```
                EXP-1
jdbc application with db
a) Create student table with rollno,name&address and insert few records
b)using statement object display the content of record
c)"           "            insert 2 rec's
d)Using stat obj update 1 rec
e)"           "       " delete   "     "
f)"           "    "    desplay content record
                CODE
Package lakshmi;
inport java.sql.*;
public class sitha
{
public static void main(string args[])throws exception
{
class forName("oracle.jdbc driver Oracle Driver");
connection
con=Driver.Manager.getConnection("jdbc:oracle:thin:@localhost:1521:XE","system",
"tec");
Statement stmt=con.create statement();
stmt.executeupdate("Create table sravani(name varchar(20),age int)");
stmt.executeupdate("insert table into sravani values('lakshmai',3)");
stmt.executeupdate("insert table into sravani values('sita',1)");
stmt.executeupdate("insert table into sravani values('laxman',7)");
stmt.executeupdate("insert into update sravani set name = 'Hanuman' where
age=7");
stmt.executeupdate("Delete from sravani where  age = 3");
esultset rs = stmt.ExecuteQuery("select * from Sravani");
while(rs next())
{
System.out.println(rs.getString(1)+" "+rs.get(Int(2));
}
System.out.println("Table is Created");
rs.close();
stmt.close();
con.close();      //sita 1
}                       //Hanuman 7
}
                EXP-2
package sravani;
import java.sql.*;
public class Student {
public static void main(String[] args) throws exception {
Class.forName("oracle.jdbc.driver.OracleDriver");
Connection con = DriverManager.getConnection(
        "jdbc:oracle:thin:@localhost:1521:XE", "system", "tec");
Statement stmt = con.createStatement();
stmt.executeUpdate("CREATE TABLE Student (" +
                "rollno INT PRIMARY KEY, " +
                "name VARCHAR2(30), " +
                "address VARCHAR2(100)");
PreparedStatement ps = con.prepareStatement("INSERT INTO Student VALUES
(?, ?, ?)");
ps.setInt(1, 1258);
ps.setString(2, "Sita");
ps.setString(3, "Hyderabad");
ps.executeUpdate();
System.out.println("1 row inserted");
stmt.close();
con.close();
}
PreparedStatement q = con.prepareStatement("UPDATE Student SET address=? WHERE
rollno=?");
q.setString(1, "Bangalore");
```

```
q.setInt(2, 1259);
q.executeUpdate();
PreparedStatement r = con.prepareStatement("DELETE FROM Student WHERE
rollno=?");
r.setInt(1, 1258);
r.executeUpdate();
System.out.println("1 row deleted");
rs.close();
stmt.close();
con.close();j
    }
}
```

EXP-3
aim:-demonstrate scrollable resultset functionality
(resultset operations)
                    Code
```
Create table student1258(rollno int,name varchar(30),age int);
insert into student1258 values(1,'sravani',20);
insert into student1258 values(2,'manju',19);
insert into student1258 values(3,'harini',18);
insert into student1258 values(4,'kowsalya',21);
select * from student1258;
commit;
package operations;
import java.sql.*;
public class Sravani{
public static void main(String[] args)throws Exception{
Class.forName("oracle.jdbc.driver.OracleDriver");
Connection con=DriverManager.getConnection(
  "jdbc:oracle:thin:@localhost:1521:XE","system","tec");
Statement stmt=con.createStatement(ResultSet rs=stmt.executeQuery("select *
Resultset.TYPE_SCROLL_INSENSITIVE,Resultset.CONCUR_READ_ONLY);
ResultSet rs = stmt.executeQuery("select * from student1258");
rs.first();
System.out.println(rs.getInt(1)+" "+rs.getString(2)+" "+rs.getInt(3));
rs.last();
System.out.println(rs.getInt(1)+" "+rs.getString(2)+" "+rs.getInt(3));
rs.absolute(3);
System.out.println(rs.getInt(1)+" "+rs.getString(2)+" "+rs.getInt(3));
rs.previous();
System.out.println(rs.getInt(1)+" "+rs.getString(2)+" "+rs.getInt(3));
rs.next();
System.out.println(rs.getInt(1)+" "+rs.getString(2)+" "+rs.getInt(3));
rs.close();
stmt.close();
con.close();
}
```
EXP-4
aim:-demonstrate updatable resultset functionality
            CODE
sql

```
Create table student1258(rollno int,name varchar(30),age int);
insert into student1258 values(1,'sravani',20);
insert into student1258 values(2,'manju',19);
insert into student1258 values(3,'harini',18);
insert into student1258 values(4,'kowsalya',21);
select * from student1258;
commit;
program
-----------
package operations;
import java.sql.*;
```

```java
public class Sravani{
public static void main(String[] args)throws Exception{
Class.forName("oracle.jdbc.driver.OracleDriver");
Connection con=DriverManager.getConnection(
  "jdbc:oracle:thin:@localhost:1521:XE","system","tec");
Statement stmt=con.createStatement(ResultSet rs=stmt.executeQuery("select *
Resultset.TYPE_SCROLL_SENSITIVE,Resultset.CONCUR_UPDATABLE);
ResultSet rs = stmt.executeQuery("select * from student1258");
rs.absolute(1);
int newage=getInt("age")+1;
rs.updateInt("age",newage);
rs.UpdateRow();
system.out.println(newage);
rs.close();
stmt.close();
con.close();
}
```

                  EXP-5
==============
aim:- testing the servlet and study deployment descriptor
                  CODE
================
```java
Package ITA;
import java.io.IOException;
import java.io.PrintWriter;
import javax.servlet.ServletException;
import javax.servlet.http.HttpSevlet;
import javax.servlet.http.HttpServletRequest;
import java.servlet.http.HttpServletResponse;
public class Ita58 extends HttpServlet
{
private Static final long serialVersionUID=IL;
Protected void doGet(HttpServletRequest request,
HttpServletresponse response)throws servletException,IOException{
Printwriter writer=response.getWriter();
writer.println("III/IT-A Students are good");
}
}
```
web.xml
```xml
 <?xml version = "1.0" encoding="UTF-8"?>
< web-app xmlns:xsi="https://www.w3.org/2001/xMLSchema-instance"xmlns="https://
java.sun.com/xml/ns/javace"xsi:schema location="http:||java.sun.com>
<display-name>it servlet</display-name>
<servlet>
<servlet-name>ita58</servlet-name>
<servlet-class>ita.ita58</servlet-class>
</servlet>
<servlet-mapping>
<servlet-name>ita58</servlet-name>
<url-pattern>/sravani</url-pattern>
</servlet-mapping>
</web-app>
```

          EXP-6
=============
aim:- tsting the include action for servlet collaboration
                  CODE

```java
Package se;
import java.io.IOException;
import java.io.PrintWriter;
import javax.servlet.RequestDispatcher;
import javax.servlet.http.HttpSevlet;
```

```
import javax.servlet.http.HttpServletRequest;
import java.servlet.http.HttpServletResponse;
public class rama extends HttpServlet
{
private Static final long serialVersionUID=IL;
Protected void doGet(HttpServletRequest request,
HttpServletresponse response)throws servletException,IOException{
Printwriter out=response.getWriter();
out.println("i am rama");
RequestDispatcher d=request.getRequestDispatcher("/Pudhi");
d.include(request,response);
}
}
          Sita.Java
Package se;
import java.io.IOException;
import java.io.PrintWriter;
import javax.servlet.ServletExcepion;
import javax.servlet.http.HttpSevlet;
import javax.servlet.http.HttpServletRequest;
import java.servlet.http.HttpServletResponse;
public class sita extends HttpServlet
{
private Static final long serialVersionUID=IL;
Protected void doGet(HttpServletRequest request,
HttpServletresponse response)throws servletException,IOException{
Printwriter out=response.getWriter();
out.println("i am sita");
}
}
                    Web.xml

<?xml version = "1.0" encoding="UTF-8"?>
< web-app xmlns:xsi="https://www.w3.org/2001/XMLSchema-instance"xmlns="https://
java.sun.com/xml/ns/javace"xsi:schema
location="http:||java.sun.com/Xnl/ns/javaee
http://java.sun.com/xml/ns/javaee/web_app_3_0.xsd"id="webApp_ID"version="3.0">>
<display-name>tecsec</display-name>
<servlet>
<servlet-name>rama</servlet-name>
<servlet-class>sec.rama</servlet-class>
</servlet>
<servlet-mapping>
<servlet-name>rama</servlet-name>
<url-pattern>/sravani</url-pattern>
</servlet-mapping>
</web-app>
<servlet>
<servlet-name>sita</servlet-name>
<servlet-class>sec.sita</servlet-class>
</servlet>
<servlet-mapping>
<servlet-name>sita</servlet-name>
<url-pattern>/pudhi</url-pattern>
</servlet-mapping>
</web-app>


            EXP-7
aim:-program which displays the simple JSP file
                  CODE
<%@ page language = "java" contentType="text/html;
          charset=UTF-8"page Encoding="UTF - 8"%>
<! DOCTYPE html>
<html>
```

```
<head>
<meta charset = "UTF - 8">
<title> Insert title here</title>
</head>
<body>
<p><% = new java.util.Date() %></p>
<p><% = 10+20 %></p>
<p><% = "hello jsp".toUpperCase() %></p>
<p><% = "RAMA".length()%></p>
<p><% =(int)(Math.random()+100) %></p>
<p><% = 7*8 %></p>
<p><% = (15> 25 )? 15:25%></p>
<p><% = "JAVA SERVLETS".toLowerCase() %></p>
</body>
</html>
```

                   EXP-8
aim:- perform sate management using cookies,http session and URL rewriting
                               CODE

```
<%@ page language = "java" contentType="text/html;
            charset=UTF-8"page Encoding="UTF - 8"%>
<! DOCTYPE html>
<html>
<head>
<meta charset = "UTF - 8">
<title> Add Two Numbers</title>
</head>
<body>
<from action = "add.jsp"method="get">
num1<input type="number"name="num1"><br></br>
num2<input type="number"name="num2"><br></br>
<input type = "submit" value = "Add">
</f or m>
<%
String num1str=request.getparameter("num1");
String num2str=request.getparameter("num2");
if(num1str != null && num2str != null){
int num1 = Integer.Parseint(num1str);
int num2 = Integer.Parseint(num2str);
int sum = num1+num2;
out.println(sum);
}
%>
</body>
</html>
```

                        EXP-9
Aim:- Perform database Access through jsp
                 CODE

```
Create table users( id int,name varchar(30),mobileno int);
insert into users values(1258,'sravani',2036237826);
insert into users values(1267,'manju',1925667899);
insert into users values(1246,'harini',3562873418);
select * from users;
commit;

<%@ page import = "java.sql.* " %>
<html>
<head>
<meta charset = "UTF - 8">
<title> database access through jsp</title>
</head>
```

```
<body>

Class.forName("oracle.jdbc.driver.OracleDriver");
Connection con = DriverManager.getConnection(
        "jdbc:oracle:thin:@localhost:1521:XE", "system", "tec");
Statement stmt = con.createStatement();
ResultSet rs = stmt.executeQuery("select * from student1258");
while(rs next())
{
out.println(rs.getInt(1)+" "+rs.getString(2)+" "+rs.getlong(3)+"<br>");
}
rs.close();
stmt.close();
con.close();
%>
</body>
</html>
```

          EXP-10
        ==========
aim:- Write down a program which demonstrates the core tag of JSTL.
          code

```
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
<html>
<head>
<title>JSTL Core Tag Demo</title>
</head>
<body>
<c:set var="username" value="harini" />
<p>${username}</p>
<c:if test="${username == 'harini'}">
<p>Welcome back</p>
</c:if>
<c:choose>
<c:when test="${username == 'harini'}">
<p>You are the admin.</p>
</c:when>
<c:otherwise>
<p>You are a guest user.</p>
</c:otherwise>
</c:choose>
<c:set var="fruits" value="${['Apple','Banana','Cherry']}" />
<c:forEach var="fruit" items="${fruits}">
<p>${fruit}</p>
</c:forEach>
</body>
</html>
```

exp-11
=======

Write down a program which demonstrates the Format tag of JSTL
code

```
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
<%@ taglib uri="http://java.sun.com/jsp/jstl/fmt" prefix="fmt" %>
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>Format tags</title>
</head>
<body>
```

```
<c:set var="price" value="12345.678" />
<p>${price}</p><br>
<fmt:formatNumber value="${price}" /><br>
<c:set var="date" value="<%=new java.util.Date() %>" />
<p>${date}</p><br>
<fmt:formatDate value="${date}"/><br>
<c:set var="time" value="<%=new java.util.Date() %>" /><br>
<fmt:formatDate value="${time}" pattern="hh:mm:ss" />
</body>
</html>
```

        exp-12
============
Write down a program which demonstrates the Function tag of JSTL.
code

```
<%@ taglib uri="http://java.sun.com/jsp/jstl/functions" prefix="fn" %>
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
<html>
<head>
<title>JSTL Function Tag Demo</title>
</head>
<body>
<c:set var='message' value='a Hello JSTL Functions' />
<p>${message}</p>
<p>${fn:length(message)}</p>
<p>${fn:toUpperCase(message)}</p>
<p>${fn:toLowerCase(message)}</p>
<p>${fn:contains(message,'rama')}</p>
<p>${fn:indexOf(message,'H')}</p>
</body>
</html>
```

 exp-13
=======
Write down a program which demonstrates the SQL tag of JSTL.
code

```
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
<%@ taglib uri="http://java.sun.com/jsp/jstl/sql" prefix="sql" %>
<html>
<head>
<title>JSP database</title>
</head>
<body>
<sql:setDataSource var="database"
driver ="oracle.jdbc.driver.OracleDriver"
url    ="jdbc:oracle:thin:@Localhost:1521:XE"
user   ="system"
password="tec"
/>
<sql:query var="result" dataSource="${database}">
select * from employee1
</sql:query>

<c:forEach var="row" items="${result.rows}">
${row.id} ${row.name} ${row.address} ${row.age} <br>
</c:forEach>
</body>
</html>
```

exp-14
======
Study and Implement MVC using Spring Framework

```
code
-------
studentModel.java
================
package it;
public class StudentModel1
{
public String name;
public int age;
public StudentModel1(String n,int a)
{
name=n;
age=a;
}
}
studentController.java
======================
package it;
import org.springframework.web.bind.annotation.GetMapping;
import org.springframework.web.bind.annotation.RestController;
@RestController
public class StudentController
{
@GetMapping("/rama")
public StudentModel1 a()
{
StudentModel1 s1=new StudentModel1("sita",20);
return s1;
}
}
application.properties
======================
spring.application.name=SPRINGMVC
server.port=5555
```