WORKSHEET – 4

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Branch: CSE   **Section/Group:** 619 - A

Subject Name: JAVA   **Subject Code:** 22-CSH-359

1. **Source Code:**

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

public class EmployeeManagementSystem {
    private static final String FILE_NAME = "employees.txt";

    public static void main(String[] args) {
        demonstrateAutoboxingUnboxing();
        run();
    }

    private static void demonstrateAutoboxingUnboxing() {
        List<Integer> numbers = Arrays.asList(10, 20, 30, 40, 50);
        int sum = 0;

        for (Integer num : numbers) {
            sum += num;
        }
```

```java
        System.out.println("Sum of numbers using autoboxing and unboxing: " +
sum);


    String numberStr = "100";
    Integer parsedNumber = Integer.parseInt(numberStr);
    System.out.println("Parsed Integer value: " + parsedNumber);
  }


  public static void run() {
    Scanner scanner = new Scanner(System.in);
    while (true) {
      System.out.println("\n1. Add Employee\n2. Display All Employees\n3.
Exit");
      System.out.print("Enter your choice: ");
      int choice = scanner.nextInt();
      scanner.nextLine();
      switch (choice) {
        case 1:
          addEmployee(scanner);
          break;
        case 2:
          displayEmployees();
          break;
        case 3:
```

```java
                System.out.println("Exiting...");

                scanner.close();

                return;

            default:

                System.out.println("Invalid choice! Try again.");

        }

    }

}


    private static void addEmployee(Scanner scanner) {

        try (BufferedWriter writer = new BufferedWriter(new

FileWriter(FILE_NAME, true))) {

            System.out.print("Name: ");

            String name = scanner.nextLine();

            System.out.print("Employee ID: ");

            int id = scanner.nextInt();

            scanner.nextLine();

            System.out.print("Designation: ");

            String designation = scanner.nextLine();

            System.out.print("Salary: ");

            double salary = scanner.nextDouble();


            Employee emp = new Employee(name, id, designation, salary);

            writer.write(emp.toFileFormat());

            writer.newLine();
```

```java
            System.out.println("Employee added successfully!");
        } catch (IOException e) {
            System.out.println("Error while saving employee details: " +
e.getMessage());
        }
    }


    private static void displayEmployees() {
        try (BufferedReader reader = new BufferedReader(new
FileReader(FILE_NAME))) {
            String line;
            while ((line = reader.readLine()) != null) {
                Employee emp = Employee.fromFileFormat(line);
                System.out.println(emp);
                System.out.println("-------------------");
            }
        } catch (IOException e) {
            System.out.println("Error while reading employee details: " +
e.getMessage());
        }
    }
}

class Employee {
```

```java
    private String name;

    private int id;

    private String designation;

    private double salary;


    public Employee(String name, int id, String designation, double salary) {

        this.name = name;

        this.id = id;

        this.designation = designation;

        this.salary = salary;

    }


    @Override

    public String toString() {

        return "Employee ID: " + id + "\nName: " + name + "\nDesignation: " +

designation + "\nSalary: " + salary;

    }


    public String toFileFormat() {

        return id + "," + name + "," + designation + "," + salary;

    }


    public static Employee fromFileFormat(String line) {

        String[] data = line.split(",");

        return new Employee(data[1], Integer.parseInt(data[0]), data[2],
```

```
Double.parseDouble(data[3]));
    }
}
```

2. **Output:**

```
1. Add Employee
2. Display All Employees
3. Exit
Enter your choice: 1
Name: Prakhyat Mittal
Employee ID: 13153
Designation: Software Developer
Salary: 100000
Employee added successfully!

1. Add Employee
2. Display All Employees
3. Exit
Enter your choice: 2
Employee ID: 13153
Name: Prakhyat Mittal
Designation: Software Developer
Salary: 100000.0
--------------------

1. Add Employee
2. Display All Employees
3. Exit
Enter your choice: 3
Exiting...
```