LAB # 1

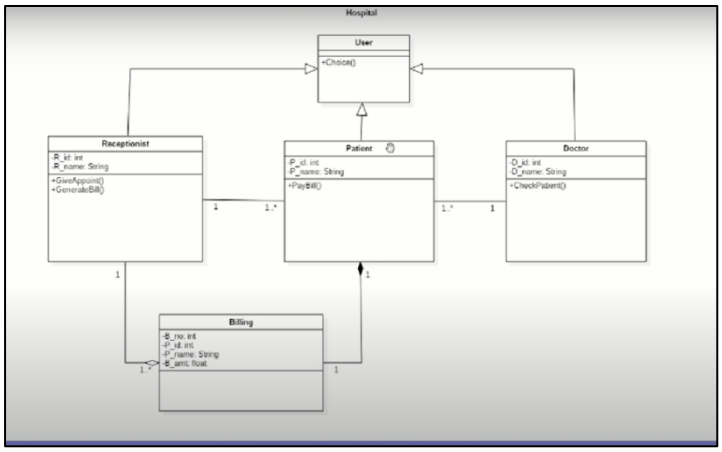
Introduction to Eclipse IDE

OBJECTIVE

Introduction to Eclipse IDE, creating projects, its classes and mapping UML class diagram in to java code.

Lab Task:

Write the java code with the help of the given class diagram of Hospital Management System.



CODE:

Task1.java

```java
package SCDLab1;  // Ensure you're using the package if needed.

public class Task1 {

    // Define the User class
    static class User {
        void choice() {
            System.out.println("Choose your Role: Doctor, Patient, or Receptionist");
        }
    }

    // Define the Patient class
    static class Patient extends User {
        int p_id;
        String p_name;

        Patient(int id, String name) {
            this.p_id = id;
            this.p_name = name;
        }

        void payBill() {
            System.out.println(p_name + " is paying the bill.");
        }
    }

    // Define the Doctor class
    static class Doctor extends User {
        int d_id;
        String d_name;

        Doctor(int id, String name) {
            this.d_id = id;
            this.d_name = name;
        }
```

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Task1.java

```
        }

        void checkPatients() {
            System.out.println(d_name + " is checking patients.");
        }
    }

    // Define the Receptionist class
    static class Receptionist extends User {
        int r_id;
        String r_name;

        Receptionist(int id, String name) {
            this.r_id = id;
            this.r_name = name;
        }

        void giveAppointment() {
            System.out.println(r_name + " is giving appointments.");
        }

        void generateBill() {
            System.out.println("The bill is generating...");
        }
    }

    // Define the Billing class
    static class Billing {
        int B_no;
        int p_id;
        String p_name;
        float B_amt;

        Billing(int no, int id, String name, float amt) {
            this.B_no = no;
```

Task1.java

```
            this.B_no = no;
            this.p_id = id;
            this.p_name = name;
            this.B_amt = amt;
        }
    }

    // Define the Surgeon class, which extends Doctor
    static class Surgeon extends Doctor {
        Surgeon(int id, String name) {
            super(id, name); // Calling the parent constructor (Doctor)
        }

        void surgeonDetails() {
            System.out.println("Surgeon Details...");
        }
    }

    // Main method for execution
    public static void main(String[] args) {
        // User choice is shown, though we don't use the base class directly
        User u = new User();
        u.choice();

        // Create a patient and perform action
        Patient p1 = new Patient(111, "Khurram Raza");
        p1.payBill();

        // Create a surgeon and perform actions
        Surgeon s = new Surgeon(101, "Dr. Rehan Khan");
        s.checkPatients();
        s.surgeonDetails();
    }
}
```

OUTPUT:

Problems | Javadoc | Declaration | Console | Coverage

<terminated> Task1 (1) [Java Application] C:\Program Files\Java\jdk-22\bin\java

```
Choose your Role: Doctor, Patient, or Receptionist
Khurram Raza is paying the bill.
Dr. Rehan Khan is checking patients.
Surgeon Details...
```