

Class : T.Y.BBA(CA) Sem – VI 2022-23

Subject : Advance Java

Slip Solution :11 to 20

Slip No : 11

A) Write a java program to display IPAddress and name of client machine.[15 M]

```
import java.net.InetAddress;
```

```
public class ClientMachineInfo {
    public static void main(String[] args) {
        try {
            InetAddress clientAddr = InetAddress.getLocalHost();
            System.out.println("IP address of client machine: " + clientAddr.getHostAddress());
            System.out.println("Name of client machine: " + clientAddr.getHostName());
        } catch (Exception e) {
            System.out.println("Error while getting client machine info: " + e.getMessage());
        }
    }
}
```

B) Write a Java program to display sales details of Product (PID, PName, Qty, Rate, Amount) between two selected dates. (Assume Sales table is already created).
[25 M]

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

```
import java.util.Scanner;
```

```
public class ProductSalesDetails {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);

        // Prompt user to enter start and end dates
        System.out.print("Enter start date (YYYY-MM-DD): ");
        String startDate = sc.next();
        System.out.print("Enter end date (YYYY-MM-DD): ");
        String endDate = sc.next();

        // Define database connection variables
        String url = "jdbc:mysql://localhost:3306/mydatabase";
        String user = "root";
        String password = "password";

        // Define SQL query to fetch sales details of product between two dates
        String query = "SELECT PID, PName, Qty, Rate, Amount FROM Sales WHERE SaleDate BETWEEN ? AND ?";
```

```

try {
    // Establish database connection
    Connection conn = DriverManager.getConnection(url, user, password);

    // Prepare SQL statement with parameters for start and end dates
    PreparedStatement pstmt = conn.prepareStatement(query);
    pstmt.setString(1, startDate);
    pstmt.setString(2, endDate);

    // Execute the SQL statement and get the result set
    ResultSet rs = pstmt.executeQuery();

    // Display the sales details in tabular form
    System.out.println("PID\tPName\tQty\tRate\tAmount");
    System.out.println("-----");
    while (rs.next()) {
        int pid = rs.getInt("PID");
        String pname = rs.getString("PName");
        int qty = rs.getInt("Qty");
        double rate = rs.getDouble("Rate");
        double amount = rs.getDouble("Amount");
        System.out.println(pid + "\t" + pname + "\t" + qty + "\t" + rate + "\t" + amount);
    }

    // Close the database connection
    conn.close();

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

```

Slip No : 12

A) Write a java program to count the number of records in a table. [15 M]

```

import java.io.*; import java.sql.*;

class Slip12A {

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

        Statement stmt;

        ResultSet rs;

```

```

int cnt = 0;

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

Connection con = DriverManager.getConnection("jdbc:mysql://localhost:3306/bcadb", "root", "
");

stmt = con.createStatement();

rs = stmt.executeQuery("select * from student");

while (rs.next()) {

    cnt++;

}

System.out.println("Total number of records in table is : " + cnt);

con.close();

}}

```

B) Write a program in java which will show lifecycle (creation, sleep, and dead) of a thread. Program should print randomly the name of thread and value of sleep time. The name of the thread should be hard coded through constructor. The sleep time of a thread will be a random integer in the range 0 to 4999.

Answer :

```

import java.util.Random;

public class MyThread extends Thread {
    private String threadName;

    public MyThread(String name) {
        threadName = name;
    }

    public void run() {
        Random rand = new Random();
        int sleepTime = rand.nextInt(5000);
        System.out.println(threadName + " sleeping for " + sleepTime + " ms.");
    }
}

```

```

    try {
        Thread.sleep(sleepTime);
    } catch (InterruptedException e) {
        System.out.println(threadName + " interrupted.");
    }
    System.out.println(threadName + " finished.");
}

public static void main(String[] args) {
    MyThread t = new MyThread("MyThread");
    System.out.println(t.getName() + " created.");
    t.start();
    try {
        t.join();
    } catch (InterruptedException e) {
        System.out.println("Main thread interrupted.");
    }
    System.out.println(t.getName() + " dead.");
}
}

```

Slip No : 13

A) Write a java program to display name of currently executing Thread in multithreading.

Answer :

```

public class Slip13A {

    public static void main(String[] args) {

        Thread t = Thread.currentThread();

        System.out.println("Thread Name is : " + t.getName());

    }
}

```

B) Write a JSP program to display the details of College (CollegeID, Coll_Name, Address) in tabular form on browser.

```

<%@page import="java.sql.*"%>
<html>
<head>
<title>College Details</title>

```

```

</head>
<body>
<h1>College Details</h1>
<table border="1">
<tr>
<th>College ID</th>
<th>College Name</th>
<th>Address</th>
</tr>
<%
try {
    // Load the JDBC driver and establish a connection to the database
    Class.forName("com.mysql.jdbc.Driver");
    Connection con = DriverManager.getConnection("jdbc:mysql://localhost:3306/mydb", "root",
"password");

    // Execute a SELECT query to retrieve the college details
    Statement stmt = con.createStatement();
    ResultSet rs = stmt.executeQuery("SELECT CollegeID, Coll_Name, Address FROM
College");

    // Loop through the result set and display the college details in the table
    while (rs.next()) {
        %>
        <tr>
        <td><%= rs.getString("CollegeID") %></td>
        <td><%= rs.getString("Coll_Name") %></td>
        <td><%= rs.getString("Address") %></td>
        </tr>
        <%
    }

    // Clean up resources
    rs.close();
    stmt.close();
    con.close();
} catch (Exception e) {
    out.println("Error: " + e.getMessage());
}
%>
</table>
</body>
</html>

```

Slip No : 14

A) Write a JSP program to accept Name and Age of Voter and check whether he is eligible for voting or not.

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
    pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>Voter Eligibility Checker</title>
</head>
<body>
    <h1>Voter Eligibility Checker</h1>
    <form method="post" action="check_voter.jsp">
        <label for="name">Name:</label>
        <input type="text" id="name" name="name"><br>
        <label for="age">Age:</label>
        <input type="number" id="age" name="age"><br>
        <input type="submit" value="Check Eligibility">
    </form>
    <%
String name = request.getParameter("name");
int age = Integer.parseInt(request.getParameter("age"));

if(age >= 18) {
    out.println("<p>" + name + ", you are eligible to vote.</p>");
} else {
    out.println("<p>" + name + ", you are not eligible to vote yet.</p>");
}
    %>
</body>
</html>
```

B) Write a Java program to display given extension files from a specific directory on server machine.

```
import java.io.File;
import java.util.Scanner;

public class DisplayFilesWithExtension {

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

```

Scanner scanner = new Scanner(System.in);
System.out.print("Enter the directory path: ");
String directoryPath = scanner.nextLine();

System.out.print("Enter the file extension (without dot): ");
String fileExtension = scanner.nextLine();

File directory = new File(directoryPath);
File[] files = directory.listFiles((dir, name) -> name.endsWith("." + fileExtension));

if (files.length == 0) {
    System.out.println("No files found with the given extension in the directory.");
} else {
    System.out.println("Files with ." + fileExtension + " extension in the directory:");
    for (File file : files) {
        System.out.println(file.getName());
    }
}
}
}

```

Slip No:15

A) Write a java program to display each alphabet after 2 seconds between 'a' to 'z'.

```

public class Slip15A {

    public static void main(String args[]) {

        alpha a1 = new alpha();

        a1.start();

    } }

class alpha extends Thread {

    public void run() {

        try {

            for(int i=97; i<=122; i++){

                System.out.println((char)i);

                sleep(2000); } }

```

```
catch (Exception e) {  
  
    }  
  
}  
  
}
```

B) Write a Java program to accept the details of Student (RNo, SName, Per, Gender, Class) and store into the database. (Use appropriate Swing Components and PreparedStatement Interface).

```
import javax.swing.*;  
import java.awt.*;  
import java.awt.event.*;  
import java.sql.*;  
  
public class StudentDetails extends JFrame implements ActionListener {  
  
    JLabel l1, l2, l3, l4, l5;  
    JTextField t1, t2, t3, t4;  
    JButton b1, b2;  
    JComboBox<String> comboBox;  
    Connection conn = null;  
    PreparedStatement pst = null;  
  
    public StudentDetails() {  
        setTitle("Student Details");  
        setSize(400, 300);  
        setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);  
        setResizable(false);  
        setLocationRelativeTo(null);  
  
        l1 = new JLabel("Roll No:");  
        l2 = new JLabel("Name:");  
        l3 = new JLabel("Percentage:");  
        l4 = new JLabel("Gender:");  
        l5 = new JLabel("Class:");  
  
        t1 = new JTextField();  
        t2 = new JTextField();  
        t3 = new JTextField();
```

```

String[] genders = {"Male", "Female", "Other"};
comboBox = new JComboBox<>(genders);

t4 = new JTextField();

b1 = new JButton("Save");
b2 = new JButton("Cancel");

JPanel p = new JPanel(new GridLayout(6, 2));
p.add(l1);
p.add(t1);
p.add(l2);
p.add(t2);
p.add(l3);
p.add(t3);
p.add(l4);
p.add(comboBox);
p.add(l5);
p.add(t4);
p.add(b1);
p.add(b2);

add(p);

b1.addActionListener(this);
b2.addActionListener(this);

setVisible(true);

// Connect to the database
try {
    Class.forName("com.mysql.cj.jdbc.Driver");
    conn = DriverManager.getConnection("jdbc:mysql://localhost:3306/test", "root",
"password");
} catch (Exception ex) {
    System.out.println("Error: " + ex.getMessage());
}
}

public static void main(String[] args) {
    new StudentDetails();
}

public void actionPerformed(ActionEvent ae) {
    if (ae.getSource() == b1) { // Save button is clicked
        try {

```

```

String query = "insert into students(RNo, SName, Per, Gender, Class) values (?, ?, ?, ?,
?);
pst = conn.prepareStatement(query);
pst.setInt(1, Integer.parseInt(t1.getText()));
pst.setString(2, t2.getText());
pst.setDouble(3, Double.parseDouble(t3.getText()));
pst.setString(4, (String) comboBox.getSelectedItemAt());
pst.setInt(5, Integer.parseInt(t4.getText()));
pst.executeUpdate();
JOptionPane.showMessageDialog(null, "Data saved successfully!");
t1.setText("");
t2.setText("");
t3.setText("");
t4.setText("");
} catch (SQLException ex) {
    System.out.println("Error: " + ex.getMessage());
}
} else if (ae.getSource() == b2) { // Cancel button is clicked
    System.exit(0);
}
}
}
}

```

Slip no :16

Write a JSP script to accept username and password from user, if they are same then display “Login Successfully” message in Login.html file, otherwise display “Login Failed” Message in Error.html file.

```

<%@ page language="java" contentType="text/html; charset=UTF-8"
    pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>Login</title>
</head>
<body>
    <% String username = request.getParameter("username");
        String password = request.getParameter("password");
        if (username != null && password != null && username.equals(password)) { %>
        <h1>Login Successfully</h1>
    <% } else { %>
        <h1>Login Failed</h1>
    <% } %>

```

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

HTML Code:

```
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>Login</title>
</head>
<body>
  <form action="login.jsp" method="post">
    <label for="username">Username:</label>
    <input type="text" id="username" name="username" required><br>
    <label for="password">Password:</label>
    <input type="password" id="password" name="password" required><br>
    <input type="submit" value="Login">
  </form>
</body>
</html>
```

Error.html

```
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>Error</title>
</head>
<body>
  <h1>Login Failed</h1>
  <p>Please check your username and password and try again.</p>
</body>
</html>
```

B) Write a Java program to accept the details of students (rno, sname, per) at least 5

Records, store it into database and display the details of student having highest

percentage. (Use PreparedStatement Interface)

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

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

```

try {
    // Connect to database
    Class.forName("com.mysql.jdbc.Driver");
    Connection conn =
DriverManager.getConnection("jdbc:mysql://localhost:3306/studentdb", "root", "");

    // Prepare SQL statement to insert student details
    String insertSql = "INSERT INTO students (rno, sname, per) VALUES (?, ?, ?)";
    PreparedStatement insertStmt = conn.prepareStatement(insertSql);

    // Insert 5 student records
    insertStmt.setInt(1, 1);
    insertStmt.setString(2, "John");
    insertStmt.setFloat(3, 85.0f);
    insertStmt.executeUpdate();

    insertStmt.setInt(1, 2);
    insertStmt.setString(2, "Jane");
    insertStmt.setFloat(3, 90.0f);
    insertStmt.executeUpdate();

    insertStmt.setInt(1, 3);
    insertStmt.setString(2, "Bob");
    insertStmt.setFloat(3, 80.0f);
    insertStmt.executeUpdate();

    insertStmt.setInt(1, 4);
    insertStmt.setString(2, "Alice");
    insertStmt.setFloat(3, 95.0f);
    insertStmt.executeUpdate();

    insertStmt.setInt(1, 5);
    insertStmt.setString(2, "Tom");
    insertStmt.setFloat(3, 75.0f);
    insertStmt.executeUpdate();

    // Prepare SQL statement to retrieve student with highest percentage
    String selectSql = "SELECT * FROM students WHERE per = (SELECT MAX(per)
FROM students)";
    PreparedStatement selectStmt = conn.prepareStatement(selectSql);

    // Execute SQL statement and display results
    ResultSet rs = selectStmt.executeQuery();
    while (rs.next()) {
        int rno = rs.getInt("rno");
        String sname = rs.getString("sname");

```

```

        float per = rs.getFloat("per");
        System.out.println("Roll No: " + rno + ", Name: " + sname + ", Percentage: " + per);
    }

    // Close resources
    rs.close();
    selectStmt.close();
    insertStmt.close();
    conn.close();

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

```

Slip no :17

A) Write a java program to accept a String from user and display each vowel from a String after 3 seconds.

```

import java.io.*;

public class Slip17A {

    public static void main(String args[]) {

        alpha a1 = new alpha();

        a1.start();

    } }

class alpha extends Thread {

    public void run(){

        try{

            DataInputStream din = new DataInputStream(System.in);

            System.out.print("Enter String : ");

            String str = din.readLine();

            String str1 = str.toLowerCase();

```

```

        for(int i=0; i<=str1.length(); i++){

            if(str1.charAt(i)=='a' || str1.charAt(i)=='e' || str1.charAt(i)=='i' || str1.charAt(i)=='o' || str1.charAt(
i)=='u' ){

                System.out.println(str1.charAt(i));

                sleep(3000); } }

            }catch(Exception e){}

        }

    }

```

B) Write a Java program to check whether given file is present on server or not, if it is there then display its contents on client's terminal otherwise display the message "File Not Found".

Answer :

Server file

```

import java.io.*;

import java.net.*;

public class Server {

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

        ServerSocket ss = new ServerSocket(5400);

        while (true) {

            Socket s = ss.accept();

            DataOutputStream dos = new DataOutputStream(s.getOutputStream());

            File f = new File("E:\addvans-java\src\jsp\server.text");

```

```

if (f.exists()) {
    Scanner sc = new Scanner(f);
    while (sc.hasNextLine()) {
        String str = sc.nextLine();
        dos.writeUTF(f.getName() + " = file content = " + str);
    }
} else {
    String stra = "file is not Exists on SERVER";
    dos.writeUTF(" Error -- " + stra);
}
}
}
}
}

```

client file

```

import java.net.*;
import java.io.*;

public class Client {

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

        Socket s = new Socket("localhost", 5400);

        DataInputStream dis = new DataInputStream(s.getInputStream());

        System.out.print("result = ");

        System.out.print(dis.readUTF()); }}

```

Slip No :18

A) Write a java program to calculate factorial of a number. (Use sleep () method).

```
import java.io.*;
public class Slip18A {
    public static void main(String args[]) {
        alpha a1 = new alpha();
        a1.start();
    }
}

class alpha extends Thread {
    public void run() {
        try {
            DataInputStream br = new DataInputStream(System.in);
            System.out.print("Enter Number : ");
            int n = Integer.parseInt(br.readLine());
            int a = 0, b = 1;
            for (int i = 1; i <= n; ++i) {
                System.out.print(a + " | ");
                int c = a + b;
                a = b;
                b = c;
                sleep(1000);
            }
        } catch (Exception e) {
        }
    }
}
```

B) Write a java program for simple standalone chatting application.

Answer :

Server file :

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

public class ChatServer {
    public static void main(String[] args) throws Exception {
        ServerSocket serverSocket = new ServerSocket(5000); // Start server on port 5000
        System.out.println("Server started. Waiting for clients to connect...");

        Socket clientSocket = serverSocket.accept(); // Wait for client to connect
        System.out.println("Client connected.");

        BufferedReader in = new BufferedReader(new
        InputStreamReader(clientSocket.getInputStream()));
        PrintWriter out = new PrintWriter(clientSocket.getOutputStream(), true);
    }
}
```

```

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

String inputLine;
while ((inputLine = in.readLine()) != null) {
    System.out.println("Client: " + inputLine); // Display client message

    String response = consoleIn.readLine(); // Read server response from console
    out.println(response); // Send server response to client
}

in.close();
out.close();
clientSocket.close();
serverSocket.close();
}
}

```

Client Code:

```

import java.io.*;
import java.net.*;

public class ChatClient {
    public static void main(String[] args) throws Exception {
        Socket socket = new Socket("localhost", 5000); // Connect to server on port 5000

        BufferedReader in = new BufferedReader(new
        InputStreamReader(socket.getInputStream()));
        PrintWriter out = new PrintWriter(socket.getOutputStream(), true);

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

        String inputLine;
        while ((inputLine = consoleIn.readLine()) != null) {
            out.println(inputLine); // Send client message to server

            String response = in.readLine(); // Read server response
            System.out.println("Server: " + response); // Display server response
        }

        in.close();
        out.close();
        socket.close();
    }
}

```

Slip No:19

A) Write a JSP program which accept UserName in a TextBox and greets the user according to the time on server machine.

Answer :

File : Slip19A.jsp

```
<%
```

```
String name=request.getParameter("username");
java.util.Date d=new java.util.Date();
int hr=d.getHours();
```

```
if(hr<12) {
    out.println("Good Morning : "+name);
}
if(hr>12 && hr<16)
{
    out.println(" Good Afternoon : "+name);
}
if(hr>16)
{
    out.println(" Good Evening:"+name);
}
%>
```

File : Slip19A.html

```
<html>
```

```
<body>
```

```
    <form action="http://localhost:8080/jsp/Slip19A/Slip19A.jsp" method="post">
        <input type="text" name="username">
        <input type="submit">
    </form>
```

```
</body>
```

```
</html>
```

B) Write a Java program to display first record from student table (rno, sname, per) onto the TextFields by clicking on button. (Assume Student table is already created).

Answer :

```
import java.sql.*;
import java.awt.*;
import java.awt.event.*;
import javax.swing.*;
```

```

public class Slip4B extends JFrame implements ActionListener {

    JButton jb;
    JTextField t1, t2, t3;
    Container c;

    Connection con;
    Statement st;
    ResultSet rs;

    public Slip4B() {

        c = getContentPane();
        c.setLayout(null);

        t1 = new JTextField();
        t1.setFont(new Font("Arial", Font.PLAIN, 20));
        t1.setSize(200, 30);
        t1.setLocation(100, 50);
        c.add(t1);

        t2 = new JTextField();
        t2.setFont(new Font("Arial", Font.PLAIN, 20));
        t2.setSize(200, 30);
        t2.setLocation(100, 100);
        c.add(t2);

        t3 = new JTextField();
        t3.setFont(new Font("Arial", Font.PLAIN, 20));
        t3.setSize(200, 30);
        t3.setLocation(100, 150);
        c.add(t3);

        jb = new JButton(">> DISPLAY FIRST RECORD<<");
        jb.setFont(new Font("Arial", Font.PLAIN, 20));
        jb.setSize(200, 30);
        jb.addActionListener(this);
        jb.setLocation(100, 200);
        c.add(jb);

        setVisible(true);
        setSize(800, 500);

    }

    public void actionPerformed(ActionEvent aq) {

```

```

    try {
        Class.forName("com.mysql.jdbc.Driver");

con = DriverManager.getConnection("jdbc:mysql://localhost:3306/Server", "root", "12345");

        if (aq.getSource() == jb) {

st = con.createStatement(rs.TYPE_SCROLL_SENSITIVE, rs.CONCUR_READ_ONLY);

            rs = st.executeQuery("Select * from Student;");
            rs.first();
            t1.setText(Integer.toString(rs.getInt(1)));
            t2.setText(rs.getString(2));
            t3.setText(Integer.toString(rs.getInt(3)));
        }
        con.close();
    } catch (Exception ex) {
    }

}

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

    new Slip4B();

}

}

```

Slip No:20

A) Write a JDBC program to delete the details of given employee (ENo EName Salary). Accept employee ID through command line.

Answer :

```

import java.sql.*;

public class EmployeeDelete {
    public static void main(String[] args) {
        if (args.length != 1) {
            System.out.println("Usage: EmployeeDelete <employee_id>");
            return;
        }
        int employeeId = Integer.parseInt(args[0]);

        try {
            // Load the JDBC driver
            Class.forName("com.mysql.jdbc.Driver");

```

```

// Connect to the database
Connection conn = DriverManager.getConnection(
    "jdbc:mysql://localhost/mydatabase", "username", "password");

// Prepare the SQL statement
PreparedStatement pstmt = conn.prepareStatement(
    "DELETE FROM Emp WHERE ENo = ?");
pstmt.setInt(1, employeeId);

// Execute the SQL statement
int rowsDeleted = pstmt.executeUpdate();
if (rowsDeleted == 0) {
    System.out.println("No employee found with ID " + employeeId);
} else {
    System.out.println("Employee with ID " + employeeId + " deleted successfully");
}

// Close the database connection
pstmt.close();
conn.close();
} catch (Exception e) {
    System.out.println("Error: " + e.getMessage());
}
}
}
}

```

B) Write a java program in multithreading using applet for drawing temple.
import java.awt.*;

```

public class Slip20B extends Frame {

    int f = 0;

    public Slip20B() {
        Signal s = new Signal();
        s.start();
        setSize(500, 500);
        setVisible(true);
    }

    public void paint(Graphics g) {
        switch (f) {

            case 0:

```

```

        g.drawRect(100, 150, 90, 120);
    case 1:
        g.drawRect(130, 230, 20, 40);
    case 2:
        g.drawLine(150, 100, 100, 150);
    case 3:
        g.drawLine(150, 100, 190, 150);
    case 4:
        g.drawLine(150, 50, 150, 100);
    case 5:
        g.drawRect(150, 50, 20, 20);
    }
}

class Signal extends Thread {
    public void run() {
        while (true) {
            f = (f + 1) % 5;
            repaint();
            try {
                Thread.sleep(1000);
            } catch (Exception e) {

            }
        }
    }
}

public static void main(String args[]) {
    new Slip20B();
}
}

```