

## Slip 18

### 10 Marks:

```
java
Copy code
import java.io.*;

class CovidException extends Exception {
    public CovidException() {
        super("Patient is Covid Positive and needs to be hospitalized");
    }
}

class Patient {
    String name;
    int age;
    double oxygenLevel, hrctReport;

    public Patient(String name, int age, double oxygenLevel, double
hrctReport) {
        this.name = name;
        this.age = age;
        this.oxygenLevel = oxygenLevel;
        this.hrctReport = hrctReport;
    }

    public void checkStatus() throws CovidException {
        if (oxygenLevel < 95 && hrctReport > 10) {
            throw new CovidException();
        }
    }
}

public class Main {
    public static void main(String[] args) throws IOException {
        BufferedReader br = new BufferedReader(new
InputStreamReader(System.in));
        System.out.print("Enter Patient Name: ");
        String name = br.readLine();
        System.out.print("Enter Patient Age: ");
        int age = Integer.parseInt(br.readLine());
        System.out.print("Enter Oxygen Level: ");
        double oxygenLevel = Double.parseDouble(br.readLine());
        System.out.print("Enter HRCT Report Value: ");
        double hrctReport = Double.parseDouble(br.readLine());

        Patient patient = new Patient(name, age, oxygenLevel, hrctReport);

        try {
            patient.checkStatus();
            System.out.println("Patient Info: ");
            System.out.println("Name: " + patient.name);
            System.out.println("Age: " + patient.age);
            System.out.println("Oxygen Level: " + patient.oxygenLevel);
            System.out.println("HRCT Report: " + patient.hrctReport);
        }
    }
}
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        } catch (CovidException e) {
            System.out.println(e.getMessage());
        }
    }
}

```

## 20 Marks:

```

java
Copy code
import java.util.Scanner;

abstract class Staff {
    protected String name;
    protected String address;

    public Staff(String name, String address) {
        this.name = name;
        this.address = address;
    }

    public abstract void display();
}

class FullTimeStaff extends Staff {
    private String department;
    private double salary;

    public FullTimeStaff(String name, String address, String department,
double salary) {
        super(name, address);
        this.department = department;
        this.salary = salary;
    }

    @Override
    public void display() {
        System.out.println("Full Time Staff:");
        System.out.println("Name: " + name);
        System.out.println("Address: " + address);
        System.out.println("Department: " + department);
        System.out.println("Salary: " + salary);
    }
}

class PartTimeStaff extends Staff {
    private int hoursWorked;
    private double ratePerHour;

    public PartTimeStaff(String name, String address, int hoursWorked, double
ratePerHour) {
        super(name, address);
        this.hoursWorked = hoursWorked;
        this.ratePerHour = ratePerHour;
    }
}

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    @Override
    public void display() {
        System.out.println("Part Time Staff:");
        System.out.println("Name: " + name);
        System.out.println("Address: " + address);
        System.out.println("Hours Worked: " + hoursWorked);
        System.out.println("Rate per Hour: " + ratePerHour);
    }
}

public class Main {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.println("Select 1 for Full Time Staff or 2 for Part Time Staff:");
        int choice = sc.nextInt();
        sc.nextLine(); // Consume newline

        if (choice == 1) {
            System.out.print("Enter Name: ");
            String name = sc.nextLine();
            System.out.print("Enter Address: ");
            String address = sc.nextLine();
            System.out.print("Enter Department: ");
            String department = sc.nextLine();
            System.out.print("Enter Salary: ");
            double salary = sc.nextDouble();

            FullTimeStaff staff = new FullTimeStaff(name, address,
department, salary);
            staff.display();
        } else if (choice == 2) {
            System.out.print("Enter Name: ");
            String name = sc.nextLine();
            System.out.print("Enter Address: ");
            String address = sc.nextLine();
            System.out.print("Enter Hours Worked: ");
            int hoursWorked = sc.nextInt();
            System.out.print("Enter Rate per Hour: ");
            double ratePerHour = sc.nextDouble();

            PartTimeStaff staff = new PartTimeStaff(name, address,
hoursWorked, ratePerHour);
            staff.display();
        } else {
            System.out.println("Invalid choice.");
        }
    }
}

```