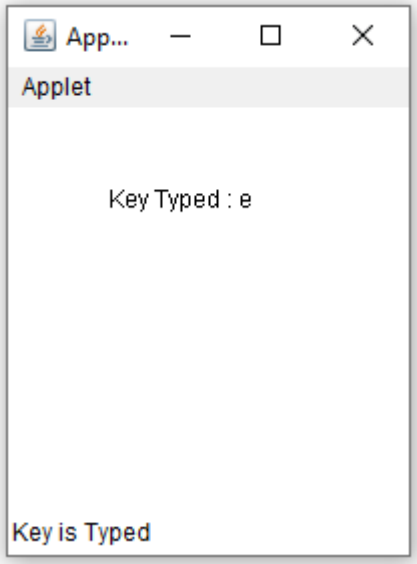
Experiment No. 1

```
import java.applet.Applet;
import java.awt.Graphics;
import java.awt.event.KeyEvent;
import java.awt.event.KeyListener;
import java.awt.event.MouseMotionListener;

public class Exp1_KeyBoardEvents extends Applet implements
KeyListener{

	String str;

	public void init() {
		addKeyListener(this);
	}

	@Override
	public void keyPressed(KeyEvent e) {
		str = "Key Pressed";
		showStatus("Key is Pressed");
		repaint();
	}

	@Override
	public void keyReleased(KeyEvent e) {
		str = "Key Released";
		showStatus("Key is Released");
		repaint();
	}

	@Override
	public void keyTyped(KeyEvent e) {
		char key = e.getKeyChar();
		str = "Key Typed : " ;
		str+= key;
		showStatus("Key is Typed");
		repaint();

	}

	public void paint(Graphics g) {
		g.drawString(str, 50, 50);
	}

}
```

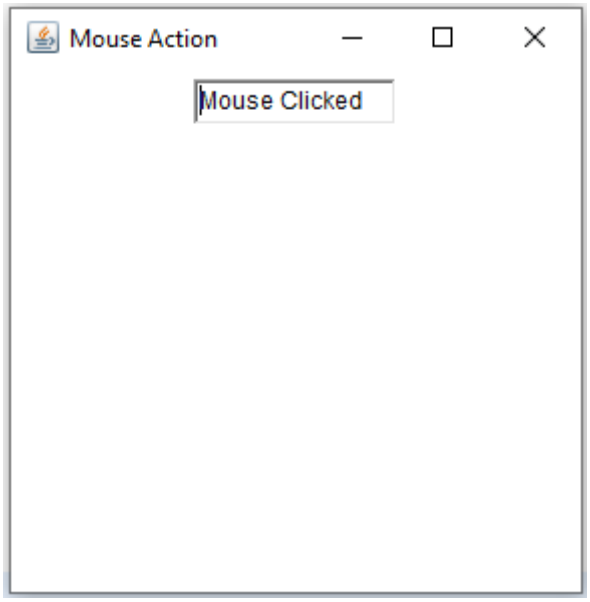
OUTPUT



Experiment No. 2

```
import java.awt.*;
import java.awt.event.*;
public class Exp2_MouseEvents extends Frame implements MouseListener {
	String str;
	Frame f;
	TextField tf;
	Exp2_MouseEvents(){
		f = new Frame("Mouse Action");
		f.setSize(300, 300);
		f.setLayout(new FlowLayout());
		tf =new TextField("Mouse Event");
		tf.setSize(100, 50);
		f.add(tf);
		f.addMouseListener(this);
		f.setVisible(true);
		f.addWindowListener( new WindowAdapter(){
			public void windowClosing(WindowEvent e){
				f.dispose();
			}
		});
	}
	@Override
	public void mouseClicked(MouseEvent arg0) {
		str="Mouse Clicked";
		tf.setText(str);
	}
	@Override
	public void mouseEntered(MouseEvent arg0) {
		str="Mouse Entered";
		tf.setText(str);
	}
	@Override
	public void mouseExited(MouseEvent arg0) {
		str="Mouse Exited";
		tf.setText(str);
	}
	@Override
	public void mousePressed(MouseEvent arg0) {
		str="Mouse Button Pressed";
		tf.setText(str);
	}
	@Override
	public void mouseReleased(MouseEvent arg0) {
		str="Mouse Button Released";
		tf.setText(str);
	}

	public static void main(String [] args){
		Exp2_MouseEvents obj=new Exp2_MouseEvents();
	}
}
```

OUTPUT



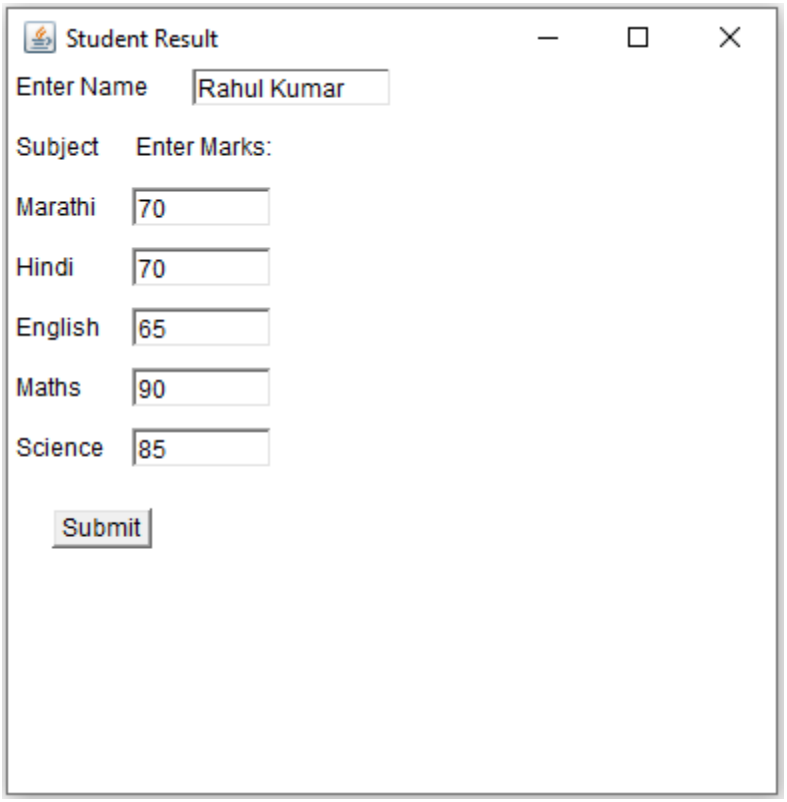
Experiment No. 3

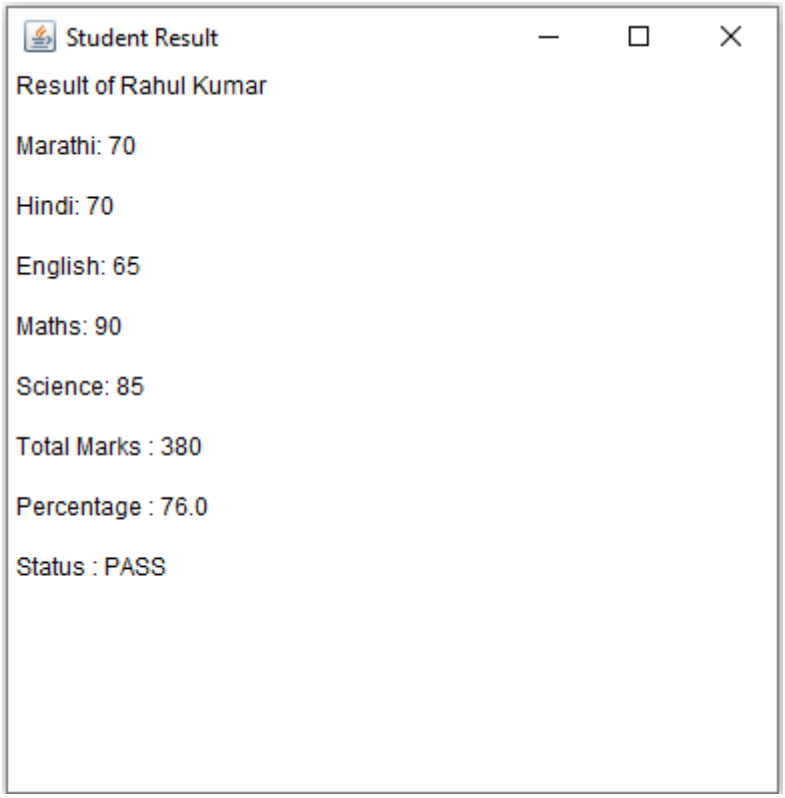
```
import java.awt.*;
import java.awt.event.*;
public class Exp3_GUI {
	Frame f, f2;
	TextField tf1, tf2, tf3, tf4, tf5, tfn;
	Exp3_GUI() {
		f = new Frame("Student Result");
		f.setLayout(null);
		f.setSize(400, 400);
		f.setVisible(true);

		f.addWindowListener(new WindowAdapter() {
			public void windowClosing(WindowEvent e) {
				f.dispose();
			}
		});

		Label ln = new Label("Enter Name");
		ln.setBounds(10, 30, 90, 20);
		f.add(ln);

		tfn = new TextField();
		tfn.setBounds(100, 30, 100, 20);
		f.add(tfn);

		Label l = new Label("Subject");
		l.setBounds(10, 60, 50, 20);
		f.add(l);

		Label l1 = new Label("Enter Marks: ");
		l1.setBounds(70, 60, 70, 20);
		f.add(l1);

		Label l2 = new Label("Marathi");
		l2.setBounds(10, 90, 60, 20);
		f.add(l2);

		tf1 = new TextField();
		tf1.setBounds(70, 90, 70, 20);
		f.add(tf1);

		Label l3 = new Label("Hindi");
		l3.setBounds(10, 120, 60, 20);
		f.add(l3);
		tf2 = new TextField();
		tf2.setBounds(70, 120, 70, 20);
		f.add(tf2);
```

```
		Label l4 = new Label("English");
		l4.setBounds(10, 150, 60, 20);
		f.add(l4);
		tf3 = new TextField();
		tf3.setBounds(70, 150, 70, 20);
		f.add(tf3);

		Label l5 = new Label("Maths");
		l5.setBounds(10, 180, 60, 20);
		f.add(l5);
		tf4 = new TextField();
		tf4.setBounds(70, 180, 70, 20);
		f.add(tf4);

		Label l6 = new Label("Science");
		l6.setBounds(10, 210, 60, 20);
		f.add(l6);
		tf5 = new TextField();
		tf5.setBounds(70, 210, 70, 20);
		f.add(tf5);

		Button b = new Button("Submit");
		b.setBounds(30, 250, 50, 20);
		f.add(b);

		b.addActionListener(new ActionListener() {
			public void actionPerformed(ActionEvent arg0) {
				f2 = new Frame("Student Result");
				f2.setLayout(null);
				f2.setSize(400, 400);
				f2.setVisible(true);

				f2.addWindowListener(new WindowAdapter() {
				    public void windowClosing(WindowEvent e) {
						f2.dispose();
				      }
				});

				Label lb = new Label("Result of
"+tfn.getText());
				lb.setBounds(10, 30, 200, 20);
				f2.add(lb);

				int s1 = Integer.parseInt(tf1.getText());
				int s2 = Integer.parseInt(tf2.getText());
				int s3 = Integer.parseInt(tf3.getText());
				int s4 = Integer.parseInt(tf4.getText());
				int s5 = Integer.parseInt(tf5.getText());
```

```
                        Label lb1 = new Label("Marathi: " + s1);
                        lb1.setBounds(10, 60, 90, 20);
                        f2.add(lb1);

                        Label lb2 = new Label("Hindi: " + s2);
                        lb2.setBounds(10, 90, 90, 20);
                        f2.add(lb2);

                        Label lb3 = new Label("English: " + s3);
                        lb3.setBounds(10, 120, 90, 20);
                        f2.add(lb3);

                        Label lb4 = new Label("Maths: " + s4);
                        lb4.setBounds(10, 150, 90, 20);
                        f2.add(lb4);

                        Label lb5 = new Label("Science: " + s5);
                        lb5.setBounds(10, 180, 90, 20);
                        f2.add(lb5);

                        int sum = s1 + s2 + s3 + s4 + s5;
                        float pctg = (float) sum/5;

                        Label lb6 = new Label("Total Marks : " + sum);
                        lb6.setBounds(10, 210, 100, 20);
                        f2.add(lb6);

                        Label lb7 = new Label("Percentage : " + pctg);
                        lb7.setBounds(10, 240, 100, 20);
                        f2.add(lb7);

                        String str;
                        if(pctg>=40) {
                              str = "PASS";
                        }
                        else {
                              str="FAIL";
                        }
                        Label lb8 = new Label("Status : " + str);
                        lb8.setBounds(10, 270, 100, 20);
                        f2.add(lb8);
                  }
            });

      }
      public static void main(String[] args) {
            Exp3_GUI ex = new Exp3_GUI();
      }
}
```

OUTPUT


Student Result
Enter Name
Rahul Kumar
Subject
Enter Marks:
Marathi
70
Hindi
70
English
65
Maths
90
Science
85
Submit


Student Result
Result of Rahul Kumar
Marathi: 70
Hindi: 70
English: 65
Maths: 90
Science: 85
Total Marks : 380
Percentage : 76.0
Status : PASS

Experiment No. 4

```
import java.sql.*;
public class Exp4_JDBC {
public static void main(String[] args) {
            //Create database : "jdbcdb"
            //Create table in this database
/*                CREATE TABLE studentdata (
                        SrNo INT(5),
                        RollNo INT(6),
                        first_name VARCHAR(255),
                        last_name VARCHAR(255),
                        email_id VARCHAR(255),
                        mobile BIGINT(10)
                );                                                  */
            String url = "jdbc:mysql://localhost:3306/jdbcdb";
            String usr = "root";
            String psw = "";
            String query1 = "insert into studentdata values(1, 304,
'Karan', 'Kumar', 'abc@gmail.com', 1239874560)";
            String query2 = "select * from studentdata";
            try {
                  Class.forName("com.mysql.jdbc.Driver");
                  Connection con = DriverManager.getConnection(url,
usr, psw);
                  Statement stmt = con.createStatement();

                  System.out.println("Inserting data...");
                  stmt.execute(query1);

                  System.out.println("Data after insertion...");
                  ResultSet rs = stmt.executeQuery(query2);

                  System.out.println("Sr.No. " + "Roll No. " + "First
Name    " + "Last Name " + "    Email ID " + "      Mobile No.");

                  while(rs.next()){
                        System.out.println("  " + rs.getInt("SrNo") +
"     " + rs.getInt("RollNo") + "       " +
rs.getString("first_name") + "        " + rs.getString("last_name")
+ "     " + rs.getString("email_id") + "    " +
rs.getString("mobile"));
                  }
            } catch (SQLException e) {
                  e.printStackTrace();
            } catch (ClassNotFoundException e) {
                  e.printStackTrace();
            }
      }
}
```

OUTPUT

```
Inserting data...

Data after insertion...

Sr.No. Roll No. First Name   Last Name     Email ID        Mobile No.
  1     304       Karan        Kumar     abc@gmail.com    1239874560
```

Experiment No. 5

Client Side

PallindromeInterface.java

```
import java.rmi.Remote;
import java.rmi.RemoteException;

public interface PallindromeInterface extends Remote{

	public boolean checkPallindrome(String str) throws RemoteException;

}
```

PallindromeClient.java

```
import java.rmi.*;
import java.util.Scanner;

public class PallindromeClient {
	public static void main (String[] args) {

		PallindromeInterface stub;
		Scanner sc = new Scanner(System.in);
		try {
			stub =
(PallindromeInterface)Naming.lookup("rmi://localhost/abc");

			System.out.println("Enter string to check pallindrome:
");
			String s = sc.next();
			boolean result=stub.checkPallindrome(s);
			if(result) {
			   System.out.println("String is Pallindrome Sequence");
			}
			else{
				System.out.println("Not a Pallindrome");
			}

		}catch (Exception e) {
			System.out.println("HelloClient exception:"+e);
		}
	}
}
```

Server Side

PallindromeInterface.java

```
import java.rmi.Remote;
import java.rmi.RemoteException;

public interface PallindromeInterface extends Remote{
	public boolean checkPallindrome(String str) throws RemoteException;
}
```

Pallindrome.java

```
import java.rmi.RemoteException;
import java.rmi.server.UnicastRemoteObject;

public class Pallindrome extends UnicastRemoteObject implements
PallindromeInterface {

	protected Pallindrome() throws RemoteException {
		super();
	}

	public boolean checkPallindrome(String s) {
	    String reverse = "";
	    int length = s.length();
	    for(int i = length-1; i >= 0; i-- )
	       reverse = reverse + s.charAt(i);

	    if(s.equals(reverse))
	      return true;
	    else
	      return false;
	}
}
```

PallindromeServer.java

```
import java.rmi.Naming;

public class PallindromeServer {

	public static void main (String[] argv) {
		 try {
			Pallindrome skeleton = new Pallindrome();

			Naming.rebind("rmi://localhost/abc", skeleton);
			System.out.println("Server is ready...");
		}catch (Exception e) {
				System.out.println("Server failed to start...:
" + e);
		}
	}

}
```

OUTPUT

```
Enter string to check pallindrome:
abcdcba
String is Pallindrome Sequence


Enter string to check pallindrome:
abcde
Not a Pallindrome
```

Experiment No. 6

```java
import java.net.*;

public class Exp6_InetAddress {

	public static void main(String args[]) throws UnknownHostException {

		System.out.println("Details of Machine getLocalHost(): ");
		InetAddress Address = InetAddress.getLocalHost();
		System.out.println(Address);

		System.out.println();

		System.out.println("Details of Machine getByName(): ");
		Address = InetAddress.getByName("DESKTOP-6BINVTE"); //PC Name
		System.out.println(Address);

		System.out.println();

		System.out.println("Details 'www.google.com' getByName(): ");
		InetAddress SW1[]= InetAddress.getAllByName("www.google.com");
		for (int i=0; i<SW1.length; i++)
			System.out.println(SW1[i]);

		System.out.println();

		System.out.println("Details 'www.sinhgad.com' getByName(): ");
		InetAddress SW2[]=InetAddress.getAllByName("www.sinhgad.com");
		for (int i=0; i<SW2.length; i++)
			System.out.println(SW2[i]);
	}
}
```

OUTPUT

```
Details of Machine getLocalHost():
DESKTOP-6BINVTE/192.168.1.3

Details of Machine getByName():
DESKTOP-6BINVTE/192.168.1.3

Details 'www.google.com' getByName():
www.google.com/142.251.42.36

Details 'www.sinhgad.com' getByName():
www.sinhgad.com/75.2.26.18
www.sinhgad.com/99.83.153.108
```

Experiment No. 7

Login.html

```
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Login</title>
</head>
<body>

	<form action="Login" method="post">
		<h1>Login</h1>

		<label>Username</label>
		<input type="text" name="username">
		<br><br>
		<label>Password</label>
		<input type="password" name="password">
		<br><br>
		<input type="submit" value="Submit"><br/>
	</form>

</body>
</html>
```

Login.java (*Servlet*)

```
import java.io.IOException;
import java.sql.ResultSet;
import java.sql.SQLException;
import javax.servlet.ServletException;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
/**
 * Servlet implementation class Login
 */
@WebServlet("/Login")
public class Login extends HttpServlet {
	private static final long serialVersionUID = 1L;
    /**
     * @see HttpServlet#HttpServlet()
     */
    public Login() {
        super();
    }
	/**
	 * @see HttpServlet#doGet(HttpServletRequest request, HttpServletResponse response)
	 */
	protected void doGet(HttpServletRequest request, HttpServletResponse
response) throws ServletException, IOException {
		response.getWriter().append("Served at:
").append(request.getContextPath());
	}
	/**
	 *@see HttpServlet#doPost(HttpServletRequest request, HttpServletResponse response)
	 */
	protected void doPost(HttpServletRequest request,
HttpServletResponse response) throws ServletException, IOException {
		String username = request.getParameter("username");
		String password = request.getParameter("password");
		response.getWriter().print("Client: Username - " + username);
		response.getWriter().print("<br>");
		response.getWriter().print("Client: Password - " + password);
		response.getWriter().print("<br><br>");
		UserDao ud = new UserDao();
		ResultSet rs = ud.readUser(username);
		try {
			while(rs.next()) {
				response.getWriter().print("Server: Username - " +
rs.getString(1));
				response.getWriter().print("<br>");
				response.getWriter().print("Server: Password - " +
rs.getString(2));
			}
		} catch (SQLException e) {
			e.printStackTrace();
		}
	}
}
```

UserDao.java

```
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import java.sql.SQLException;
import java.util.Scanner;

public class UserDao {
	Scanner sc = new Scanner(System.in);
	String driver = "com.mysql.jdbc.Driver";
	String url = "jdbc:mysql://localhost:3306/jdbcdb";
	String user = "root";
	String pass = "";
	PreparedStatement pstmt = null;
	Connection con = null;

	public Connection createConnection() {
		try{
			Class.forName(driver);
			con = DriverManager.getConnection(url,user,pass);
		}catch(Exception e){
			System.out.println(e);
		}
		return con;
	}
	public ResultSet readUser(String str) {

		ResultSet rs = null;
		Connection con = createConnection();
		String query = "SELECT * FROM ClientServerData WHERE
username=?";
		try {
			pstmt=con.prepareStatement(query);
			pstmt.setString(1, str);
			rs=pstmt.executeQuery();

		} catch (SQLException e) {
			e.printStackTrace();
		}

		return rs;
	}
}
```

OUTPUT

Client: Username - amit

Client: Password - 589

Server: Username - amit

Server: Password – 789

Experiment No. 8

```
import java.sql.*;
import java.util.Scanner;

public class Exp8_JDBC_CURD {
	public static void main(String[] args) {
		//Create database : "jdbcdb"
		//Create table in this database
/*			CREATE TABLE classdata (
				RollNo INT(6),
				first_name VARCHAR(255),
				last_name VARCHAR(255),
			);                                              */
		Scanner sc = new Scanner(System.in);
		String url = "jdbc:mysql://localhost:3306/jdbcdb";
		String usr = "root";
		String psw = "";
		int rn = 0;
		String fn = "";
		String ln = "";
		char ctn = 'N';
		int ch = 0;
		String create = "";
		String read = "";
		String update = "";
		String delete = "";
		try {
			Class.forName("com.mysql.jdbc.Driver");
			Connection con = DriverManager.getConnection(url,
usr, psw);
			Statement stmt = con.createStatement();
			PreparedStatement pstmt = null;
			ResultSet rs;
			do {
				System.out.println("Select CRUD Operation:");
				System.out.println(" 1. Create \n 2. Read \n
3. Update \n 4. Delete ");
				System.out.println("Enter your choice: ");
				ch = sc.nextInt();
				switch(ch) {
					case 1:
					 System.out.println("Enter Roll No.: ");
					 rn = sc.nextInt();
					 System.out.println("Enter First Name:");
					 fn = sc.next();
					 System.out.println("Enter Last Name: ");
					 ln = sc.next();
					 create="insert into classdata values(?,
?, ?)";
```

```
                                pstmt = con.prepareStatement(create);
                                pstmt.setInt(1, rn);
                                pstmt.setString(2, fn);
                                pstmt.setString(3, ln);
                                pstmt.execute();
                                System.out.println("Data Inserted
Successfully");
                                break;

                               case 2:
                                     read = "select * from classdata";
                                     pstmt = con.prepareStatement(read);
                                     rs = pstmt.executeQuery(read);

                                     System.out.println("Roll No. " +
"First Name   " + "Last Name ");
                                     while(rs.next()){
                                          System.out.println("   " +
rs.getInt("rollno") + "       " + rs.getString("first_name") + "
" + rs.getString("last_name"));
                                     }
                                     break;

                               case 3:
                                     System.out.println("Enter first
name of student whose roll no is to update: ");
                                     fn = sc.next();

                                     System.out.println("Enter correct
roll no.: ");
                                     rn = sc.nextInt();

                                     update = "UPDATE classdata SET
RollNo = ? WHERE first_name = ?";
                                     pstmt=con.prepareStatement(update);
                                     pstmt.setInt(1, rn);
                                     pstmt.setString(2, fn);
                                     pstmt.execute();

                                     System.out.println("Data Updated
Successfully");
                                     break;

                               case 4:
                                     System.out.println("Enter roll no
of student to delete record: ");
                                     rn = sc.nextInt();
```

```
                                    delete = "DELETE FROM classdata
WHERE RollNo=" + rn;
                                    pstmt=con.prepareStatement(delete);
                                    pstmt.execute();

                                    System.out.println("Data Deleted
Successfully");
                                    break;

                               default :
                                    System.out.println("Choice Not
Matched...!");
                          }
                          System.out.println("Do you want to continue:
Y/N");
                          ctn = sc.next().charAt(0);
                     }while(Character.toUpperCase(ctn)=='Y');

                     con.close();
                     System.out.println("Program Terminated...!");

               } catch (SQLException e) {
                     e.printStackTrace();
               } catch (ClassNotFoundException e) {
                     e.printStackTrace();
               }
          }
}
```

OUTPUT

```
Select CRUD Operation :
 1. Create
 2. Read
 3. Update
 4. Delete
Enter your choice:
1
Enter Roll No.:
101
Enter First Name:
Karan
Enter Last Name:
Kumar
Data Inserted Successfully
Do you want to continue: Y/N
y
Select CRUD Operation:
 1. Create
 2. Read
 3. Update
 4. Delete
Enter your choice:
2
Roll No. First Name   Last Name
  210       Amar        Singh
  101       Karan        Kumar
Do you want to continue: Y/N
y
Select CRUD Operation:
 1. Create
 2. Read
 3. Update
 4. Delete
Enter your choice:
3
Enter first name of student whose roll no is to update:
Amar
Enter correct roll no.:
102
Data Updated Successfully
Do you want to continue: Y/N
```

```
y
Select CRUD Operation:
 1. Create
 2. Read
 3. Update
 4. Delete
Enter your choice:
2
Roll No. First Name   Last Name
  102       Amar        Singh
  101       Karan        Kumar
Do you want to continue: Y/N
y
Select CRUD Operation:
 1. Create
 2. Read
 3. Update
 4. Delete
Enter your choice:
4
Enter roll no of student to delete record:
102
Data Deleted Successfully
Do you want to continue: Y/N
y
Select CRUD Operation:
 1. Create
 2. Read
 3. Update
 4. Delete
Enter your choice:
2
Roll No. First Name   Last Name
  101       Karan        Kumar
Do you want to continue: Y/N
n
Program Terminated...!
```

Experiment No. 9

index.html

```
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>AJP Exp-9</title>
</head>
<body>
	<form action="index.jsp">
		<label>Enter the number : </label>
		<input type="text" name="un">
		<input type="submit" value="Submit">
		<br>
	</form>
</body>
</html>
```

index.jsp

```
<%@ page language="java" contentType="text/html; charset=ISO-8859-1"
    pageEncoding="ISO-8859-1"%>
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Insert title here</title>
</head>
<body>
	<h1>Welcome to JSP</h1>
	<br>
	<%
		String n = request.getParameter("un");
		int no = Integer.parseInt(n);
		out.println("Number Entered is: " + no);
		out.println("<br> <br>");
		out.println("Cube of Number: " + no*no*no);
	%>
</body>
</html>
```

OUTPUT

Welcome to JSP

Number Entered is: 9

Cube of Number: 729

Experiment No. 10

Registration.html

```
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Registration</title>
</head>
<body>
	<form action="Registration" method="post">
		<h1>Registration Details</h1>

		<label>Username</label>
		<input type="text" name="username">
		<br><br>
		<label>Password</label>
		<input type="password" name="password">
		<br><br>
		<label>Email Id</label>
		<input type="email" name="email">
		<br><br>
		<label>Country</label>
		<input type="text" name="country">
		<br><br>
		<input type="submit" value="Register"><br/>
	</form>
</body>
</html>
```

Registration.java (*Servlet*)

```
import java.io.IOException;
import javax.servlet.ServletException;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
/**
 * Servlet implementation class Registration
 */
@WebServlet("/Registration")
public class Registration extends HttpServlet {
      private static final long serialVersionUID = 1L;
    /**
     * @see HttpServlet#HttpServlet()
     */
     public Registration() {
         super();
     }
       /**
        * @see HttpServlet#doGet(HttpServletRequest request, HttpServletResponse response)
        */
      protected void doGet(HttpServletRequest request,
HttpServletResponse response) throws ServletException, IOException {
            response.getWriter().append("Served at:
").append(request.getContextPath());
      }
      /**
       * @see HttpServlet#doPost(HttpServletRequest request, HttpServletResponse response)
       */
      protected void doPost(HttpServletRequest request,
HttpServletResponse response) throws ServletException, IOException {

            String username = request.getParameter("username");
            String password = request.getParameter("password");
            String email = request.getParameter("email");
            String country = request.getParameter("country");

            UserBean usr = new UserBean();
            usr.setUsername(username);
            usr.setPassword(password);
            usr.setEmail(email);
            usr.setCountry(country);

            System.out.println("Records: "+ usr.toString());

            RegistrationDao regdao = new RegistrationDao();
            regdao.createUser(usr);
            response.getWriter().print("User Registered Successfully");
      }
}
```

UserBean.java

```
public class UserBean {
	private String username;
	private String password;
	private String email;
	private String country;

	public UserBean() {
		super();
	}
	public UserBean(String username, String password, String
email, String country) {
		super();
		this.username = username;
		this.password = password;
		this.email = email;
		this.country = country;
	}

	public String getUsername() {
		return username;
	}
	public void setUsername(String username) {
		this.username = username;
	}
	public String getPassword() {
		return password;
	}
	public void setPassword(String password) {
		this.password = password;
	}
	public String getEmail() {
		return email;
	}
	public void setEmail(String email) {
		this.email = email;
	}
	public String getCountry() {
		return country;
	}
	public void setCountry(String country) {
		this.country = country;
	}
	@Override
	public String toString() {
		return "UserBean [username=" + username + ", password=" +
password + ", email=" + email + ", country=" + country + "]";
	}
}
```

RegistrationDao.java

```
import java.sql.*;
import java.util.Scanner;
public class RegistrationDao {
	Scanner sc = new Scanner(System.in);
	String driver = "com.mysql.jdbc.Driver";
	String url = "jdbc:mysql://localhost:3306/jdbcdb";
	String user = "root";
	String pass = "";
	PreparedStatement pstmt = null;
	Connection con = null;
	public Connection createConnection() {
		try{
			Class.forName(driver);
			con = DriverManager.getConnection(url,user,pass);
		}catch(Exception e){
			System.out.println(e);
		}
		return con;
	}
	public void createUser(UserBean usr) {
		Connection con = createConnection();
		String query = "INSERT INTO ServletData VALUES (?,?,?,?)";
		try {
			pstmt=con.prepareStatement(query);
			pstmt.setString(1, usr.getUsername());
			pstmt.setString(2, usr.getPassword());
			pstmt.setString(3, usr.getEmail());
			pstmt.setString(4, usr.getCountry());
			pstmt.execute();
			System.out.println("User Registered Successfully");

		} catch (SQLException e) {
			e.printStackTrace();
		}
	}
	public void readUser() {
		Connection con = createConnection();
		String query = "SELECT * FROM ServletData";
		try {
			pstmt=con.prepareStatement(query);
			ResultSet rs=pstmt.executeQuery();
			System.out.println("Data Recorded is as follows: ");
			System.out.println("Username " + "  Password " + "
EmailId " + "       Country");
			while(rs.next())
				System.out.println("  " + rs.getString(1)+"
"+rs.getString(2)+"       "+rs.getString(3)+"   "+rs.getString(4));
		} catch (SQLException e) {
			e.printStackTrace();
		}
	}
}
```

OUTPUT

User Registered Successfully

Experiment No 11

```
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import java.sql.SQLException;
import java.sql.Statement;
import java.util.Scanner;

public class Exp11_JDBCResult {
	public static void main(String[] args) {
		//Create database : "jdbcdb"
		//Create table in this database
		/*		CREATE TABLE studentresult (
				rollno INT(6),
				first_name VARCHAR(255),
				last_name VARCHAR(255),
				subject1 INT(255),
				subject2 INT(255),
				subject3 INT(255),
				subject4 INT(255),
				subject5 INT(255),
			);                                                    */
		String url = "jdbc:mysql://localhost:3306/jdbcdb";
		String usr = "root";
		String psw = "";
		PreparedStatement pstmt = null;
		ResultSet rs;

		Scanner sc = new Scanner(System.in);

		System.out.println("Enter roll no: ");
		int rn = sc.nextInt();

		System.out.println("Enter first name: ");
		String fn = sc.next();

		System.out.println("Enter first name: ");
		String ln = sc.next();

		System.out.println("Enter Marks Subject 1: ");
		int sub1 = sc.nextInt();

		System.out.println("Enter Marks Subject 2: ");
		int sub2 = sc.nextInt();

		System.out.println("Enter Marks Subject 3: ");
		int sub3 = sc.nextInt();

		System.out.println("Enter Marks Subject 4: ");
		int sub4 = sc.nextInt();

		System.out.println("Enter Marks Subject 5: ");
		int sub5 = sc.nextInt();
```

```
            try {
                  Class.forName("com.mysql.jdbc.Driver");
                  Connection con = DriverManager.getConnection(url, usr,
psw);
                  Statement stmt = con.createStatement();

                  String create = "insert into studentresult values(?, ?,
?, ?, ?, ?, ?, ?)";
                  pstmt = con.prepareStatement(create);

                  pstmt.setInt(1, rn);
                  pstmt.setString(2, fn);
                  pstmt.setString(3, ln);
                  pstmt.setInt(4, sub1);
                  pstmt.setInt(5, sub1);
                  pstmt.setInt(6, sub1);
                  pstmt.setInt(7, sub1);
                  pstmt.setInt(8, sub1);

                  pstmt.execute();

                  System.out.println("Data Inserted Successfully");

                  System.out.println("Your Result :");
                  String read = "SELECT rollno, first_name, last_name,
(subject1+subject2+subject3+subject4+subject5)/5 FROM studentresult WHERE
rollno = ?";
                  pstmt = con.prepareStatement(read);
                  pstmt.setInt(1, rn);
                  rs = pstmt.executeQuery();

                  System.out.println("Roll No. " + "First Name " + "Last
Name " + "Percentage");
                  while(rs.next()){
                        System.out.println("  " + rs.getInt(1) + "      "
+ rs.getString(2) + "      " + rs.getString(3) + "       " +
rs.getInt(4));
                  }

            } catch (SQLException e) {
                  e.printStackTrace();
            } catch (ClassNotFoundException e) {
                  e.printStackTrace();
            }
      }
}
```

OUTPUT

```
Enter roll no:
115
Enter first name:
Kapil
Enter first name:
Dev
Enter Marks Subject 1:
85
Enter Marks Subject 2:
75
Enter Marks Subject 3:
77
Enter Marks Subject 4:
65
Enter Marks Subject 5:
89
Data Inserted Successfully

Your Result:
Roll No.    First Name    Last Name    Percentage
  115          Kapil          Dev          85
```