu();
        }
    }
}
```

```

                break;
                default: System.out.println("Wrong
Choice");
            }
        }while(ch!=9);
    }

    public void menu()
    {
        int ch;
        do{
            System.out.println("--- Menu ---");
            System.out.println("1.Create New Account");
            System.out.println("2.Show Total Bank Balance");
            System.out.println("3.Show Max and Min Account
Balance Holders");
            System.out.println("4.Check for Given Balance");
            System.out.println("5.Check for Given Account");
            System.out.println("6.check existing account");
            System.out.println("7.Exit");
            System.out.println("Enter Your Choice:");

            Scanner sc = new Scanner(System.in);
            ch = sc.nextInt();
            switch(ch)
            {
                case 1: this.createAccount();
                    break;
                case 2: this.showBankBal();
                    break;
                case 3: this.maxMin();
                    break;
                case 4: this.checkBal();
                    break;
                case 5: this.checkAccount();
                    break;
                case 6: this.createexist();
                    break;
                case 7: System.exit(0);

                default: System.out.println("Wrong
Choice");
            }
        }
    }

```

```

        }
    }while(ch!=9);
}

    public void getBal()
    {
        System.out.println("Enter Your Account Number : ");
        Scanner inp=new Scanner(System.in);
        int ac=inp.nextInt();
        int f=1;

        for (int i = 0; i <accounts.size(); i++)
        {
            if(ac==accounts.get(i).acc)
            {
                f=0;
                System.out.println("Your Account Balance is : " +
accounts.get(i).bal);
                break;
            }
            else
            {
                f=1;
            }
        }

        if(f==1)
        {
            System.out.println("Account not found");
        }
    }

    public void withdrawl()
    {
        System.out.println("Enter Your Account Number : ");
        Scanner inp=new Scanner(System.in);
        int ac=inp.nextInt();
        int f=1;

        for (int i = 0; i <accounts.size(); i++)
        {
            if(ac==accounts.get(i).acc)
            {

```

```

int ac1=i;
f=0;
System.out.println("Enter withdrawl amount : ");
int withdraw=inp.nextInt();

        if(withdraw>accounts.get(i).bal)
        {
            System.out.println("Insufficient Balance");
        }
        else if(withdraw<=0)
        {
            System.out.println("Wrong withdrawl amount");
        }
        else
        {
            accounts.get(ac1).bal-=withdraw;
            System.out.println("Your Updated Balance is : "+
accounts.get(ac1).bal);
        }
        break;
    }
    else
    {
        f=1;
    }
}

if(f==1)
{
    System.out.println("Account not found");
}
}

public void deposit()
{
    System.out.println("Enter Your Account Number : ");
    Scanner inp=new Scanner(System.in);
    int ac=inp.nextInt();
    int f=1;

    for (int i = 0; i <accounts.size(); i++)
    {
        if(ac==accounts.get(i).acc)

```

```

        {
            f=0;
            int ac1= i;
            System.out.println ("Enter the amount to be deposited : ");
            int deposit=inp.nextInt();

            if(deposit<=0)
            {
                System.out.println("Wrong deposit
amount");
            }

            else if(deposit>10000)
            {
                int a=tax_red(deposit);
                accounts.get(ac1).bal+=a;
                System.out.println("Your Updated Balance is : "+ accounts.get(ac1).bal);
            }
            else
            {
                accounts.get(ac1).bal+=deposit;
                System.out.println("Your Updated Balance is : "+ accounts.get(ac1).bal);
            }
            break;
        }
        else
        {
            f=1;
        }
    }

    if(f==1)
    {
        System.out.println("Account not found");
    }
}

public int tax_red(int d)
{
    int x=(int)(d-(.02*d));
    return x;
}

void createAccount()

```

```

    {
    System.out.println("Enter Your name");
    Scanner sc = new Scanner(System.in);
    String name=sc.nextLine();
    this.acc++;
        accounts.add(new Account(name,this.acc));
    System.out.println("Welcome " +name+" Your Account is
successfully created with acc no : " + this.acc);
    }

private void showBankBal()
{
    int total=0;
    for (int i = 0; i <accounts.size(); i++)
    {
        //System.out.println(accounts.get(i).bal);
        total+=accounts.get(i).bal;
    }
    System.out.println("Total Amount in bank : "+total);
}

private void maxMin()
{
    int minValue=accounts.get(0).bal;
    for(int i=1;i<accounts.size();i++)
    {
        if(accounts.get(i).bal< minValue)
        {
            minValue = accounts.get(i).bal;
        }
    }

    int maxValue=accounts.get(0).bal;
    for(int i=1;i<accounts.size();i++)
    {
        if(accounts.get(i).bal> maxValue)
        {
            maxValue = accounts.get(i).bal;
        }
    }

    System.out.println("Min Balance in Bank : "+minValue);
    System.out.println("Max Balance in Bank : "+maxValue);
}

```



```

private void checkBal()
{
System.out.println("Enter the amount to be checked..?");
Scanner sc=new Scanner(System.in);
int b=sc.nextInt();
int count=0;

for(int i=1;i<accounts.size();i++)
{
if(accounts.get(i).bal>= b)
{
count++;
}
}
}
System.out.println("Total accounts with balance greater than or equal to
"+b+" are : "+count);
}

```

```

private void checkAccount()
{
System.out.println("Enter Your Account Number : ");
Scanner inp=new Scanner(System.in);
int ac=inp.nextInt();
int f=1;

for (int i = 0; i <accounts.size(); i++)
{
if(ac==accounts.get(i).acc)
{
f=0;
System.out.println("Your account was found with Account Balance : " +
accounts.get(i).bal);
break;
}
else
{
f=1;
}
}
if(f==1)
{
System.out.println("Account not found");
}
}
}

```

```
}
```

QUES2-

Stack.java

```
abstract class Stack
{
    int top;
    Stack()
    {
        this.top = -1;
    }
    abstract void push(int paramInt);
    abstract int pop();
    abstract void display();
}
```

DynamicStack.java

```
import java.io.PrintStream;
import java.util.ArrayList;

class dynamicStack extends Stack
{
    ArrayList<Integer> arr;
    dynamicStack()
    {
        this.arr = new ArrayList();
    }

    void push(int paramInt)
    {
        this.arr.add(++this.top, Integer.valueOf(paramInt));
    }

    int pop()
    {
        if (this.top == -1)
        {
            return -1;
        }
    }
}
```

```

        }
        return ((Integer)this.arr.remove(this.top--)).intValue();
    }

    void display()
    {
        System.out.print("The Stack is : ");
        for (int i = 0; i <this.arr.size(); i++)
        {
            System.out.print(this.arr.get(i) + " ");
        }
        System.out.println();
    }
}

```

StaticStack.java

```

import java.io.PrintStream;

class staticStack extends Stack
{
    int[] arr;
    int size;
    staticStack(int paramInt)
    {
        this.size = paramInt;
        this.arr = new int[this.size];
    }

    void push(int paramInt)
    {
        if (this.top == this.size - 1)
        {
            System.out.println("overflow");
        }
        else
        {
            this.arr[(++this.top)] = paramInt;
        }
    }
}

```

```

int pop()
{
    if (this.top == -1)
    {
        return -1;
    }
    return this.arr[(this.top--)];
}

void display()
{
    System.out.print("The Stack is : ");
    for (int i = 0; i <= this.top; i++)
    {
        System.out.print(this.arr[i] + " ");
    }
    System.out.println();
}
}

```

Main.java

```

import java.io.PrintStream;
import java.util.Scanner;
class main1
{
    public static void main(String[] paramArrayOfString)
    {
        Scanner localScanner = new Scanner(System.in);
        System.out.println("Enter");
        System.out.println("1.staticStack");
        System.out.println("2.dynamicStack");
        System.out.println("3.Exit");
        int m = localScanner.nextInt();

        switch (m)
        {
            case 1: System.out.println("Enter array size");
                    int i3 = localScanner.nextInt();
                    staticStack localstaticStack = new
staticStack(i3);

                    System.out.println("Enter");

```

```

System.out.println("1.Push");
System.out.println("2.Pop");
System.out.println("3.Display");
int i4;
do{
    System.out.println("Enter your
choice");
    int i = localScanner.nextInt();

    switch (i)
    {
        case 1:
System.out.println("Enter a number to be pushed into the stack");
        int j =
localScanner.nextInt();
        localstaticStack.push(j);
        break;

        case 2: int k=localstaticStack.pop();
            if (k == -1)
                {
System.out.println("Underflow");
                }
            else
                {
System.out.println("Number popped =" + k);
                }
            break;

        case 3:
localstaticStack.display();
    }

    System.out.println("Enter 0 if you want to continue");
    i4 = localScanner.nextInt();
    } while (i4 == 0);
    break;

    case 2: dynamicStack localdynamicStack = new dynamicStack();
        System.out.println("Enter");
        System.out.println("1.Push");

```

```
System.out.println("2.Pop");
System.out.println("3.Display");
```

```
for (;;)
{
    System.out.println("Enter your choice");
    int n = localScanner.nextInt();

    switch (n)
    {
        case 1: System.out.println("Enter a number to be pushed into the stack");
                int i1 = localScanner.nextInt();

                localdynamicStack.push(i1);
                break;
        case 2: int i2 = localdynamicStack.pop();
                if (i2 == -1)
                {
                    System.out.println("Underflow");
                }
                else
                {
                    System.out.println("Number popped =" + i2);
                }
                break;
        case 3: localdynamicStack.display();
                }
    }
    System.out.println("Enter 0 if you want to continue");
    int i5 = localScanner.nextInt();
    if (i5 != 0)
    {
        break;
    }
}
}
```

JDBC

QUES1- STUDENT DATABASE

```
MySQL 5.6 Command Line Client
Rows matched: 1  Changed: 1  Warnings: 0
mysql> select *from student;
+----+-----+-----+-----+
| roll | name  | age  | gender |
+----+-----+-----+-----+
| 1    | nisha | 20   | f      |
| 2    | krishi | 21  | f      |
| 3    | kanishk | 22  | m      |
| 4    | sid   | 21   | m      |
| 5    | divesha | 20  | f      |
+----+-----+-----+-----+
5 rows in set (0.00 sec)
mysql>
```

```
MySQL 5.6 Command Line Client
+----+-----+-----+-----+
| rollno | SUBJECT | MARKS |
+----+-----+-----+-----+
| 1      | english | 90.00 |
| 1      | maths  | 95.00 |
| 2      | english | 96.00 |
| 2      | maths  | 92.00 |
| 3      | english | 87.00 |
| 3      | maths  | 67.00 |
| 4      | english | 52.00 |
| 4      | maths  | 65.00 |
| 5      | english | 76.00 |
| 5      | maths  | 89.00 |
+----+-----+-----+-----+
10 rows in set (0.00 sec)
mysql>
```

```
package javaapplication9;
import java.io.BufferedReader;
import java.io.InputStreamReader;
import java.sql.DriverManager;
import java.sql.*;
```

```

import java.util.Scanner;
public class JavaApplication9 {

    public static void main(String[] args) {
        ResultSet rs;
    try
    {
        int c1=0;
        int c2=0;
        int c3=0;
        Class.forName("com.mysql.cj.jdbc.Driver");
        Connection con
=DriverManager.getConnection("jdbc:mysql://localhost:3306/it_gals","ro
ot","root");
        Statement stmt= con.createStatement();
    do{
        System.out.println("MENU");
        System.out.println("1.FIND TOTAL STUDENTS");
        System.out.println("2.Each subject average marks");
        System.out.println("3.STUDENT NAME WITH HIGHEST MARKS");
        System.out.println("4.NO OF STUDENTS GETTING FIRST SECOND
AND THIRD DIVISION");
        System.out.println("5.SUBJECT WISE TOPPERS");
        System.out.println("6.AVERGAE MARKS");
        System.out.println("7.STUDENT GETTING SECOND HIGHEST
MARKS");
        System.out.println("8.SUM OF MARKS OF STUDENT");
        int ch;

```



```

String sub;

BufferedReader br = new BufferedReader(new
InputStreamReader(System.in));

Scanner sc = new Scanner(System.in);

ch=sc.nextInt();

        switch(ch)
    {
        case 1: rs= stmt.executeQuery("select count(*) total from
student");

            rs.next();
            int total =rs.getInt("total");
            System.out.println(total);
            break;

        case 2: System.out.println("Enter the subject");
            sub=sc.next();

            String sql="select AVG(MARKS) as abg from results where
SUBJECT='"+sub+"'";

            rs=stmt.executeQuery(sql);
            rs.next();
            int s=rs.getInt("abg");
            System.out.println(s);
            break;

        case 3: System.out.println("");

            rs = stmt.executeQuery("select name, rollno, sum(marks)
from student, results where roll=rollno group\n" +
"by rollno order by sum(marks) desc limit 1");

```

```

rs.next();
String n=rs.getString("name");
System.out.println("The student with highest marks is "+"
+n);
break;
case 4: rs=stmt.executeQuery("select
rollno,(SUM(MARKS)/200)*100 AS 'DIV' from results GROUP BY rollno");
while(rs.next())
{
if(rs.getInt("div")>=60)
{
c1++;
}
else
if(rs.getInt("div")>=40&&rs.getInt("div")<60)
{
c2++;
}
else
{
c3++;
}
}
System.out.println(+c1);
System.out.println(+c2);
System.out.println(+c3);

```

```
break;
```

```
case 5: rs=stmt.executeQuery("select  
name,rollno,SUBJECT,MARKS as \"Highest\" from student, results where  
roll=rollno and marks in (select max(MARKS) from results group by  
SUBJECT)");
```

```
while(rs.next())
```

```
{
```

```
System.out.println("max marks in  
"+rs.getString("SUBJECT")+" is of "+rs.getString("name"));
```

```
}
```

```
break;
```

```
case 6: rs=stmt.executeQuery("select SUBJECT as  
sub,avg(MARKS) as avg from results group by SUBJECT");
```

```
while(rs.next())
```

```
{
```

```
System.out.println("Average marks of  
"+rs.getString("sub")+" are "+rs.getInt("avg"));
```

```
}
```

```
break;
```

```
case 7: rs=stmt.executeQuery("select name, rollno,  
sum(MARKS) from student, results where roll=rollno group by rollno  
order by sum(MARKS) desc limit 1,1");
```

```
rs.next();
```

```
System.out.println(" second topper "+rs.getString("name"));
```

```
break;
```

```
case 8: rs=stmt.executeQuery("select rollno, sum(MARKS)  
as mrk from results group by rollno order by sum(MARKS) desc limit 5");
```

```
while(rs.next()){
```

```
        System.out.println(" total marks of roll no  
"+rs.getString("rollno")+ " is "+rs.getString("mrk"));}  
        break;  
    }  
  
        System.out.println("Do u want to continue y\n");  
String s= br.readLine();  
if(s.startsWith("n"))  
{  
    System.exit(0);  
}  
} while(true);  
}  
catch(Exception e)  
{  
    System.out.println(e);  
  
}  
  
}  
  
}
```

```

MENU
1.FIND TOTAL STUDENTS
2.Each subject average marks
3.STUDENT NAME WITH HIGHEST MARKS
4.NO OF STUDENTS GETTING FIRST SECOND AND THIRD DIVISION
5.SUBJECT WISE TOPPERS
6.AVERGAE MARKS
7.STUDENT GETTING SECOND HIGHEST MARKS
8.SUM OF MARKS OF STUDENT
1
5
Do u want to continue y

y
MENU
1.FIND TOTAL STUDENTS
2.Each subject average marks
3.STUDENT NAME WITH HIGHEST MARKS
4.NO OF STUDENTS GETTING FIRST SECOND AND THIRD DIVISION
5.SUBJECT WISE TOPPERS
6.AVERGAE MARKS
7.STUDENT GETTING SECOND HIGHEST MARKS
8.SUM OF MARKS OF STUDENT
2
Enter the subject
english
50
Do u want to continue y

y
MENU
1.FIND TOTAL STUDENTS
2.Each subject average marks
3.STUDENT NAME WITH HIGHEST MARKS
4.NO OF STUDENTS GETTING FIRST SECOND AND THIRD DIVISION
5.SUBJECT WISE TOPPERS
6.AVERGAE MARKS
7.STUDENT GETTING SECOND HIGHEST MARKS
8.SUM OF MARKS OF STUDENT

```

```

MENU
1.FIND TOTAL STUDENTS
2.Each subject average marks
3.STUDENT NAME WITH HIGHEST MARKS
4.NO OF STUDENTS GETTING FIRST SECOND AND THIRD DIVISION
5.SUBJECT WISE TOPPERS
6.AVERGAE MARKS
7.STUDENT GETTING SECOND HIGHEST MARKS
8.SUM OF MARKS OF STUDENT
3
The student with highest marks is krishi
Do u want to continue y

y
MENU
1.FIND TOTAL STUDENTS
2.Each subject average marks
3.STUDENT NAME WITH HIGHEST MARKS
4.NO OF STUDENTS GETTING FIRST SECOND AND THIRD DIVISION
5.SUBJECT WISE TOPPERS
6.AVERGAE MARKS
7.STUDENT GETTING SECOND HIGHEST MARKS
8.SUM OF MARKS OF STUDENT
4
4
1
0
Do u want to continue y

y
MENU
1.FIND TOTAL STUDENTS
2.Each subject average marks
3.STUDENT NAME WITH HIGHEST MARKS
4.NO OF STUDENTS GETTING FIRST SECOND AND THIRD DIVISION
5.SUBJECT WISE TOPPERS
6.AVERGAE MARKS
7.STUDENT GETTING SECOND HIGHEST MARKS
8.SUM OF MARKS OF STUDENT
1

```

```
3.STUDENT NAME WITH HIGHEST MARKS
4.NO OF STUDENTS GETTING FIRST SECOND AND THIRD DIVISION
5.SUBJECT WISE TOPPERS
6.AVERGAE MARKS
7.STUDENT GETTING SECOND HIGHEST MARKS
8.SUM OF MARKS OF STUDENT
5
max marks in maths is of nisha
max marks in english is of krishi
Do u want to continue y

y
MENU
1.FIND TOTAL STUDENTS
2.Each subject average marks
3.STUDENT NAME WITH HIGHEST MARKS
4.NO OF STUDENTS GETTING FIRST SECOND AND THIRD DIVISION
5.SUBJECT WISE TOPPERS
6.AVERGAE MARKS
7.STUDENT GETTING SECOND HIGHEST MARKS
8.SUM OF MARKS OF STUDENT
6
Average marks of english are 80
Average marks of maths are 81
Do u want to continue y

y
MENU
1.FIND TOTAL STUDENTS
2.Each subject average marks
3.STUDENT NAME WITH HIGHEST MARKS
4.NO OF STUDENTS GETTING FIRST SECOND AND THIRD DIVISION
5.SUBJECT WISE TOPPERS
6.AVERGAE MARKS
7.STUDENT GETTING SECOND HIGHEST MARKS
8.SUM OF MARKS OF STUDENT
7
second topper nisha
Do u want to continue y
```

```
y
MENU
1.FIND TOTAL STUDENTS
2.Each subject average marks
3.STUDENT NAME WITH HIGHEST MARKS
4.NO OF STUDENTS GETTING FIRST SECOND AND THIRD DIVISION
5.SUBJECT WISE TOPPERS
6.AVERGAE MARKS
7.STUDENT GETTING SECOND HIGHEST MARKS
8.SUM OF MARKS OF STUDENT
8
total marks of roll no 2 is 188.00
total marks of roll no 1 is 185.00
total marks of roll no 5 is 165.00
total marks of roll no 3 is 154.00
total marks of roll no 4 is 117.00
Do u want to continue y
```

QUES2

```
package javaapplication6;
```

```
import java.sql.*;
```

```
public class JavaApplication6 {
```

```
    public static void main(String[] args) {
```

```
        try{
```

```
            Class.forName("com.mysql.cj.jdbc.Driver");
```

```

Connection
conn=DriverManager.getConnection("jdbc:mysql://localhost:3306/jdbc_
ass2","root", "root" );

CallableStatement stmt=conn.prepareCall("{call getTotal()}");

stmt.registerOutParameter(1,Types.INTEGER);

stmt.execute();

System.out.println("No of rows= "+stmt.getInt(1));

conn.close();
}

    catch(Exception e)
    { System.out.println(e);}
}
}

```

Mysql:--

```

mysql> use jdbc_ass2;

Database changed

mysql> DELIMITER //

mysql> DELIMITER //

mysql> CREATE PROCEDURE getTotal

-> (

-> OUT total INT

-> )

-> BEGIN

-> SELECT COUNT(*)

-> INTO total

```

-> FROM student;

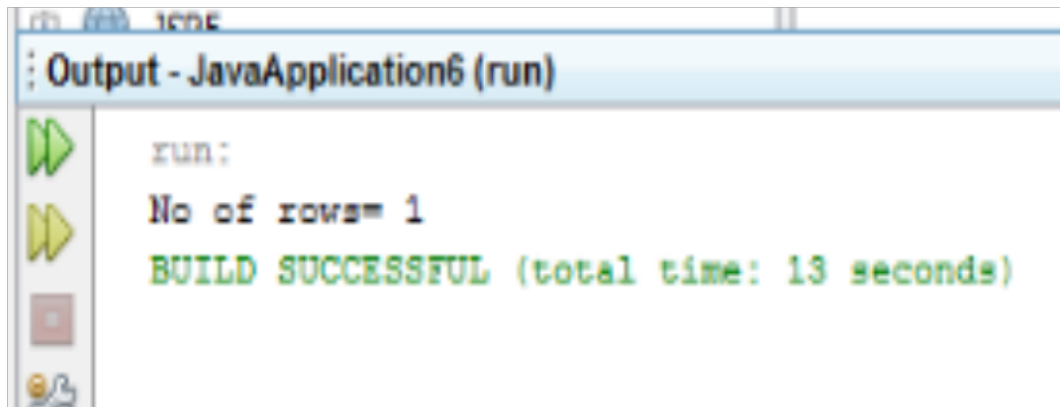
-> END

-> //

Query OK, 0 rows affected (0.66 sec)

mysql> DELIMITER ;

mysql> DELIMITER //



JAVABEANS

QUES1- STUDENT BEAN

student.java

```
package stud;
```

```
import java.io.Serializable;
```

```
public class student extends StringFormat implements Serializable {
```



```

private static String DATE_FORMAT_PATTERN = "yyyy-MM-dd";
private static String[] GENDER_LIST = {"m", "f"};
private static String EMAILADDR = "name@company.com" ;
private String name;
private int roll;
private String course;
private String gender;
private String dob;
private String email;
public student()
{
    name = course = gender = dob = email = null;
    roll=0;
}

/** name property with validation**/
public String getName() {
    return name;
}
public void setName(String name)
{
    this.name=name;
}
public boolean isNameValid( ) {

```

```
boolean isValid = false;
if (name != null) {
    isValid = true;
}
return isValid;
}
```

```
    /**roll number property with validation**/
    public int getRoll()
    {
        return roll;
    }

    public void setRoll(int roll) {
        this.roll = roll;
    }

    public boolean isRollValid() {
        boolean isValid = false;
        if (roll != 0) {
            isValid = true;
        }
        return isValid;
    }

    /**course property **/
```

```
public String getCourse()
{
    return course;
}

public void setCourse(String course) {
    this.course = course;
}

public boolean isCourseValid() {
    boolean isValid = false; //null
    if (course != null) {
        isValid = true;
    }
    return isValid;
}
```

```
/** DOB property with validation**/
```

```
public String getDob() {
    return dob;
}

public void setDob(String dob) {
    this.dob = dob;
}

public boolean isDobValid() {
    boolean isValid = false;
```

```
if (dob != null && StringFormat.isValidDate(dob,
DATE_FORMAT_PATTERN)) {
    isValid = true;
}
return isValid;
}
```

```
/** gender property with validation**/
public String getGender() {
    return gender;
}
public void setGender(String gender) {
    this.gender = gender;
}
public boolean isGenderValid() {
    boolean isValid = false;
    if (gender != null && StringFormat.isValidGender(gender, GENDER_LIST))
    {
        isValid = true;
    }
    return isValid;
}
/** email property with validation**/
```

```
public String getEmail() {
    return email;
}

public void setEmail(String email) {

    this.email = email;
}

public boolean isEmailValid( ) {
boolean isValid = false;
if (email != null && StringFormat.isValidEmail(email, EMAILADDR)) {
isValid = true;
}
return isValid;
}
}
```

studentbean.jsp

```
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
<html>
    <head>
        <style>
table, th, td {
    border: 4px solid pink;
}
}
```

```

</style>
    <title>Student registration</title>
</head>
<body>
<jsp:useBean id="studentInfo" class="stud.student">
<jsp:setProperty name="studentInfo" property="*/>
</jsp:useBean>
<form action="studentbean.jsp" method="post" >
    <input type="hidden" name="submitted" value="true">
    <table width="50%" height="70%" >
        <c:if test="\${param.submitted && empty param.name}">
<tr><td></td>
<td colspan="2"><font color="red">
Please enter your Name
</font></td></tr>
</c:if>
<tr>
<td>Name:</td>
<td>
<input type="text" name="name" size="30"
value="\<c:out value="\${studentInfo.name}" />" />
</td>
</tr>

```

```
<c:if test="\${param.submitted && empty param.roll}">
    <tr><td></td>
    <td colspan="2"><font color="red">
        Please enter your Roll No
    </font></td></tr>
</c:if>
<tr>
<td>Roll No:</td>
<td>
    <input type="number" name="roll" size="30" required="true"
value="\<c:out value="\${studentInfo.roll}" />" />
</td>
</tr>
```

```
<c:if test="\${param.submitted && empty param.course}">
    <tr><td></td>
    <td colspan="2"><font color="red">
        Please enter your Course Name
    </font></td></tr>
</c:if>
<tr>
<td>Course:</td>
<td>
```

```
<input type="text" name="course" size="30" required="true" title="Use
format Bsc(H).Computer Science" value="<c:out
value="\${studentInfo.course}" />" />
```

```
</td></tr>
```

```
<c:if test="\${param.submitted && empty param.dob}">
```

```
<tr><td></td>
```

```
<td colspan="2"><font color="red">
```

```
Please enter a valid Birth Date
```

```
</font></td></tr>
```

```
</c:if>
```

```
<tr>
```

```
<td>Birth Date:</td>
```

```
<td>
```

```
<input type="date" name="dob" title="Use format dd-mm-yyyy"
required="true" size="30" value="<c:out value="\${studentInfo.dob}" />" />
```

```
</td>
```

```
</tr>
```

```
<c:if test="\${param.submitted && empty param.email }">
```

```
<tr><td></td>
```

```
<td colspan="2"><font color="red">
```

```
Please enter valid Email Address
```

```
</font></td></tr>
```

```
</c:if>
```



```
<tr>
<td>Email Address:</td>
<td>
<input type="email" name="email" required="true" size="30" title="Use
format name@company.com" value="<c:out
value="\${studentInfo.email}" />">
</td>
</tr>
```

```
<c:if test="\${param.submitted &&
param.gender != 'm' && param.gender != 'f'}">
```

```
<tr><td></td>
```

```
<td colspan="2"><font color="red">
```

```
Please select a valid Gender
```

```
</font></td></tr>
```

```
</c:if>
```

```
<tr>
```

```
<td>Gender:</td>
```

```
<td>
```

```
<c:choose>
```

```
<c:when test="\${param.gender == 'f'}">
```

```
<input type="radio" name="gender" value="m">
```

```
Male<br>
```

```
<input type="radio" name="gender" value="f" >
```

```
Female
```

```

</c:when>
<c:otherwise>
<input type="radio" name="gender" value="m" >
Male<br>
<input type="radio" name="gender" value="f">
Female
</c:otherwise>
</c:choose>
</td>
</tr>
<tr>
    <td colspan=2><center>
        <input type="submit" value="Submit Your Response" >
</td></center>
</tr>
</table>
</form>
<c:if test="{param.submitted}">
    <h3><u>YOU ENTERED FOLLOWING DETAILS :</u></h3>
<h4 style="color:brown">
Name : <jsp:getProperty property="name" name="studentInfo"/><br>
Roll No : <jsp:getProperty property="roll" name="studentInfo"/><br>
Course : <jsp:getProperty property="course" name="studentInfo"/><br>
Birth Date : <jsp:getProperty property="dob" name="studentInfo"/><br>

```

Email Address : <jsp:getProperty property="email" name="studentInfo"/>

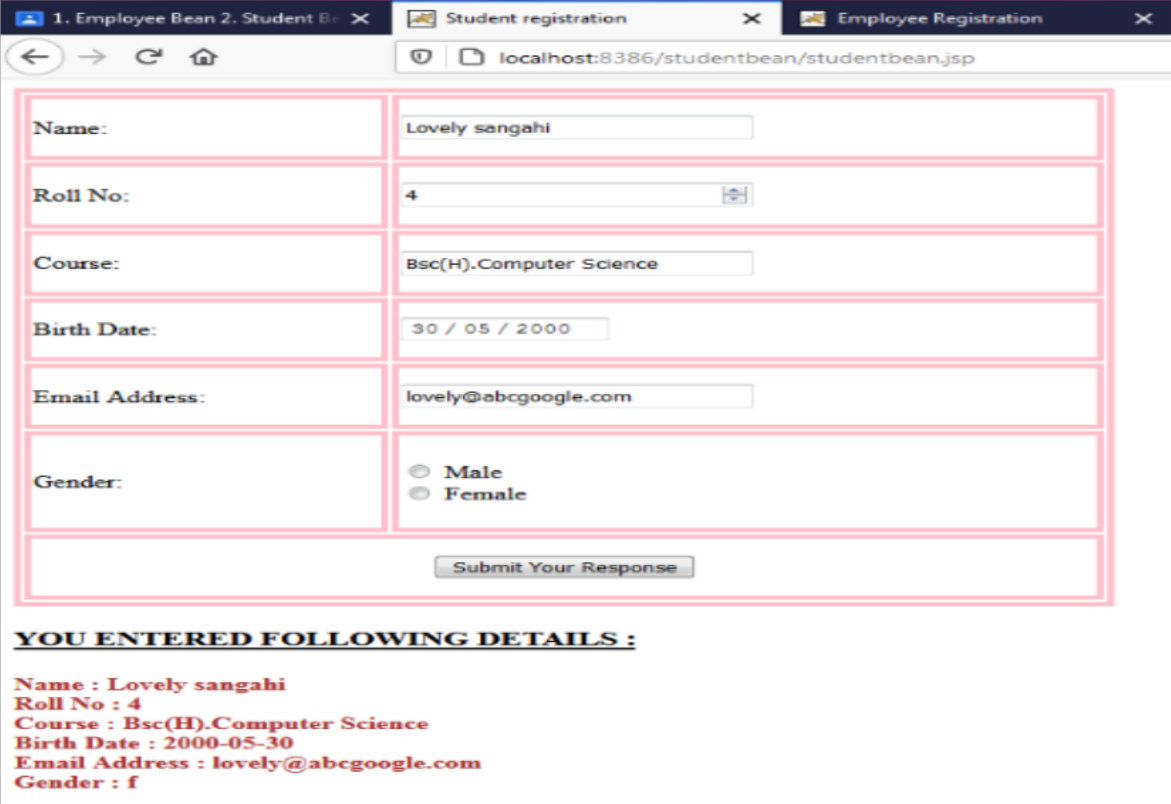
Gender : <jsp:getProperty property="gender" name="studentInfo"/>

</c:if>

</body>

</html>

OUTPUT-



1. Employee Bean 2. Student B... x Student registration x Employee Registration x

localhost:8386/studentbean/studentbean.jsp

Name:	Lovely sangahi
Roll No:	4
Course:	Bsc(H).Computer Science
Birth Date:	30 / 05 / 2000
Email Address:	lovely@abcgoogle.com
Gender:	<input type="radio"/> Male <input type="radio"/> Female

Submit Your Response

YOU ENTERED FOLLOWING DETAILS :

Name : Lovely sangahi
Roll No : 4
Course : Bsc(H).Computer Science
Birth Date : 2000-05-30
Email Address : lovely@abcgoogle.com
Gender : f

QUES2- EMPLOYEE BEAN

employee.java

```
package emply;
```

```
import java.beans.*;
```

```
import java.io.Serializable;
```

```
public class employee implements Serializable {
```

```
private static String[] gender_list = {"m","f"};
private static String[] lang_list = {"c", "c++","java"};
private static String emailaddr = "name@company.com" ;
private String name;
private int id;
private String email;
private String dept;
private String gender;
private String[] language;
```

```
public employee()
```

```
{
    name = null;
    dept = null;
    id = 0;
    gender = null;
}
```

```
/**Language property with validation**/
```

```
public String[] getLanguage() {
    return language;
}
```

```
public void setLanguage(String[] language) {
    this.language = language;
```



```
    }  
    public boolean isCSelected( ) {  
return isLangTypeSelected("c");  
    }  
    public boolean isCPPSelected( ) {  
return isLangTypeSelected("c++");  
    }  
    public boolean isJavaSelected( ) {  
return isLangTypeSelected("java");  
    }  
    private boolean isLangTypeSelected(String langType) {  
if (language == null) {  
return false;  
}  
    boolean selected = false;  
    for (int i = 0; i < language.length; i++) {  
if (language[i].equals(langType)) {  
selected = true;  
break;  
}  
    }  
    return selected;  
    }
```



```
/**name property with validation**/  
public String getName()  
{  
    return name;  
}  
public void setName(String name)  
{  
    this.name=name;  
}  
public boolean isNameValid() {  
    boolean isValid = false;  
    if (name != null) {  
        isValid = true;  
    }  
    return isValid;  
}
```

```
/**gender property with validation**/  
public String getGender() {  
    return gender;  
}
```

```
public void setGender(String gender) {  
    this.gender = gender;  
}
```



```
    }  
    public boolean isGenderValid( ) {  
boolean isValid = false;  
if (gender != null && StringFormat.isValidGender(gender, gender_list)) {  
isValid = true;  
}  
return isValid;  
}
```

```
    /**Department property with validation**/  
    public void setDept(String dept)  
    {  
        this.dept=dept;  
    }  
    public String getDept()  
    {  
        return dept;  
    }  
    public boolean isDeptValid( ) {  
boolean isValid = false;  
if (dept != null) {  
isValid = true;  
}  
return isValid;
```

```
}  
  
/**Id property with validation**/  
public void setId(int id)  
{  
    this.id=id;  
}  
  
public int getId()  
{  
    return id;  
}  
  
public boolean isValid() {  
boolean isValid = false;  
if (id != 0) {  
    isValid = true;  
}  
return isValid;  
}  
  
/** email property with validation**/  
public String getEmail() {  
    return email;  
}  
  
public void setEmail(String email) {  
  
    this.email = email;  
}
```




```

}
public boolean isValid() {
boolean isValid = false;
if (email != null && StringFormat.isValidEmail(email, emailaddr)) {
isValid = true;
}
return isValid;
}
}

```

empbean.jsp

```

<%@page contentType="text/html" pageEncoding="UTF-8" %>
<%@ taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core" %>
<html>
  <head>
    <style>
table, th, td {
  border: 4px solid brown;
}
</style>
    <title>Employee Registration</title>
  </head>
  <body>
    <body>
<jsp:useBean id="empInfo" class="emp.employee">

```

```

<jsp:setProperty name="emplyInfo" property="*" />
</jsp:useBean>
<form action="empbean.jsp" method="post" >
  <input type="hidden" name="submitted" value="true">
  <table width="50%" height="70%">

<c:if test="\${param.submitted && empty param.name}">
<tr><td></td>
<td colspan="2"> <font color="red"> Please enter your Name
</font> </td> </tr>
</c:if>
<tr>
<td>Name:</td>
<td>
<input type="text" name="name" required="true" size="30" value="\<c:out
value="\${emplyInfo.name}" />" >
</td>
</tr>

<c:if test="\${param.submitted && empty param.id}">
  <tr><td></td>
  <td colspan="2"><font color="red">
Please enter your Id
</font></td></tr>

```

```
        </c:if>
<tr>
<td>Id:</td>
<td>
<input type="number" name="id" size="30" required="true" value="<c:out
value="{emptyInfo.id}"/>">
</td>
</tr>
```

```
<c:if test="{param.submitted && empty param.dept}">
```

```
    <tr><td></td>
```

```
    <td colspan="2"><font color="red">
```

```
    Please enter your Department Name
```

```
    </font></td></tr>
```

```
</c:if>
```

```
<tr>
```

```
<td>Department:</td>
```

```
<td>
```

```
<input type="text" name="dept" size="30" title="enter valid department
name" required="true" value="<c:out value="{emptyInfo.dept}"/>" >
```

```
</td>
```

```
</tr>
```

```
<c:if test="{param.submitted && empty param.email }">
```

```
<tr><td></td>
<td colspan="2"><font color="red">
Please enter valid Email Address
</font></td></tr>
</c:if>
```

```
<tr>
<td>Email Address:</td>
<td>
<input type="email" name="email" required="true" size="30" title="Use
format name@company.com" value="<c:out
value="&#123;studentInfo.email&#125;" />">
</td>
</tr>
```

```
<c:if test="&#123;param.submitted && param.gender != 'm' && param.gender
!= 'f'&#125;">
```

```
<tr><td></td>
<td colspan="2"><font color="red">
Please select a valid Gender
</font></td></tr>
</c:if>
```

```
<tr>
<td>Gender:</td>
<td>
<c:choose>
```

```

<c:when test="{param.gender == 'f'}">
<input type="radio" name="gender" value="m">
Male<br>
<input type="radio" name="gender" value="f" >
Female
</c:when>
<c:otherwise>
  <br><input type="radio" name="gender" value="m" >
Male<br>
<input type="radio" name="gender" value="f">
Female
</c:otherwise>
</c:choose>
</td>
</tr>

```

```

<c:forEach items="{paramValues.language}" var="current">
<c:choose>
<c:when test="{current == 'c'}">
<c:set var="CSelected" value="true" />
</c:when>
<c:when test="{current == 'c++'}">
<c:set var="CPPSelected" value="true" />
</c:when>

```

```

<c:when test="{current == 'java'}">
<c:set var="JavaSelected" value="true" />
</c:when>
<c:otherwise>
<c:set var="invalidSelection" value="true" />
</c:otherwise>
</c:choose>
</c:forEach>
<c:if test="{invalidSelection}">
<tr><td></td>
<td colspan="2"><font color="red">
Please select only valid languages known
</font></td></tr>
</c:if>
<tr>
<td>Languages Known:</td>

<td>
<input type="checkbox" name="language" value="c"
${CSelected ? 'checked' : ""}>C<br>
<input type="checkbox" name="language" value="c++"
${CPPSelected ? 'checked' : ""}>C++<br>
<input type="checkbox" name="language" value="java"
${JavaSelected ? 'checked' : ""}>Java

```

```
</td>
```

```
</tr>
```

```
<tr>
```

```
  <td colspan=4><center>
```

```
<input type="submit" value="Submit Data">
```

```
</td></center>
```

```
</tr>
```

```
</table>
```

```
</form>
```

```
<c:if test="{param.submitted}">
```

```
<h3><u>Employee Details:</u></h3>
```

```
<h4 style="color:orange">
```

```
Name : <jsp:getProperty property="name" name="emplyInfo"/><br>
```

```
Id : <jsp:getProperty property="id" name="emplyInfo"/><br>
```

```
Department : <jsp:getProperty property="dept" name="emplyInfo"/><br>
```

```
Email-Id : <jsp:getProperty property="email" name="emplyInfo"/><br>
```

```
Gender : <jsp:getProperty property="gender" name="emplyInfo"/><br>
```

```
Programming Languages Known :
```

```
<c:forEach items="{emplyInfo.language}" var="current">
```

```
  <c:out value="{current}" />&nbsp;
```

```
</c:forEach>
```

```
</c:if>
```

```
</body>
```

</html>

OUTPUT-

1. Employee Bean 2. Student B... x Student registration x Employee Registration x

localhost:8386/employeebean/empbean.jsp

Name:	Lovely sangahi
Id:	4
Department:	technical
Email Address:	
Gender:	<input type="radio"/> Male <input checked="" type="radio"/> Female
Languages Known:	<input type="checkbox"/> C <input checked="" type="checkbox"/> C++ <input checked="" type="checkbox"/> Java
<input type="button" value="Submit Data"/>	

Employee Details:

Name : Lovely sangahi
Id : 4
Department : technical
Email-Id : sghlovely@gmail.com
Gender : f
Programming Languages Known : c++ java

JAVASCRIPT

QUES1

<!DOCTYPE html>

<html>

<head>

<title>Registration Form

</title>


```
<style>
body
{
background-color: greenyellow;
}
h1
{
color: goldenrod;
}
h2
{
color: deeppink;
}
.button {
background-color: lightseagreen;
color: indigo;
padding: 15px 32px;
text-align: center;
text-decoration: none;
display: inline-block;
font-size: 16px;
margin: 4px 2px;
cursor: pointer;
}
```

</style>

</head>

<body>

<h1><u><center>STUDENT REGISTRATION FORM</center></u></h1>

<center>

<h2><u>NAME: </u></h2>

<input type="text" class="button" id="name" placeholder="Enter name" size="50px" title=" alphabet characters only " pattern="[A-Za-z]{1,}">

<h2><u>ROLL NO: </u></h2>

<input type="number" class="button" id="rollno" placeholder="Enter roll no" size="50px" title=" 7 digit numeric value" pattern="[0-9]{7}">

<h2><u>DOB: </u></h2>

<input type="date" class="button" id="dob" placeholder="Enter DOB in dd/mm/yy format" size="50px" title="dd/mm/yy" pattern="dd/mm/yy">

<button class="button" type="submit" onclick="validate()" value="Submit">SUBMIT</button></center>

```
<script>
```

```
function validate() {
```

```
var p = document.getElementById("text");
```

```
var y = document.getElementById("rollno").value;
```

```
var x = document.getElementById("name").value;
```

```
var z = document.getElementById("dob").value;
```

```
if(x == "") {
```

```
    alert("Name must be filled out");
```

```
}
```

```
else if(y == "") {
```

```
    alert("Rollno must be filled out");
```

```
}
```

```
else if(z == "") {
```

```
    alert("DOB must be filled out");
```

```
}
```

```
else
```

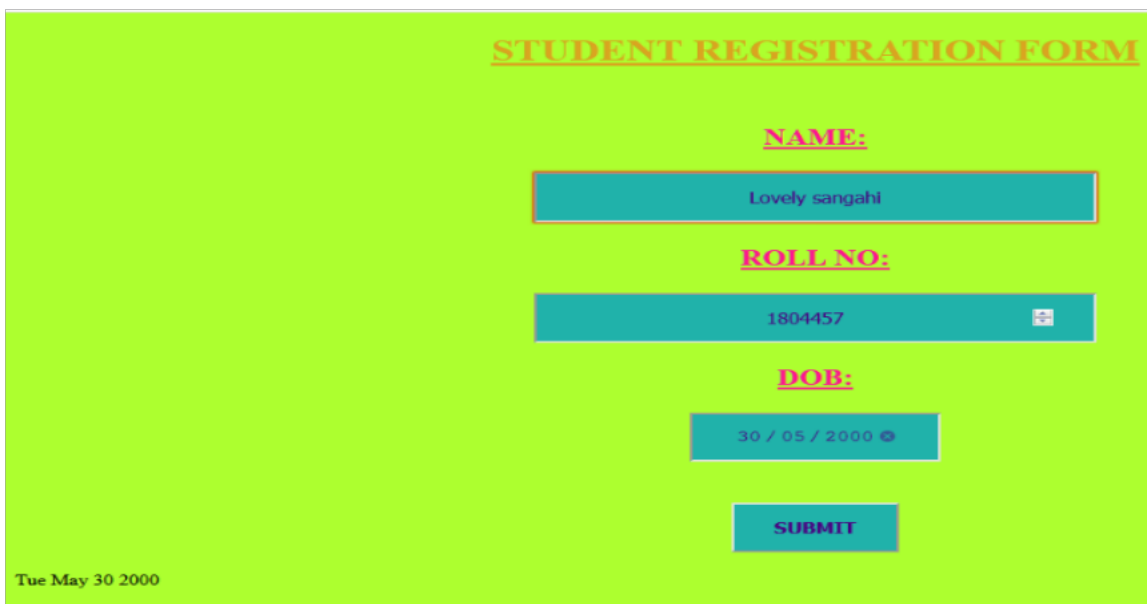
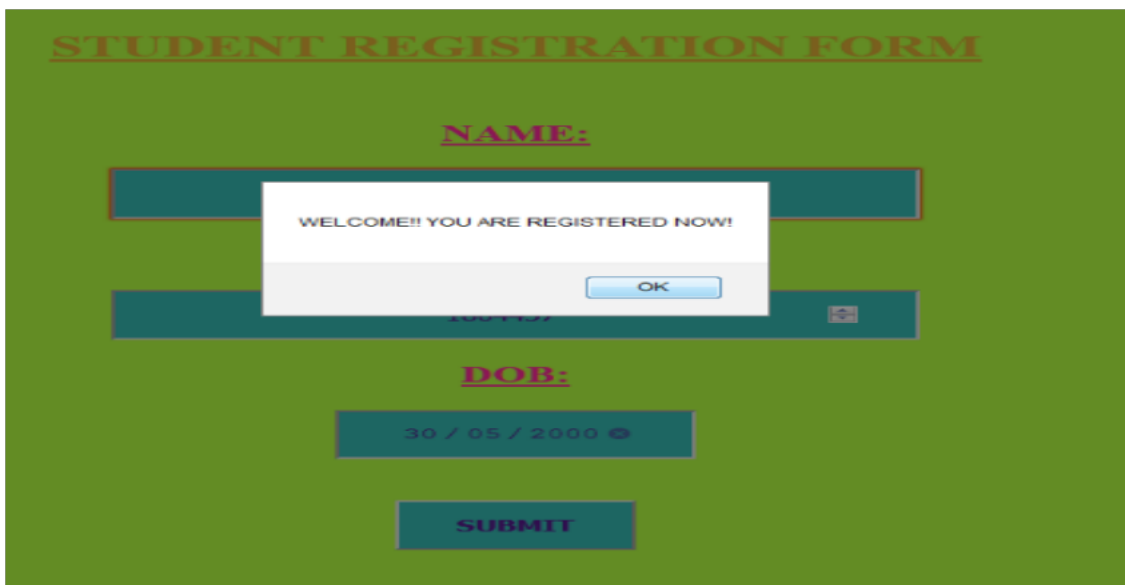
```
{
```

```
    alert("WELCOME!! YOU ARE REGISTERED NOW!");
```

```
}
```



```
p.innerHTML = new Date(z).toDateString();  
}  
</script>  
<p id="text"></p>  
</body>  
</html>
```



QUES2

```
<!DOCTYPE html>
<html>
<head>
<title>user Form
</title>
<style>
body
{
background-color: grey;
}
h1
{
color: lightblue;
}
h2
{
color: orange;
}
.button {
background-color: pink;
color: red;
padding: 15px 32px;
text-align: center;
text-decoration: none;
```

```

display: inline-block;
font-size: 16px;
margin: 4px 2px;
cursor: pointer;
}
</style>

</head>

<body>

<h1><u><center>STATIC PASSWORD PROTECTION</center></u></h1>

<form name="p2"><center>

<br/><h2><u>USERNAME: </u></h2>

<input type="text" class="button" name="uname" placeholder="Enter
username" size="50px" title="must be your email-id" pattern="[a-z0-9._%+
-]+@[a-z0-9.-]+\.[a-z]{2,3}$"><br/>

<h2><u>PASSWORD: </u></h2><input type="password" class="button"
name="pwd" placeholder="Enter password" size="50px" title="minimum
8 characters" pattern=".{8,}"><br/>

<br/> <br/><button class="button" type="submit" onClick="check()"
value="Submit"><b>SUBMIT</b></button></center>

```

```
</form>
```

```
<script>
```

```
function check()
```

```
{
```

```
var y = document.forms["p2"]["pwd"].value;
```

```
var x = document.forms["p2"]["uname"].value;
```

```
var name = "xyz@gmail.com";
```

```
var pass = "12345678";
```

```
if (x == "") {
```

```
    alert("UserName must be filled out");
```

```
}
```

```
else if (y == "") {
```

```
    alert("Password must be filled out");
```

```
}
```

```
else if(name==x && pass==y)
```

```
{
```

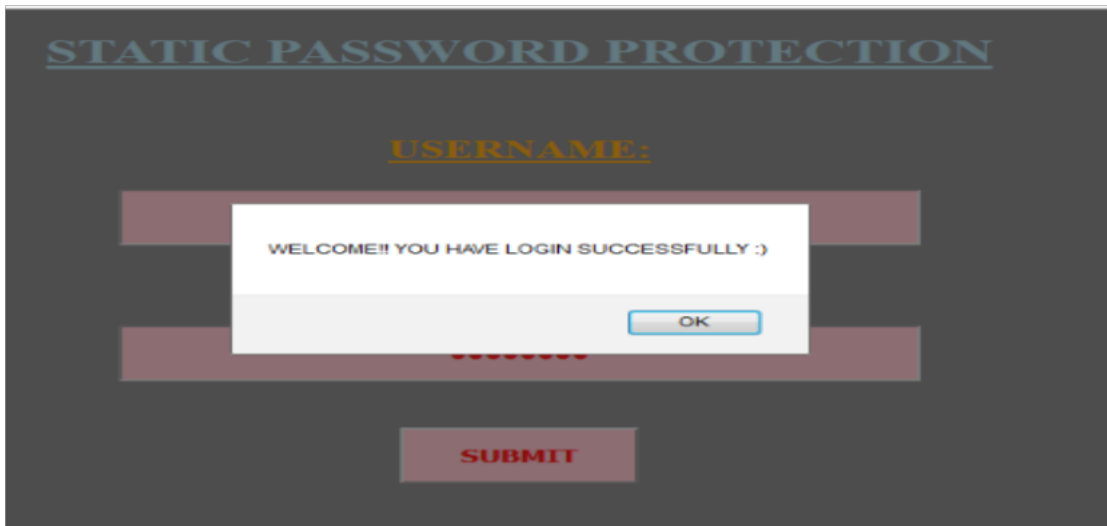
```
    alert("WELCOME!! YOU HAVE LOGIN SUCCESSFULLY :) ");
```

```
}
```

```
else{
```

```
    alert("wrong credentials");
```

```
}  
}  
</script>  
  
</body>  
</html>
```





QUES3

```
<html>
```

```
<head>
```

```
<title>Bubble Sort</title>
```

```
<style>
```

```
body
```

```
{
```

```
background-color: lightgreen;
```

```
}
```

```
h1
```

```
{
```

```
color: purple;
```

```
}
```

```
h2
```

```
{
```

```
color: lightcoral;
```

```
}  
.button {  
  background-color: cyan;  
  color: crimson;  
  width: 575px;  
  padding: 15px 32px;  
  text-align: center;  
  text-decoration: none;  
  display: inline-block;  
  font-size: 16px;  
  margin: 4px 2px;  
  cursor: pointer;  
}  
</style>  
  
</head>  
<body>  
<h1><u><center>ARRAY SORTING USING BUBBLE  
SORT</center></u></h1>  
  
<center>  
  
<br/><h2><u> INPUT ARRAY: </h2></u><button class="button"  
id="enternum" ></button><br><br><br>
```

```
<h2><u>CLICK THIS TO GET SORTED ARRAY</h2></u><button  
type="submit" class="button" value="SORT"  
onclick="sorting()"><b>SORT ARRAY</b></button><br></br></br>
```

```
<h2><u>AFTER SORTING THE ARRAY IS: </h2></u><input type="text"  
placeholder="sorted array" class="button" id="dis" /><br></center>
```

```
<script>
```

```
var n = prompt("Enter the number of elements in the array :");
```

```
var arr=new Array();
```

```
for(i=0;i<n;i++)
```

```
arr.push(prompt("Enter the "+i+"th element in the array :"));
```

```
document.getElementById("enternum").innerHTML = arr;
```

```
function sorting()
```

```
{
```

```
    for(var i=0; i<arr.length-1; i++)
```

```
    {
```

```
        for(var j=0; j<arr.length-1-i; j++)
```

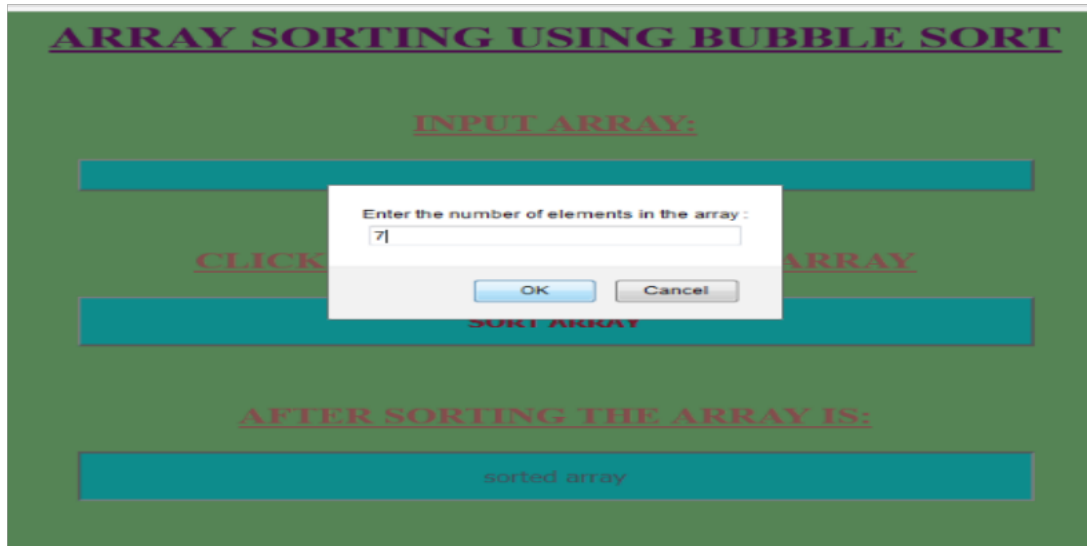
```
        {
```

```
            if(arr[j]>arr[j+1])
```

```
            {
```

```
        var t=arr[j];
        arr[j]=arr[j+1];
        arr[j+1]=t;
    }
}
}
disp();
}

function disp()
{
    var temp="";
    for(var i=0; i<arr.length; i++)
    {
        temp+= arr[i]+" ";
    }
    document.getElementById("dis").value=temp;
}
</script>
</body>
</html>
```



QUES4

```
<html>
```

```
<head>
```

```
<title>STACK</title>
```

```
<style>
```

```
body
```

```
{
```

```
background-color: LavenderBlush;
```

```
}  
h1  
{  
color: turquoise;  
}  
h2  
{  
color: palegreen;  
}  
.button {  
background-color: LemonChiffon;  
color: crimson;  
padding: 15px 32px;  
text-align: center;  
text-decoration: none;  
display: inline-block;  
font-size: 16px;  
margin: 4px 2px;  
cursor: pointer;  
}  
</style>
```

```
<script>
```



```
var arr=[];
function ab()
{
    var a=document.getElementById('one');
    var b=document.getElementById('two');
    arr.push(a.value);
    b.value=arr;
    a.value=" ";
}
function def()
{
    var len=arr.length;
    if(len==0)
    {
        alert("no underflow");
    }
    else
    {
        arr.pop(len);
        var c=document.getElementById('two');
        c.value=arr;
    }
}
```

</script>

```

</head>
<body>
<h1><u><center>STACK IMPLEMENTATION</center></u></h1>
<form><center>
<br/><h2>ENTER NUMBERS TO THE STACK :</h2><br/><input
type="text" class="button" size="75px" name="first" id="one" />
<br/><h2>STACK: </h2><br/><input type="text" class="button"
name="second" size="75px" id="two"/><br/><br/>
<input type="button" class="button" value="push" size="50px"
onClick="ab()">
<br/>
<input type="button" value="pop" class="button" size="50px"
onClick="def()" /></center>
</form>
</body>
</html>

```

STACK IMPLEMENTATION

ENTER NUMBERS TO THE STACK :

18

STACK:

10 11 12 13 14,15

STACK IMPLEMENTATION

ENTER NUMBERS TO THE STACK :

STACK:

10 11 12 13 14,15 , 18

push

pop

STACK IMPLEMENTATION

ENTER NUMBERS TO THE STACK :

STACK:

10 11 12 13 14,15

push

pop

QUES5

```

<!DOCTYPE html>
<html>
<head>
<title>Teddy bear</title>
</head>
<style>
p{
font-size: 50px;
}

```

```
img
{
border: 1px solid #ddd;
border-radius: 50% ;
padding: 5px 5px 5px 5px;
width: 250px;
margin-top: 50px;
}
```

```
img:hover {
box-shadow: 0 0 2px 1px rgba(0, 140, 186, 0.5);
}
```

```
body
{
background-image: url('images/teddy.jpg');
background-repeat: no-repeat;
background-attachment: fixed;
background-size: 100% 100%;
}
```

```
.button {
background-color: cyan;
color: crimson;
```

```
padding: 15px 32px;
text-align: center;
text-decoration: none;
display: inline-block;
font-size: 16px;
margin: 6px 10px;
cursor: pointer;
}
</style>
```

```
<body onLoad="f()"><center>
```

```
<div>
```

```
    <p id="text">HELLO TEDDY</p>
```

```
    </div>
```

```
    <div>
```

```
        <br>
```

```
        <button onclick="g()" class="button" id="b1">Move
Image</button>
```

```
        <button onclick="h()" class="button" id="b2">Stop
Image</button>
```

```
    </div></center>
```

```
<script>
```

```
    var l=0;var w;
```

```

function f()
{
    //Display text in different colour after 3 seconds
(3000 milliseconds)

setTimeout(=>{document.getElementById("text").style.color="lime"},3000);

}

function a()
{
    var img = document.getElementById("im");
    img.style.position="relative";
    img.style.left=(l)+"px"; //HORIZONTAL

MOVEMENT

    l+=10;
}

function g()
{
    w=setInterval("a()",500); //after every 0.5 second
the position changes
}

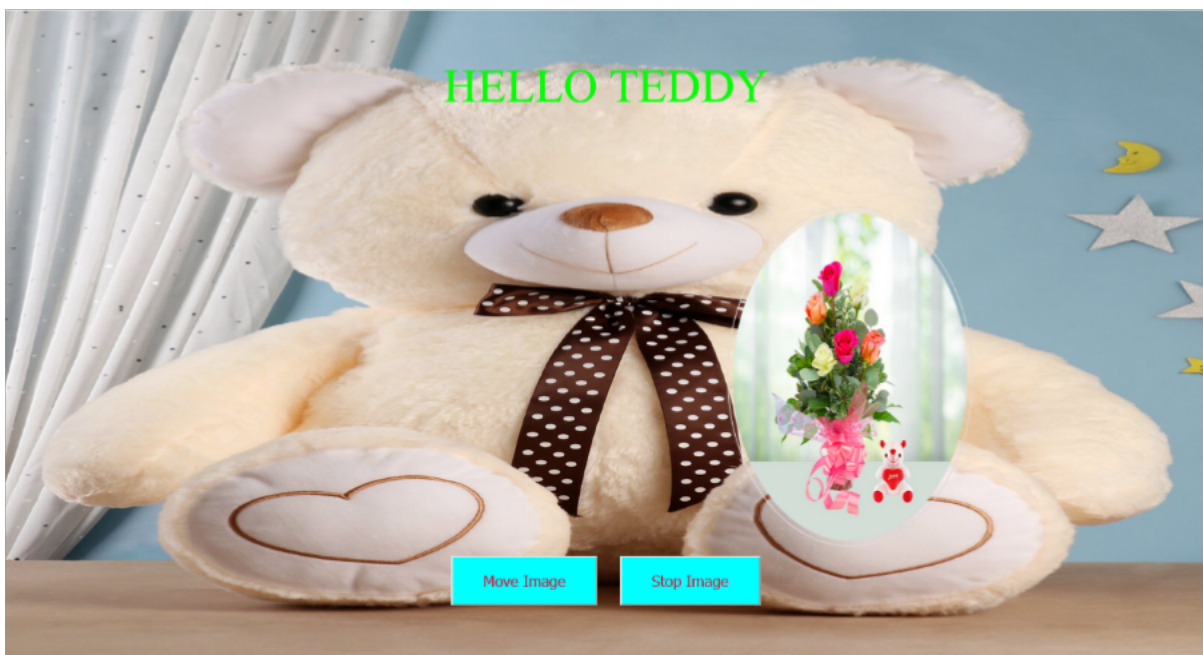
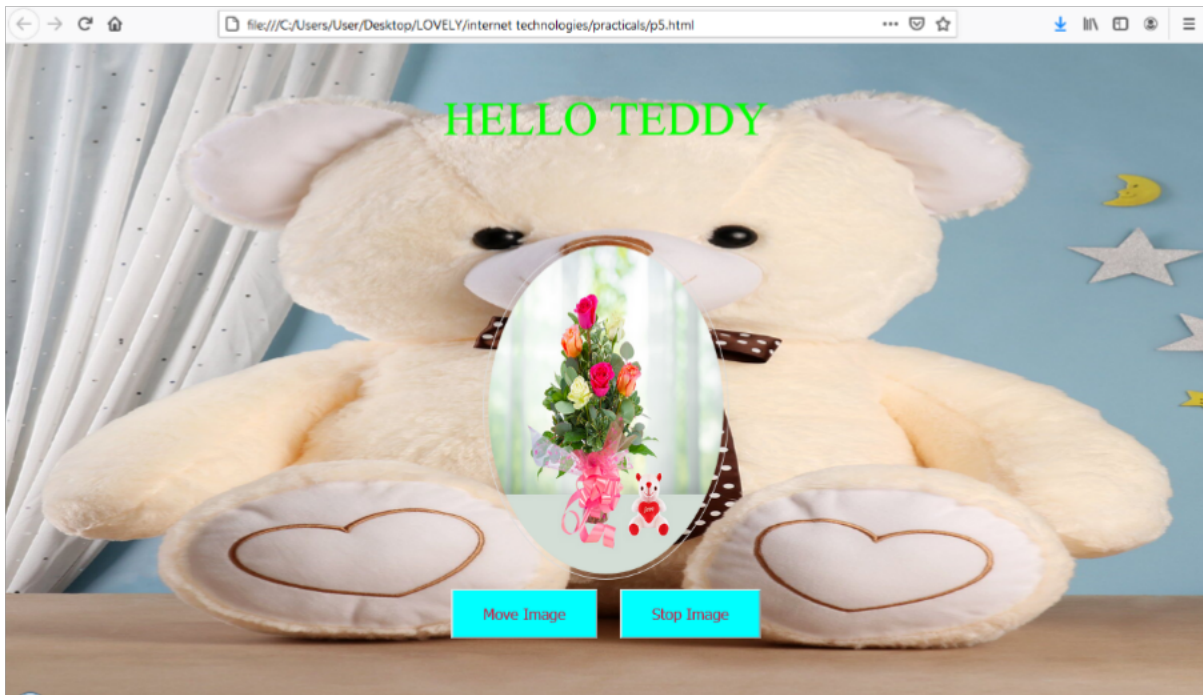
function h()
{
    clearInterval(w);
}

</script>

```

</body>

</html>



QUES6

<!DOCTYPE html>

<html>

```
<head>
<title>EXERCISES</title>
<style>
body
{
background-color: darkkhaki;
}
h1
{
color: darkblue;
}
p
{
font-size: 25px;
color: darkred;
}
.button {
background-color: darksalmon;
color: darkgreen;
padding: 15px 32px;
text-align: center;
text-decoration: none;
display: inline-block;
font-size: 16px;
```

```
margin: 4px 2px;
cursor: pointer;
}
</style>
<script>
```

```
function validateForm() {
var x = document.forms["myForm"]["fname"].value;
if (x == "") {
    alert("First name must be filled out");
    return false;
}
else
var y = document.forms["myForm"]["lname"].value;
if (y == "") {
    alert("last name must be filled out");
    return false;
}
else
var z = document.forms["myForm"]["email"].value;
if (z == "") {
    alert("email must be filled out");
    return false;
}
}
```

```
else
var z1 = document.forms["myForm"]["address"].value;
if (z1 == "") {
    alert("Address must be filled out");
    return false;
}
else
var z2 = document.forms["myForm"]["city"].value;
if (z2 == "") {
    alert("City must be filled out");
    return false;
}
else
var z3 = document.forms["myForm"]["state"].value;
if (z3 == "") {
    alert("State must be filled out");
    return false;
}
else
var z4 = document.forms["myForm"]["postalcode"].value;
if (z4 == "") {
    alert("Postalcode must be filled out");
    return false;
}
```



```

else
var z5 = document.forms["myForm"]["country"].value;
if (z5 == "") {
    alert("Country must be filled out");
    return false;
}
else
    alert("WELCOME!! YOU ARE REGISTERED NOW");
}
</script>

</head>

<body>

<h1><u>INFONET SERVICES</u></h1>

<form name="myForm" onsubmit="return validateForm()">
<input type="text" class="button" id="fname" placeholder="Enter
firstname" size="50px" title="alphabet characters only" pattern="[A-Za-
z]{1,}">FIRSTNAME <br/>

<input type="text" class="button" id="lname" placeholder="Enter
lastname" size="50px" title="alphabet characters only" pattern="[A-Za-
z]{1,}">LASTNAME <br/>

```

```
<input type="text" class="button" id="email" placeholder="Enter email id"
size="50px" title="must contain @" pattern="[a-z0-9._%+-]+@[a-z0-9.
-]+\.[a-z]{2,3}$">EMAIL ADDRESS <br/>
```

```
<input type="alphanumeric" class="button" id="address"
placeholder="Enter address" size="50px"> ADDRESS <br/>
```

```
<input type="text" class="button" id="city" placeholder="Enter city"
size="50px" pattern="[A-Za-z]{1,}">CITY<br/>
```

```
<input type="text" class="button" id="state" placeholder="Enter state"
pattern="[A-Za-z]{1,}">STATE
```

```
<input type="numeric" class="button" id="postalcode" placeholder="Enter
postal code" pattern=".{6,}">POSTAL CODE
```

```
<input type="text" class="button" id="country" placeholder="Enter country
name" pattern="[A-Za-z]{1,}">COUNTRY
```

<p>Please choose the most appropriate statement</p>

```
<input type="radio" id="1" name="opt1"/>I regularly purchase items
online<br>
```

```
<input type="radio" id="2" name="opt1"/>I have on occassion purchased
items online<br>
```

```
<input type="radio" id="3" name="opt1"/>I have not purchased anything
online,but I would consider it <br>
```

```
<input type="radio" id="4" name="opt1"/>I prefer to shop in real stores<br><br><br>
```

```
<p>I am interested in (choose all that apply)</p>
```

```
<input type="checkbox" id="c1" name="c1" />Hiking<br>
```

```
<input type="checkbox" id="c2" name="c2" />Mountain Biking<br>
```

```
<input type="checkbox" id="c3" name="c3" />Camping<br>
```

```
<input type="checkbox" id="c4" name="c4" />Rock climbing<br>
```

```
<input type="checkbox" id="c5" name="c5" />Off-Road 4WD<br>
```

```
<input type="checkbox" id="c6" name="c6" />Cross-country Skiing<br><br><br>
```

```
<p>I learned about this site from</p>
```

```
<select id="subjects" class="button" name="subjects">
```

```
<option value="printad">Printads</option>
```

```
<option value="google">Google</option>
```

```
<option value="noticebard">NoticeBard</option>
```

```
<option value="gmail">Gmail</option>
```

```
<option value="fb">Facebook</option>
```

```
</select><br><br>
```

```
<p>COMMENTS:</p><textarea rows="7" cols="50" placeholder="Please type any comment here..." class="button" name="comment">
```

```
</textarea>
```

```
<br/> <br/><input type="submit" class="button" value="SUBMIT">
<input type="reset" class="button" value="START OVER"/>

</form>
</body>
</html>
```

INFONET SERVICES

LOVELY FIRSTNAME

sangahi LASTNAME

lovely@xyz.com EMAIL ADDRESS

ff ADDRESS

fbd CITY

HARYANA STATE 121004 POSTAL CODE india COUNTRY

Please choose the most appropriate statement

- I regularly purchase items online
- I have on occasion purchased items online
- I have not purchased anything online, but I would consider it
- I prefer to shop in real stores

I am interested in (choose all that apply)

- Hiking
- Mountain Biking
- Camping
- Rock climbing
- Off-Road 4WD
- Cross-country Skiing

I learned about this site from

COMMENTS:

JSP

QUES1

index.jsp

```
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<html>
  <head>
    <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
    <title>JSP Page</title>
  </head>
  <body>
    <% int n=Integer.parseInt((request.getParameter("name")));
        int i,j;
```

```
for(i=1;i<=n;i++)
{
    for(j=1;j<=i;j++)
    {out.print(j);
    out.print(" ");
    }
    out.println("<br>");
}
%>
```

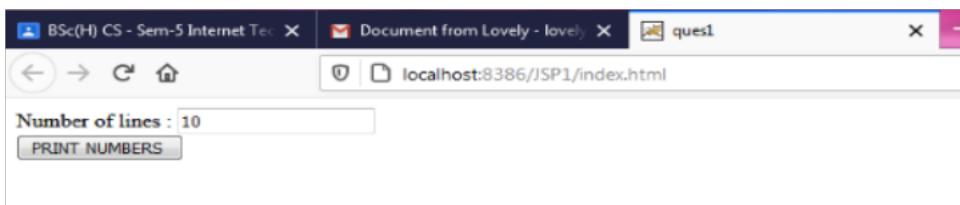
</body>

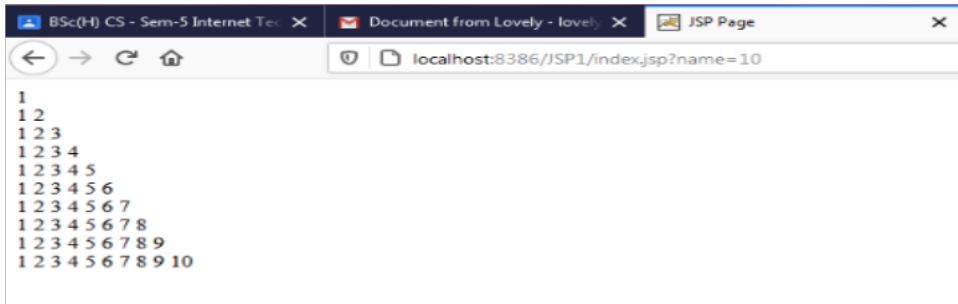
</html>

index.html



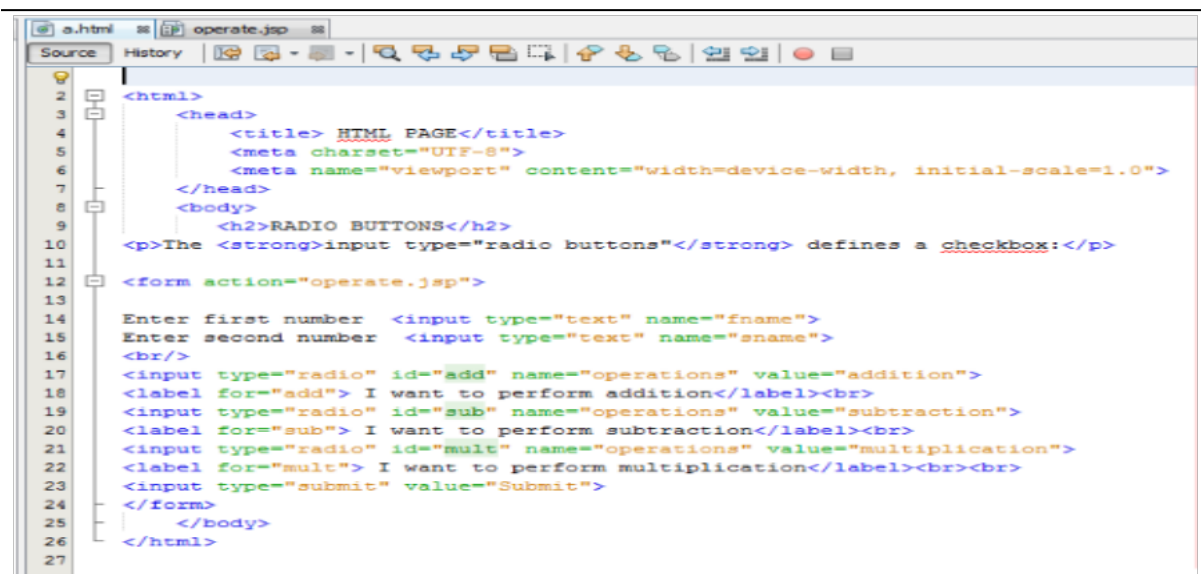
```
2 <html>
3 <head>
4 <title>ques1</title>
5 <meta charset="UTF-8">
6 <meta name="viewport" content="width=device-width, initial-scale=1.0">
7 </head>
8 <body>
9
10 <form action="index.jsp" method="GET">
11 Number of lines : <input type="text" name="name" ><br/>
12 <input type="submit" value="PRINT NUMBERS ">
13 </form>
14 </body>
15 </html>
16
```





QUES2

a.html



operate.jsp

```
<%@page contentType="text/html" pageEncoding="UTF-8"%>
```

```
<html>
```

```
<head>
```

```
<title>JSP Page</title>
```

```
</head>
```

```
<body>
```

```
Student name is: <%= request.getParameter("fname")%> <%=
request.getParameter("lname")%>
```

```
<%! String[] selectedoperation; %>
```

<h2>You have chosen:</h2>

<%

```
selectedoperation = request.getParameterValues("operations");
```

```
if (selectedoperation != null)
```

```
{ for(int i=0;i<selectedoperation.length;i++)
```

```
    out.println("<br><h3 style='color:blue'>" + selectedoperation[i]);
```

```
}
```

```
else
```

```
out.println ("<b>none<b></h3>");
```

```
%>
```


The result is:

```
<% String selectedoperation = request.getParameter("operations");
```

```
    if(selectedoperation.equals("addition")){%>
```

```
    ${param.fname+param.sname}
```

```
<% }else if(selectedoperation.equals("subtraction")){%>
```

```
    ${param.fname-param.sname}
```

```
<% } else if(selectedoperation.equals("multiplication")) {%>
```

```
    ${param.fname*param.sname}
```

```
<% } else
```

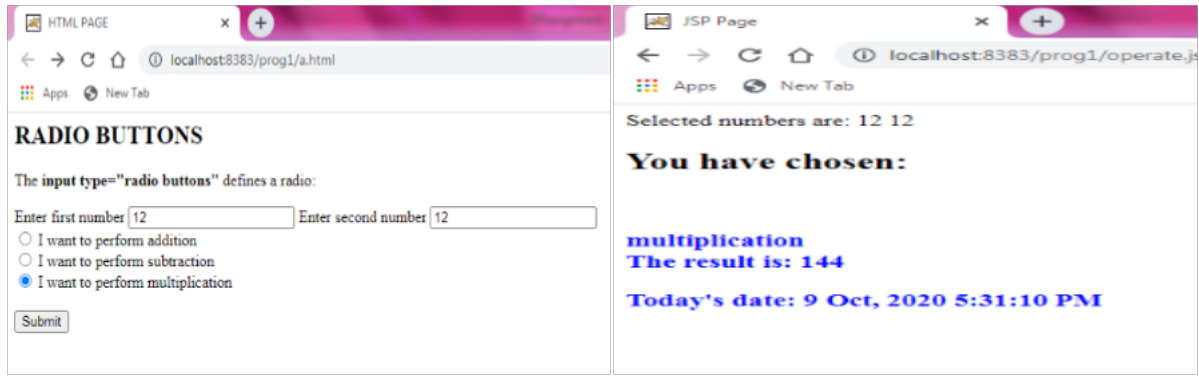
```
    out.println("No operator selected");%>
```

<p> Today's date: <%= (new java.util.Date()).toLocaleString()%> </p>

</body>

</html>

Output:-



OPERATE1.JSP

```
<%@page contentType="text/html" pageEncoding="UTF-8"%>
```

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
<meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
```

```
<title>JSP2 Page</title>
```

```
</head>
```

```
<body>
```

```
Selected numbers are: <%= request.getParameter("fname")%> <%= request.getParameter("sname")%>
```

```
<%! String[] selectedoperation; %>
```

```
<h2>You have chosen:</h2>
```

```
<%
```

```

selectedoperation = request.getParameterValues("operations");
if (selectedoperation != null)
{ for(int i=0;i<selectedoperation.length;i++)
    out.println("<br><h3 style='color:blue'>" + selectedoperation[i]);
}
else
out.println ("<b>none<b></h3>");
%>
<br>

```

The result is:

```

<%! String a; String b; int x; int y; %>
<% String selectedoperation = request.getParameter("operations");
    if(selectedoperation.equals("addition"))
{a=request.getParameter("fname");
b=request.getParameter("sname");
x=Integer.parseInt(a);
y=Integer.parseInt(b);
out.println(x+y);
}
else if(selectedoperation.equals("subtraction"))
{
a=request.getParameter("fname");
b=request.getParameter("sname");
x=Integer.parseInt(a);

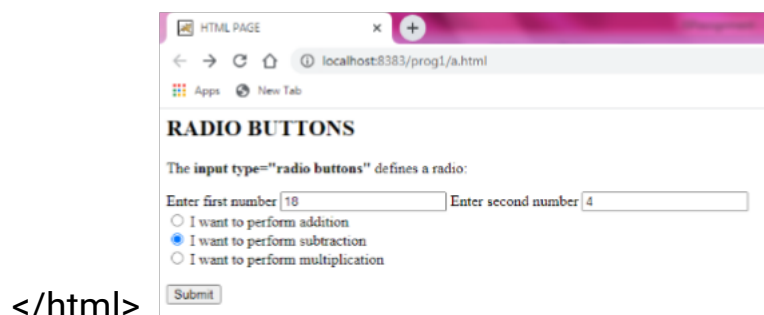
```

```

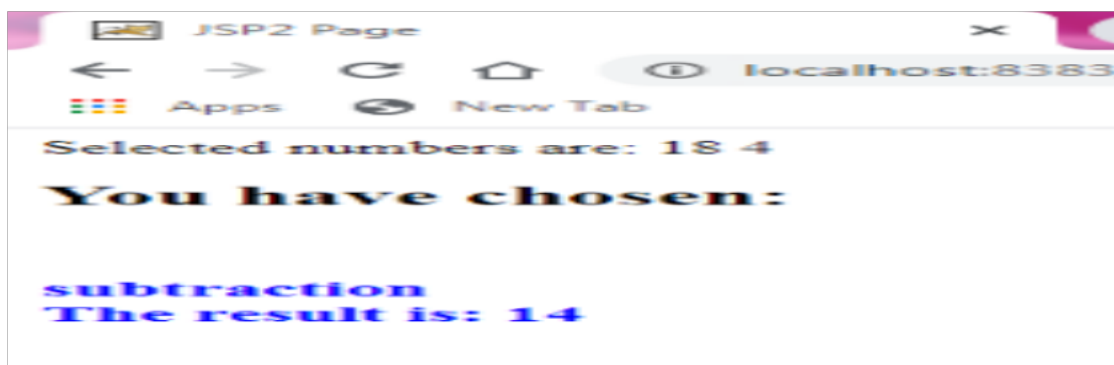
y=Integer.parseInt(b);
out.println(x-y);
}
else if(selectedoperation.equals("multiplication"))
{
a=request.getParameter("fname");
b=request.getParameter("sname");
x=Integer.parseInt(a);
y=Integer.parseInt(b);
out.println(x*y);
}
else
out.println ("No operator selected");
%>

</body>

```



</html>



QUES3

Welcome.jsp

```
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
  <head>
    <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
    <title>JSP Page</title>
  </head>
  <body bgcolor="lightblue">
    <h1>WELCOME <%= request.getParameter("userName")%></h1>
    <h1> YOUR EMAIL ADDRESS IS: <%=
request.getParameter("emailAddr")%></h1>
    <h1> YOUR LUCKY NUMBER IS: <%=
request.getParameter("luckyNumber")%></h1>
    <h1> YOUR DATE OF BIRTH IS: <%=
request.getParameter("birthDate")%></h1>
  </body>
</html>
```

Index.jsp

```
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<%@taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core" %>
<!DOCTYPE html>
<html>
```

```

<head>
  <title>JSP Page</title>
</head>
<body>
  <form action="welcome.jsp" method="post">
    <input type="hidden" name="submitted" value="true">
    <table>
      <c:if test="{param.submitted && empty param.userName}">
        <tr><td></td>
        <td colspan="2"><font color="red">
          Please enter your Name
        </font></td></tr>
      </c:if>
      <tr>
        <td>Name:</td>
        <td>
          <input type="text" name="userName"
            value="{c:out value="{param.userName}" />">
        </td>
      </tr>
      <c:if test="{param.submitted && empty param.birthDate}">
        <tr><td></td>
        <td colspan="2"><font color="red">
          Please enter your Birth Date

```

```

        </font></td></tr>
</c:if>
<tr>
    <td>Birth Date:</td>
    <td>
        <input type="text" name="birthDate"
        value="<c:out value="{param.birthDate}" />" />
    </td>
    <td>(Use format yyyy-mm-dd)</td>
</tr>
<c:if test="{param.submitted && empty param.emailAddr}">
    <tr><td></td>
    <td colspan="2"><font color="red">
        Please enter your Email Address
    </font></td></tr>
</c:if>
<tr>
    <td>Email Address:</td>
    <td>
        <input type="text" name="emailAddr"
        value="<c:out value="{param.emailAddr}" />" />
    </td>
    <td>(Use format name@company.com)</td>
</tr>

```

```

<c:if test="\${param.submitted && param.gender != 'm' &&
param.gender != 'f'}">
  <tr><td></td>
  <td colspan="2"><font color="red">
Please select a valid Gender
</font></td></tr>
</c:if>
<tr>
  <td>Gender:</td>
  <td>
<c:choose>
  <c:when test="\${param.gender == 'f'}">
    <input type="radio" name="gender" value="m">
    Male<br>
    <input type="radio" name="gender" value="f" checked>
    Female
  </c:when>
  <c:otherwise>
    <input type="radio" name="gender" value="m" checked>
    Male<br>
    <input type="radio" name="gender" value="f">
    Female
  </c:otherwise>
</c:choose>
</td>

```



```

</tr>
<c:if test="{param.submitted &&
    (param.luckyNumber < 1 || param.luckyNumber > 100)}">
    <tr><td></td>
    <td colspan="2"><font color="red">
    Please enter a Lucky Number between 1 and 100
    </font></td></tr>
</c:if>
<tr>
    <td>Lucky number:</td>
    <td>
    <input type="text" name="luckyNumber"
    value="{c:out value="{param.luckyNumber}" />">
    </td>
    <td>(A number between 1 and 100)</td>
</tr>
<c:forEach items="{paramValues.food}" var="current">
    <c:choose>
        <c:when test="{current == 'z'}">
            <c:set var="pizzaSelected" value="true" />
        </c:when>
        <c:when test="{current == 'p'}">
            <c:set var="pastaSelected" value="true" />
        </c:when>
    </c:choose>
</c:forEach>

```



```

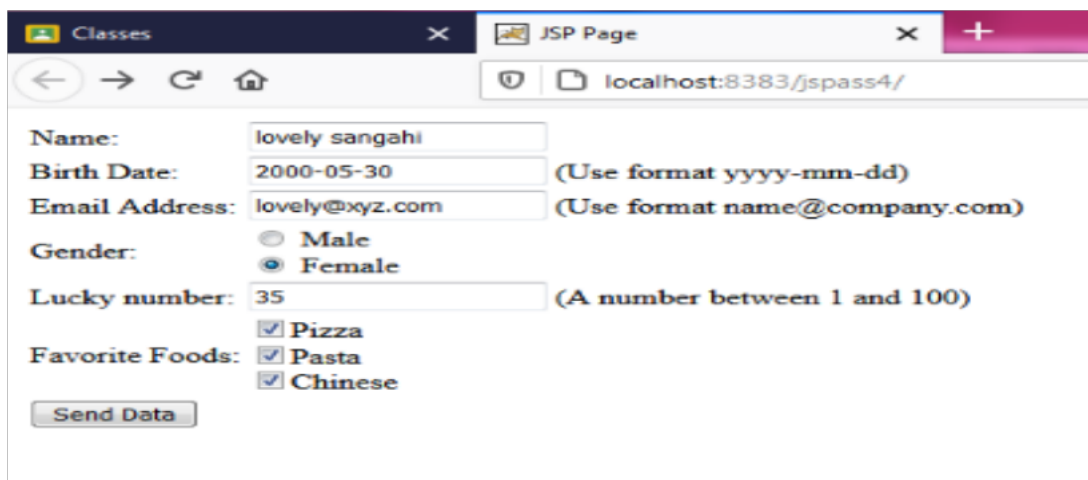
<c:when test="\${current == 'c'}">
    <c:set var="chineseSelected" value="true" />
</c:when>
<c:otherwise>
    <c:set var="invalidSelection" value="true" />
</c:otherwise>
</c:choose>
</c:forEach>
<c:if test="\${invalidSelection}">
    <tr><td></td>
    <td colspan="2"><font color="red">
Please select only valid Favorite Foods
</font></td></tr>
</c:if>
<tr>
    <td>Favorite Foods:</td>
    <td>
        <input type="checkbox" name="food" value="z"
        \${pizzaSelected ? 'checked' : ""}>Pizza<br>
        <input type="checkbox" name="food" value="p"
        \${pastaSelected ? 'checked' : ""}>Pasta<br>
        <input type="checkbox" name="food" value="c"
        \${chineseSelected ? 'checked' : ""}>Chinese
    </td>

```



```
</tr>
<tr>
  <td colspan="3">
    <input type="submit" value="Send Data">
  </td>
</tr>
</table>
</form>
</body>
</html>
```

Output



The screenshot shows a web browser window with the following content:

Name: lovely sangahi

Birth Date: 2000-05-30 (Use format yyyy-mm-dd)

Email Address: lovely@xyz.com (Use format name@company.com)

Gender: Male Female

Lucky number: 35 (A number between 1 and 100)

Favorite Foods: Pizza Pasta Chinese



QUES4

index.jsp

```
<%@page contentType= "text/html" pageEncoding="UTF-8"%>
<%@taglib uri="/WEB-INF/tlds/gret.tld" prefix="k" %>
<%@taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core" %>
```

```
<html>
  <head>
    <title>JSP Page</title>
  </head>
  <body>
    <k:today name1 ="${param.name1}">
    </k:today>
  </body>
</html>
```

q4.java

```
package grett;

import java.beans.*;
import java.io.Serializable;
import javax.servlet.jsp.tagext.*;
import javax.servlet.jsp.*;
import java.io.*;
import java.util.*;

public class q4 extends SimpleTagSupport {

    String name1;

    public void setName1(String name1)
    {
        this.name1 = name1;
    }

    public String getName1() {
        return name1;
    }

    int hr, min, sec;

    public void doTag() throws JspException, IOException
    {
```

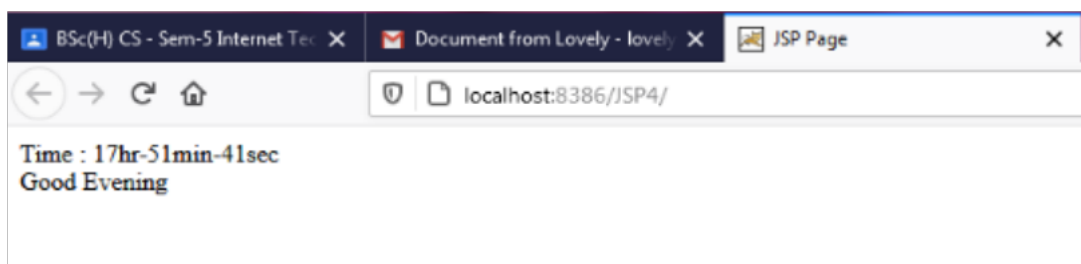
```
JspWriter out = getJspContext().getOut();
    out.print("Time : ");
    hr = Calendar.getInstance().get(Calendar.HOUR_OF_DAY);
    min = Calendar.getInstance().get(Calendar.MINUTE);
    sec = Calendar.getInstance().get(Calendar.SECOND);
    out.print(hr+"hr-");
    out.print(min+"min-");
    out.print(sec+"sec<br>");

        if(hr>=5 && hr<= 11 )
    {
        out.println(name1+"Good Morning ");
    }
    else if(hr>=12 && hr<= 4)
    {
        out.println(name1+"Good Afternoon ");
    }
    else
    {
        out.println(name1+" Good Evening ");
    }
}
}
```

gret.tld

```
<?xml version="1.0" encoding="UTF-8"?>
<taglib version="2.1" xmlns="http://java.sun.com/xml/ns/javaee"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://java.sun.com/xml/ns/javaee
http://java.sun.com/xml/ns/javaee/web-jsptaglibrary_2_1.xsd">
  <tlib-version>1.0</tlib-version>
  <short-name>gret</short-name>
  <uri>/WEB-INF/tlds/gret.tld</uri>
  <tag>
    <name> today </name>
    <tag-class>grett.q4</tag-class>
    <body-content>scriptless</body-content>
    <attribute>
      <name>name1</name>
      <required>true</required>
      <rtexprvalue>true</rtexprvalue>
    </attribute>
  </tag>
</taglib>
```

Output:-



QUES5

index.jsp

```
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<%@taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core" %>
<%@taglib prefix="fn" uri="http://java.sun.com/jsp/jstl/functions" %>
```

```
<html>
  <head>
    <title>JSP Page</title>
  </head>
  <body>
    <c:set var="b" value="{param.evod}"/>
    <c:set var="c" value="{fn:split(a, '')}"/>
    <c:set var="a" value="{param.vowel}"/>
    <c:choose>
      <c:when test="{b=='odd'}">
        <c:forEach begin="1" end="4" var="k" step="2">
          <c:if test="{ (c[k] == 'a') ||
            (c[k] == 'e') ||
            (c[k] == 'i') ||
            (c[k] == 'o') ||
            (c[k] == 'u') }">
            <c:out value="you won" />
          </c:if>
        </c:forEach>
      </c:when>
    </c:choose>
  </body>
</html>
```



```

        </c:forEach>
        <c:out value="you lose" />
    </c:when>

<c:otherwise>
    <c:forEach begin="0" end="3" var="j" step="2">
        <c:if test="\${c[j]}=='a' ||
            c[j]=='e' ||
            c[j]=='i' ||
            c[j]=='o' ||
            c[j]=='u'}">
            <c:out value="you won" />
        </c:if>

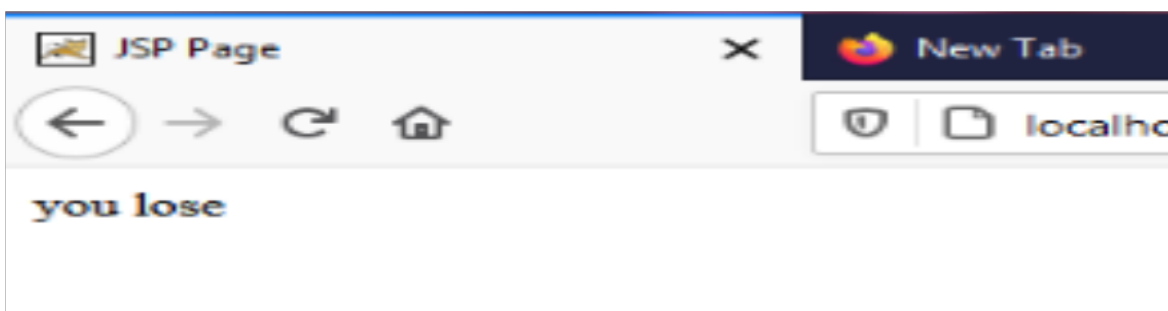
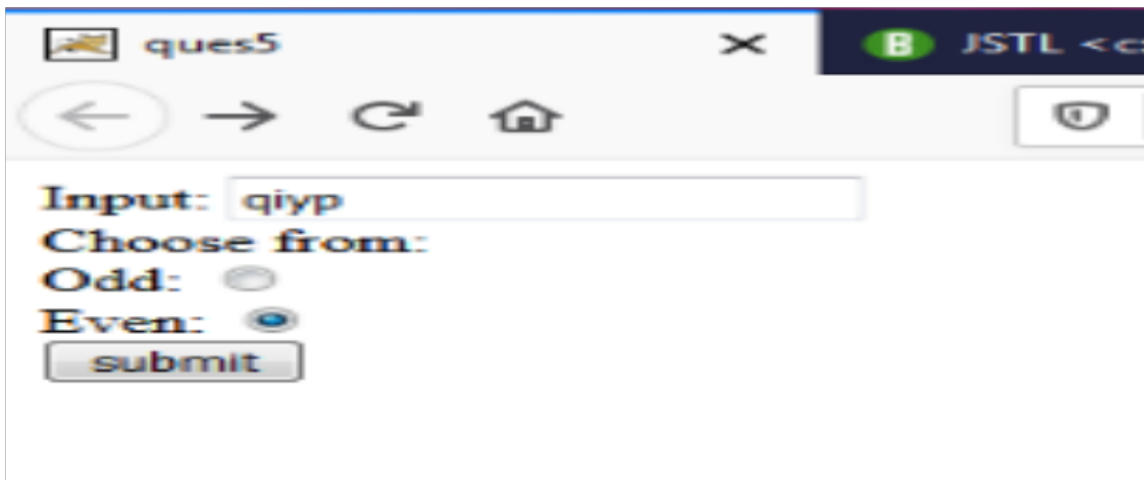
    </c:forEach> <c:out value="you lose" />
</c:otherwise>
    </c:choose>
</body>
</html>
</body>
</html>

```

q5.html


```
Start Page  index.jsp  custom.tld  q5.html
Source  History
<html>
  <head>
    <title>ques5</title>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
  </head>
  <body>
    <form action="index.jsp" method="post">
      Input: <input type="text" name="vowel"><br/>
      Choose from:<br/>
      Odd: <input type="radio" name="evod" value="odd"><br/>
      Even: <input type="radio" name="evod" value="even"><br/>
      <input type="submit" value="submit">
    </form>
  </body>
</html>
```

Output



QUES6

Chocobean.java

package choco;

```
import javax.servlet.jsp.tagext.*;
import javax.servlet.jsp.*;
import java.io.*;
import java.util.*;
import javax.servlet.jsp.tagext.SimpleTagSupport;

public class chocobean extends SimpleTagSupport{

    String texture;

    public void setTexture(String choco)
    {
        this.texture=choco;
    }
    @Override
    public void doTag() throws JspException, IOException
    {
        JspWriter out = getJspContext().getOut();
        if(texture!=null){
            if(texture.equalsIgnoreCase("Crunchy") )
                out.println("KitKat, Munch");
            if(texture.equalsIgnoreCase("chewy") )
                out.println("Fivestar, Barone");
        }
    }
}
```

```
}  
    if(texture==null)  
        out.println("Attribute value not set! <br/>");  
  
}  
  
}
```

hello.java

```
package choco;  
  
import javax.servlet.jsp.tagext.*;  
import javax.servlet.*;  
import java.io.*;  
import java.util.*;  
import java.io.Serializable;  
import javax.servlet.jsp.tagext.SimpleTagSupport;  
  
public class hello extends SimpleTagSupport implements Serializable {  
    String name;  
    public void setName(String name)  
    {
```

```

        this.name=name;
    }
    public void doTag() throws IOException
    {
        JspWriter out = getJspContext().getOut();
        if(name!=null)
            out.println("Hello "+ name);
        if(name==null)
            out.println("Attribute value not set! <br/>");
    }
}

```

index.jsp

```

<%@page contentType="text/html" pageEncoding="UTF-8"%>
<%@taglib prefix="all" uri="/WEB-INF/tlds/custom" %>
<!DOCTYPE html>
<html>
    <head>

        <title>JSP Page</title>
    </head>
    <body>
        <all:hello name="{param.name}"/><br><br>
        <all:choco texture="{param.choc}"/>
    </body>
</html>

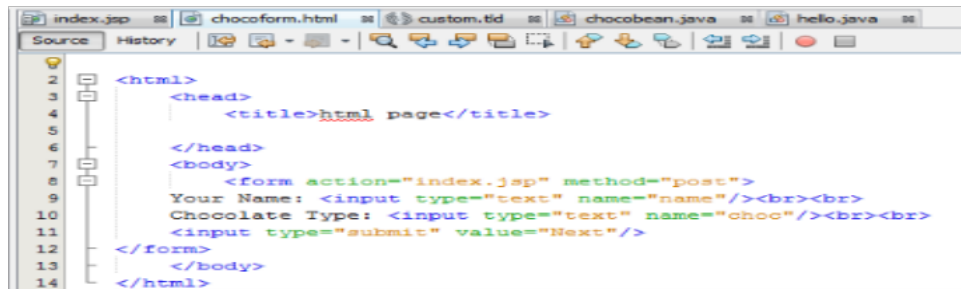
```



</body>

</html>

chocofrom.html



```
1 <html>
2   <head>
3     <title>html page</title>
4   </head>
5   <body>
6     <form action="index.jsp" method="post">
7       Your Name: <input type="text" name="name"/><br><br>
8       Chocolate Type: <input type="text" name="choc"/><br><br>
9       <input type="submit" value="Next"/>
10    </form>
11  </body>
12 </html>
```

custom.tld

<?xml version="1.0" encoding="UTF-8"?>

<taglib version="2.1" xmlns="http://java.sun.com/xml/ns/javaee"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://java.sun.com/xml/ns/javaee
http://java.sun.com/xml/ns/javaee/web-jsptaglibrary_2_1.xsd">

<tlib-version>1.0</tlib-version>

<short-name>custom</short-name>

<uri>/WEB-INF/tlds/custom</uri>

<tag>

<name>choco</name>

<tag-class>choco.chocobean</tag-class>

<body-content>scriptless</body-content>

<attribute>

<name>texture</name>

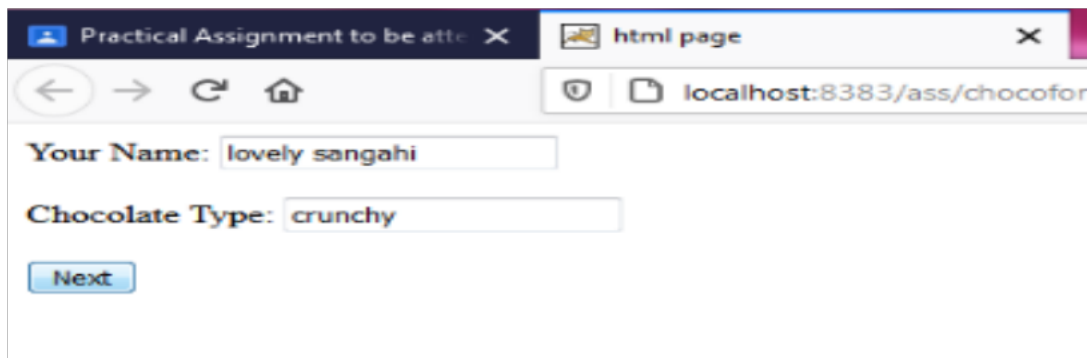
<required>>true</required>

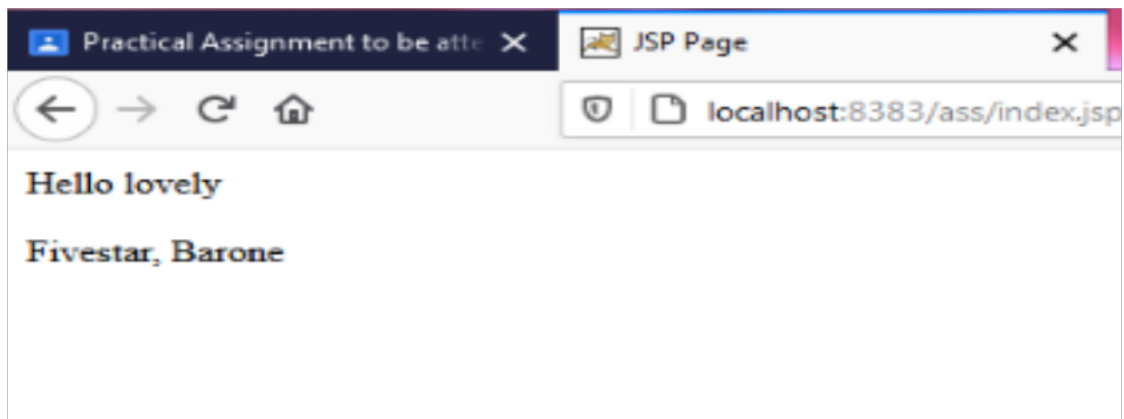
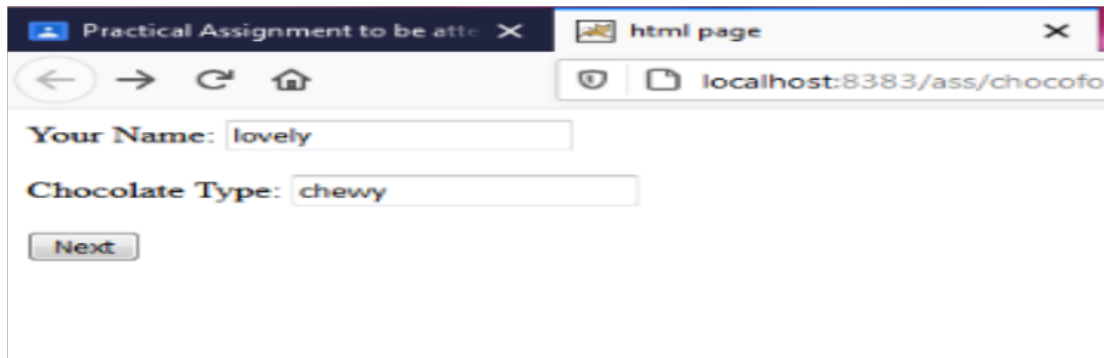
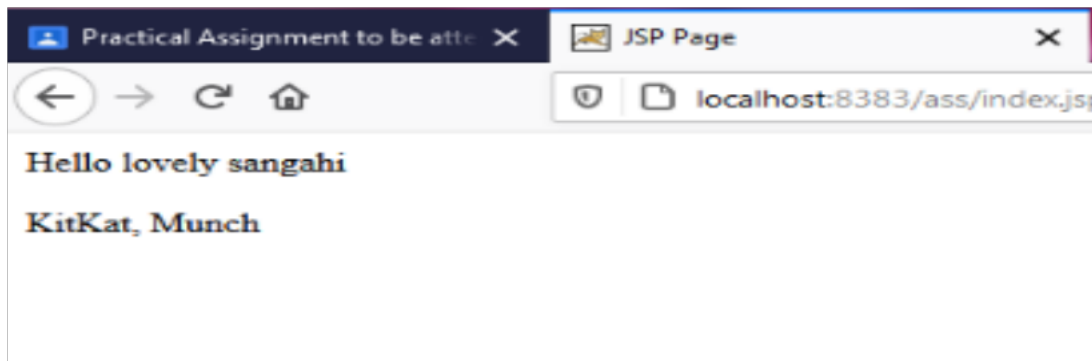
<type>String</type>

<rtexprvalue>>true</rtexprvalue>

```
</attribute>
</tag>
<tag>
<name>hello</name>
<tag-class>choco.hello</tag-class>
<body-content>empty</body-content>
<attribute>
  <name>name</name>
  <required>true</required>
  <type>String</type>
  <rtexprvalue>true</rtexprvalue>
</attribute>
</tag>
</taglib>
```

output





QUES7

q1.html

```
index.jsp  q1.html  custom.tid  substring.java
Source  History
1
2  <html>
3  <head>
4  <title>substring</title>
5
6  </head>
7  <body>
8  <form action="index.jsp" method="post">
9  Input: <input type="text" name="input"/><br><br>
10 Start: <input type="text" name="start"/><br><br>
11 End: <input type="text" name="end"/><br><br>
12 <input type="submit" value="Submit"/>
13 </form>
14 </body>
15 </html>
16
```

index.jsp

```
<%@page contentType="text/html" pageEncoding="UTF-8" %>
```

```
<%@taglib prefix="all" uri="/WEB-INF/tlds/custom" %>
```

```
<html>
```

```
  <head>
```

```
    <title>JSP Page</title>
```

```
  </head>
```

```
  <body>
```

```
    <all:substring end="${param.end}" input="${param.input}"  
start="${param.start}"></all:substring>
```

```
  </body>
```

```
</html>
```

substring.java

```
package substr;
```

```
import javax.servlet.jsp.tagext.*;
```

```
import javax.servlet.jsp.*;
```

```
import java.io.*;
```

```
import java.util.*;
```

```
public class substring extends SimpleTagSupport {
```

```
  String input;
```

```
  int start,end;
```

```
  public void setInput(String input)
```



```
{
    this.input=input;
}
public void setStart(int start)
{
    this.start=start;
}
public void setEnd(int end)
{
    this.end=end;
}
public void doTag() throws JspException, IOException
{
    JspWriter out = getJspContext().getOut();
    if(start>=0 && end<input.length())
    {
        for(int i=start;i<=end;i++)
        {
            out.print(input.charAt(i));
        }
    }
    else
        out.println("Invalid start or end");
}
```



}

custom.tld

```
<?xml version="1.0" encoding="UTF-8"?>
```

```
<taglib
```

```
  version="2.1" xmlns="http://java.sun.com/xml/ns/javaee"
```

```
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
```

```
  xsi:schemaLocation="http://java.sun.com/xml/ns/javaee  
http://java.sun.com/xml/ns/javaee/web-jsptaglibrary_2_1.xsd">
```

```
  <tlib-version>1.0</tlib-version>
```

```
  <short-name>custom</short-name>
```

```
  <uri>/WEB-INF/tlds/custom</uri>
```

```
  <tag>
```

```
    <name>substring</name>
```

```
    <tag-class>substr.substring</tag-class>
```

```
    <body-content>empty</body-content>
```

```
    <attribute>
```

```
      <name>end</name>
```

```
      <required>>true</required>
```

```
      <rtexprvalue>>true</rtexprvalue>
```

```
    </attribute>
```

```
    <attribute>
```

```
      <name>input</name>
```

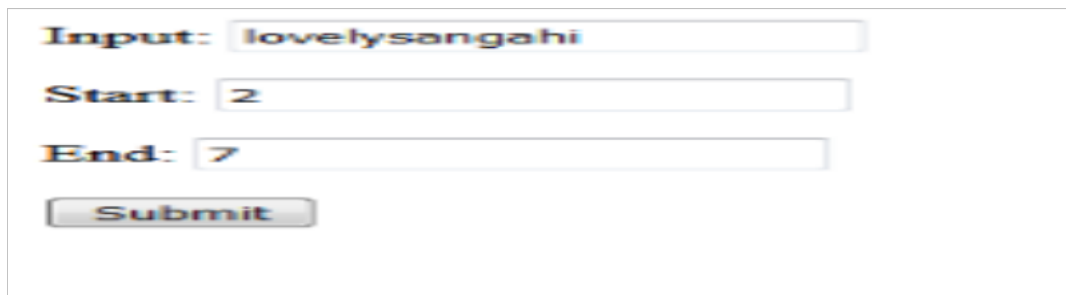
```
      <required>>true</required>
```

```
      <rtexprvalue>>true</rtexprvalue>
```

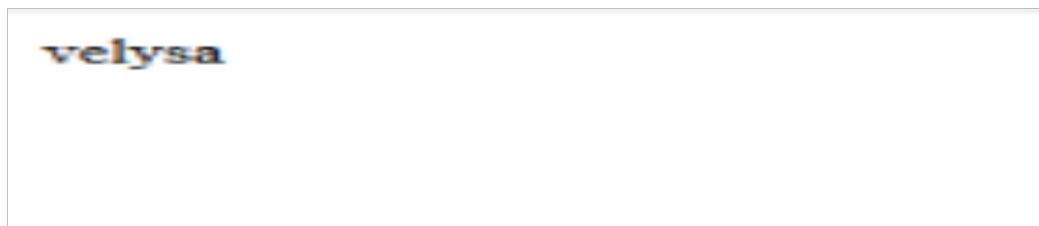
```
    </attribute>
```

```
<attribute>
  <name>start</name>
  <required>true</required>
  <rtexprvalue>true</rtexprvalue>
</attribute>
</tag>
</taglib>
```

output



A screenshot of a web form. It contains three input fields: 'Input' with the value 'lovelysangahi', 'Start' with the value '2', and 'End' with the value '7'. Below the fields is a 'Submit' button.



A screenshot of the output showing the word 'velysa'.

QUES8

Index.jsp

```
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<%@taglib prefix="all" uri="/WEB-INF/tlds/custom" %>
<!DOCTYPE html>
<html>
  <head>
    <title> JSP Page</title>
```

```
</head>
<body>
  <all:reverse input="{param.input}"/><br><br>
</body>
</html>
```

Custom.tld

```
<?xml version="1.0" encoding="UTF-8"?>
<taglib
  version="2.1" xmlns="http://java.sun.com/xml/ns/javaee"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://java.sun.com/xml/ns/javaee
http://java.sun.com/xml/ns/javaee/web-jsptaglibrary_2_1.xsd">
  <tlib-version>1.0</tlib-version>
  <short-name>custom</short-name>
  <uri>/WEB-INF/tlds/custom</uri>
  <tag>
    <name>reverse</name>
    <tag-class>rev.reverse</tag-class>
    <body-content>empty</body-content>
    <attribute>
      <name>input</name>
      <required>true</required>
      <type>String</type>
      <rtexprvalue>true</rtexprvalue>
    </attribute>
```

</tag>

</taglib>

Reverse.java

```
package rev;
```

```
import javax.servlet.jsp.tagext.*;
```

```
import javax.servlet.*;
```

```
import java.io.*;
```

```
import java.util.*;
```

```
public class reverse extends SimpleTagSupport {
```

```
    private String input;
```

```
    public void setInput(String input)
```

```
    {
```

```
        this.input=input;
```

```
    }
```

```
    @Override
```

```
    public void doTag() throws JspException, IOException
```

```
    {
```

```
        JspWriter out = getJspContext().getOut();
```

```
        for(int i=input.length()-1;i>=0;i--)
```

```
        {
```

```
            out.print(input.charAt(i));
```

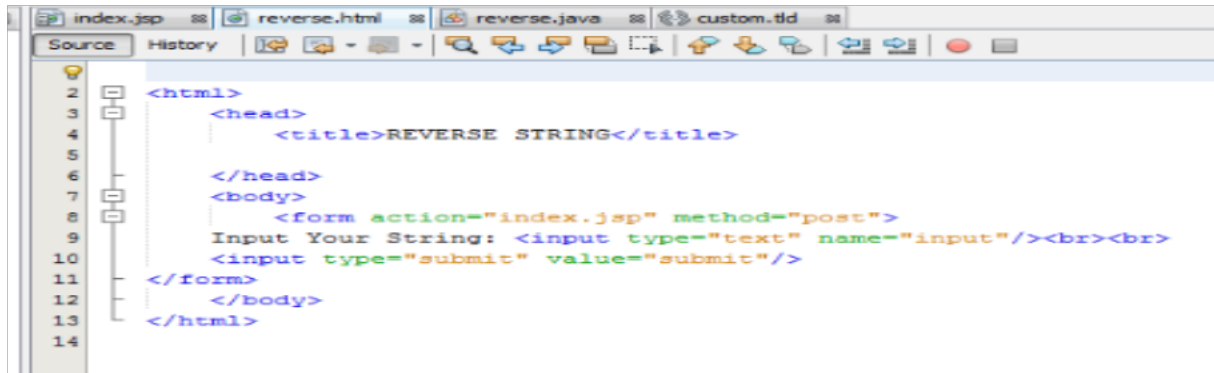
```
        }
```



}

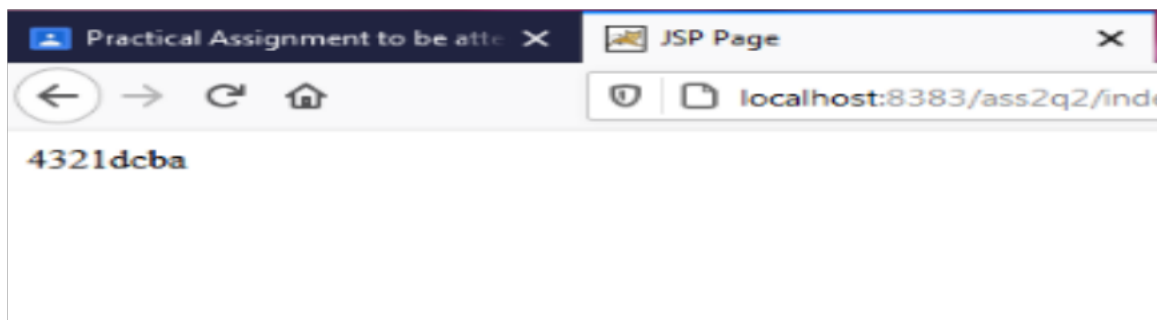
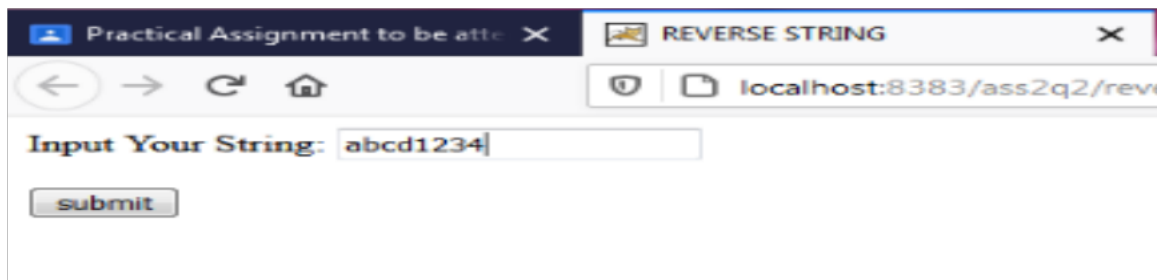
}

Reverse.html



```
1 <html>
2
3   <head>
4     <title>REVERSE STRING</title>
5
6   </head>
7   <body>
8     <form action="index.jsp" method="post">
9       Input Your String: <input type="text" name="input"/><br><br>
10      <input type="submit" value="submit"/>
11    </form>
12  </body>
13 </html>
14
```

output



QUES9

datetime.java

package q9;

```

import java.beans.*;
import java.io.Serializable;
import javax.servlet.jsp.tagext.*;
import javax.servlet.jsp.*;
import java.io.*;
import java.util.*;

public class datetime extends SimpleTagSupport {
    public void doTag() throws JspException, IOException
    {
        JspWriter out = getJspContext().getOut();
        try
        {
            out.print("Date : ");

out.print(Calendar.getInstance().get(Calendar.DAY_OF_MONTH)+"/");
            out.print(Calendar.getInstance().get(Calendar.MONTH)+"/");
            out.print(Calendar.getInstance().get(Calendar.YEAR)+"<br/>");
            out.print("Time : ");

out.print(Calendar.getInstance().get(Calendar.HOUR_OF_DAY)+"hr-");
            out.print(Calendar.getInstance().get(Calendar.MINUTE)+"min-");
            out.print(Calendar.getInstance().get(Calendar.SECOND)+"sec");
        }
        catch(Exception e)
        {

```

```
        System.out.println(e);
    }
}

}
```

today.tld

```
<?xml version="1.0" encoding="UTF-8"?>
<taglib version="2.1"
    xmlns="http://java.sun.com/xml/ns/javaee"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xsi:schemaLocation="http://java.sun.com/xml/ns/javaee
http://java.sun.com/xml/ns/javaee/web-jsptaglibrary_2_1.xsd">
    <tlib-version>1.0</tlib-version>
    <short-name>today</short-name>
    <uri>/WEB-INF/tlds/today</uri>
    <tag>
        <name> xyz </name>
        <tag-class> q9.datetime </tag-class>
        <body-content>scriptless</body-content>
    </tag>
</taglib>
```

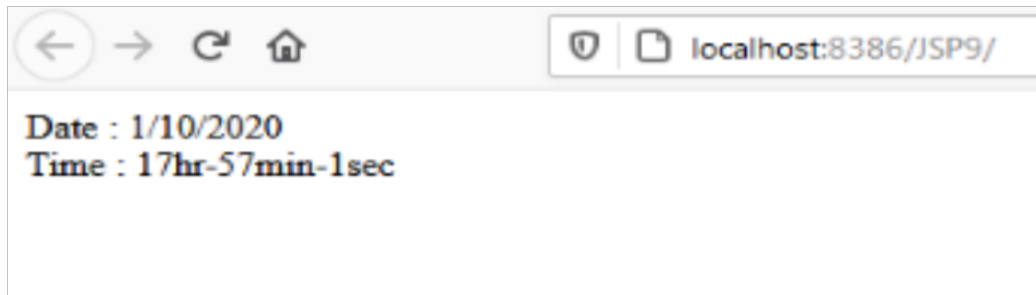
index.jsp

```
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<%@taglib uri="/WEB-INF/tlds/today" prefix="x" %>
<html>
```



```
<x:xyz/>
</html>
```

Output:-



QUES10

USER.JAVA

```
package user;
import java.beans.*;
import java.io.Serializable;
public class USER implements Serializable {
    private String Uname;
    private int age;
    private String product;

    public USER()
    {
        Uname=null;
        age=0;
        product=null;
    }
}
```

```

}

/** name property with validation**/
public String getUName() {
    return (Uname == null ? "" : Uname);
}

public void setName(String name)
{
    this.Uname=name;
}

public boolean isNameValid()
{
    boolean isValid=false;
    if(Uname!=null)
        isValid=true;
    return isValid;
}

/**age property with validation**/
public int getAge()
{
    return age;
}

public void setRoll(int roll) {
    this.age = age;
}

```

```

}

public boolean isAgeValid()
{
    boolean isValid=false;
    if(age!=0)
    isValid=true;
    return isValid;
}

public void setProduct(String product)
{ this.product= product; }

public String getProduct()
{ return product;}

}

```

The screenshot shows a code editor window with several tabs: file1.jsp, file2.jsp, index.html, and USER.java. The active tab is index.html, displaying the following HTML code:

```

2 <html>
3 <head>
4 <title>html page</title>
5 <meta charset="UTF-8">
6 <meta name="viewport" content="width=device-width, initial-scale=1.0">
7 </head>
8 <body>
9 <form action="file1.jsp" method="post">
10 ENTER NAME:<input type="text" name="name"/><br>
11 ENTER AGE:<input type="text" name="age"/><br>
12 <input type="submit"/>
13 </form>
14 </body>
15 </html>
16

```

FILE1.JSP

```
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<html>
  <head>

    <title>JSP Page</title>
  </head>
  <body>
    <form action="file2.jsp" method="post">
      <%
        String name=request.getParameter("name");
        out.println("hello " +name);
        session.setAttribute("nm",name);
        %><br>
        WHAT YOU WANNA BUY: <input type="text"
        name="prod"/><br/>
        <input type="submit"/>
      </form>
    </body>
  </html>
```

FILE2.JSP

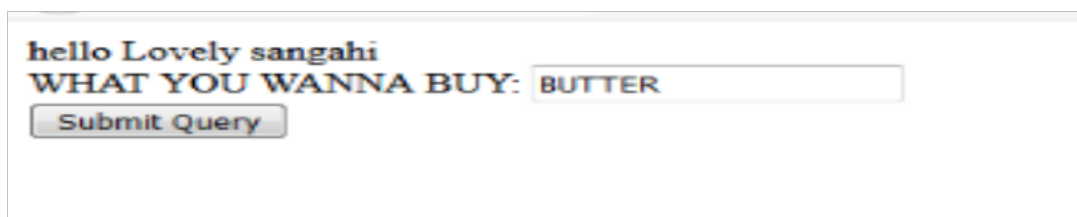
```
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<html>
```

```
<head>
  <title>JSP2 Page</title>
</head>
<body>
  <%
    String a=(String)session.getAttribute("nm");
    out.println("hello! " +a); %>
  <br>
  <%
    String prod=request.getParameter("prod");
    out.println("Ordered product is " +prod);
    %>
  </body>
</html>
```

Output:-



ENTER NAME: Lovely sangahi
ENTER AGE: 20
Submit Query



hello Lovely sangahi
WHAT YOU WANNA BUY: BUTTER
Submit Query

hello! Lovely sangahi
Ordered product is BUTTER