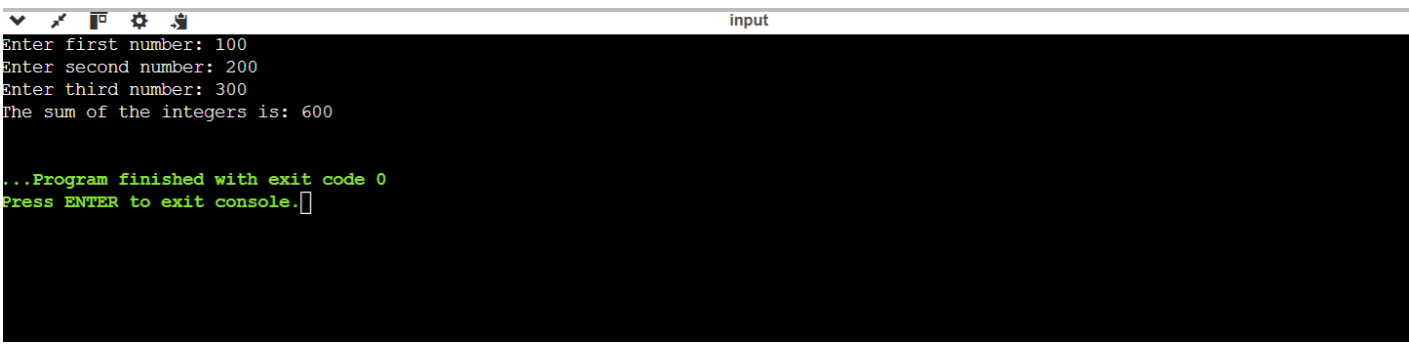
Name :-Naman Aryan
UID:-22BCS16362
CLASS:-22BCS-IOT-619 _A

#CODE 1

```
package Wrap; import
java.util.ArrayList; import
java.util.List; public class
First {
    public static int calculateSum(List<Integer> integerList) {
int sum = 0;
        for (Integer num : integerList) {
sum += num;
        }
        return sum;
    }
    public static Integer parseInteger(String str) {
        return Integer.parseInt(str);
    }
    public static void main(String[] args) {
        List<Integer> integerList = new ArrayList<>();
integerList.add(parseInteger("10"));
integerList.add(parseInteger("20"));
integerList.add(parseInteger("30"));                    int
sum = calculateSum(integerList);
        System.out.println("The sum of the integers is: " + sum);
    }
}
```

OUTPUT



#code 2

——————————-main.java——————————

```
package Second; import
java.io.*;  public class
Main {
    public static void serializeStudent(Student student, String filename) {
        try (ObjectOutputStream out = new ObjectOutputStream(new FileOutputStream(filename))) {
out.writeObject(student);
            System.out.println("Student object serialized successfully.");
        } catch (FileNotFoundException e) {
            System.out.println("File not found: " + e.getMessage());
        } catch (IOException e) {
            System.out.println("IOException occurred: " + e.getMessage());
        }
    }
    public static Student deserializeStudent(String filename) {
Student student = null;
        try (ObjectInputStream in = new ObjectInputStream(new FileInputStream(filename))) {
student = (Student) in.readObject();  // Deserializes the student object
            System.out.println("Student object deserialized successfully.");
        } catch (FileNotFoundException e) {
            System.out.println("File not found: " + e.getMessage());
        } catch (IOException e) {
            System.out.println("IOException occurred: " + e.getMessage());
        } catch (ClassNotFoundException e) {
            System.out.println("Class not found: " + e.getMessage());
        }
        return student;
    }
    public static void main(String[] args) {
        Student student = new Student(1, "Naman Aryan ", 99);
String filename = "student.ser";                serializeStudent(student,
filename);
        Student deserializedStudent = deserializeStudent(filename);
if (deserializedStudent != null) {
            deserializedStudent.displayStudentDetails();
}}}
```

Student.java——————————

```
—- package Second; import java.io.Serializable;
public class Student implements Serializable {
    private static final long serialVersionUID = 1L;
    private int id; private String name; private
    double gpa;
    public Student(int id, String name, double gpa) {
        this.id = id; this.name = name; this.gpa = gpa;
    }
    public int getId() { return
        id;
    }
    public String getName() { return
        name;
    }
```

```
    public double getGpa() { return
        gpa;
    }
    // To display student details
    public void displayStudentDetails() {
        System.out.println("Student ID: " + id);
        System.out.println("Student Name: " + name);
        System.out.println("Student GPA: " + gpa); }
}
```

#OUTPUT

#code 3

```
package Third; import java.sql.*;
import java.util.Scanner; public class
EmployeeManagement {

    private static Connection connection;
    private static Scanner scanner = new Scanner(System.in);


    private static void connectToDatabase() { try
        {

            String url = "jdbc:mysql://localhost:3306/employee_db";
            String username = "root";
            String password = "password";


            connection = DriverManager.getConnection(url, username, password);
            System.out.println("Connected to the database."); }
        catch (SQLException e) {

            System.out.println("Database connection failed: " + e.getMessage());
        }
    }


    private static void addEmployee() { try
        {
```

```
            if (connection == null) {
                System.out.println("Database connection is not established."); return;
            }
            System.out.print("Enter Employee Name: ");
            String name = scanner.nextLine();
            System.out.print("Enter Employee ID: ");
            int id = scanner.nextInt();
            scanner.nextLine();
            System.out.print("Enter Designation: ");
            String designation = scanner.nextLine();
            System.out.print("Enter     Salary:     ");
            double salary = scanner.nextDouble();
            scanner.nextLine();
            String query = "INSERT INTO employees1 (employee_id, employee_name, designation, salary) VALUES
(?, ?, ?, ?)";
            PreparedStatement stmt = connection.prepareStatement(query);
            System.out.println("anshul koundal");
            stmt.setInt(1,    id);    stmt.setString(2,
            name); stmt.setString(3, designation);
            stmt.setDouble(4, salary);

            int result = stmt.executeUpdate(); if
            (result > 0) {
                System.out.println("Employee added successfully!");
            } else {
                System.out.println("Failed to add employee."); }

        } catch (SQLException e) {

            System.out.println("Error adding employee: " + e.getMessage());
        }
    }
    private static void displayAllEmployees() {
        try    {    if    (connection    ==    null)    {
        System.out.println("Database
        connection is not established."); return;
            }
            String query = "SELECT * FROM employees1";
            Statement stmt = connection.createStatement();
            ResultSet rs = stmt.executeQuery(query);
            while (rs.next()) {
                System.out.println("Employee ID: " + rs.getInt("employee_id"));
                System.out.println("Employee Name: " + rs.getString("employee_name"));
                System.out.println("Designation: " + rs.getString("designation"));
                System.out.println("Salary: " + rs.getDouble("salary"));
                System.out.println("  --------------------------------  ");
            }

        } catch (SQLException e) {

            System.out.println("Error displaying employees: " + e.getMessage()); }
    }
    private static void closeConnection() {
        try {
            if (connection != null) {
```

```
                connection.close();
                System.out.println("Database connection closed."); }
            } catch (SQLException e) {

                System.out.println("Error closing connection: " + e.getMessage()); }
        }
        public static void main(String[] args) {

            connectToDatabase();
            while (true) {
                System.out.println("\nMenu:");
                System.out.println("1. Add an Employee");
                System.out.println("2. Display All Employees");
                System.out.println("3.              Exit");
                System.out.print("Select an option: ");
                int     choice     =     scanner.nextInt();
                scanner.nextLine();

                switch (choice) {
                    case 1:
                        addEmployee();
                        break;
                    case 2:
                        displayAllEmployees();
                        break;
                    case 3:
                        closeConnection();
                        System.out.println("Exiting application."); return;
                    default:
                        System.out.println("Invalid choice. Please try again."); }
            }
        }
    }
```

Output

Output Generated files

```
Menu:
1. Add an Employee
2. Display All Employees
3. Exit
Select an option: 1
Enter Employee ID: 16362
Enter Employee Name: Naman Aryan
Enter Designation: CEO
Enter Salary: 99999999999
Employee added successfully!

Menu:
1. Add an Employee
2. Display All Employees
3. Exit
Select an option: 2
Employee ID: 16362
Employee Name: Naman Aryan
Designation: CEO
Salary: 9.9999999999E10
----------------------

Menu:
1. Add an Employee
2. Display All Employees
3. Exit
Select an option:
```