LAB # 1
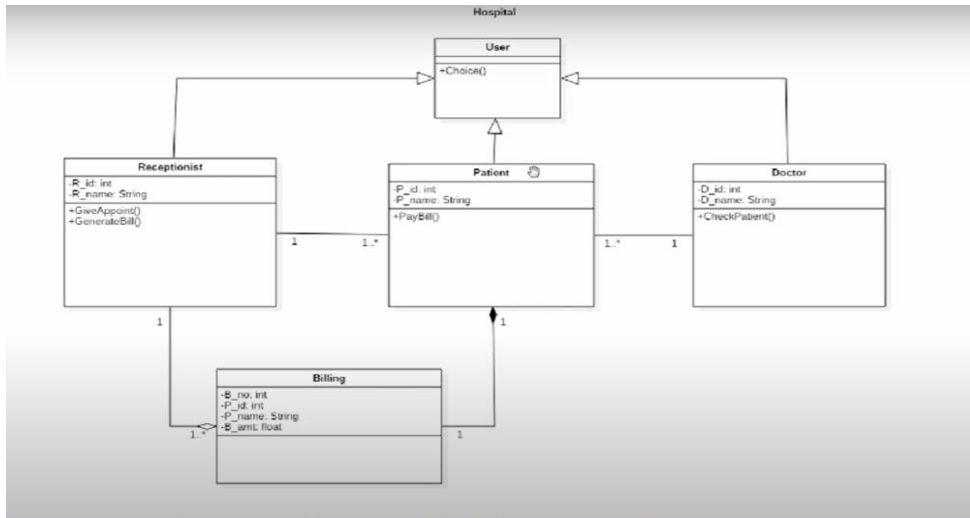# Introduction to Eclipse IDE

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.


```java
1   import java.text.DecimalFormat;
2   class User {
3       public void Choice() {
4           System.out.println("Choose user type: Receptionist / Patient / Doctor"
                );
5       }
6   }
7   // Receptionist Class
8   class Receptionist extends User {
9       int R_id;
10      String R_name;
11      public void GenAppoint() {
12          System.out.println("Appointment generated by: " + R_name);
13      }
14      public void GenerateBill() {
15          System.out.println("Bill generated by: " + R_name);
16      }
17  }
18  // Doctor Class
19  class Doctor extends User {
20      int D_id;
21      String D_name;
22      public void CheckPatient() {
23          System.out.println("Doctor " + D_name + " is checking a patient.");
24      }
25  }
26  // Patient Class
27  class Patient extends User {
28      int P_id;
```

```
29        String P_name;
30 -      public void PayBill() {
31            System.out.println(P_name + " (Patient ID: " + P_id + ") has paid the
                  bill.");
32        }
33  }
34  // Billing Class
35 - class Billing {
36        int B_no;
37        int P_id;
38        String P_name;
39        float B_amt;
40 -      public void displayBill() {
41            DecimalFormat df = new DecimalFormat("#,##0.00");
42            System.out.println("\n===== BILL DETAILS =====");
43            System.out.println("Bill No: " + B_no);
44            System.out.println("Patient ID: " + P_id);
45            System.out.println("Patient Name: " + P_name);
46            System.out.println("Bill Amount: Rs. " + df.format(B_amt));
47        }
48  }
49 - public class Main {
50 -      public static void main(String[] args) {
51            System.out.println("=== USER MENU ===");
52            User u = new User();
53            u.Choice();
54            System.out.println("\n=== RECEPTIONIST DETAILS ===");
55            Receptionist r = new Receptionist();
56            r.R_id = 1;

57            r.R_name = "Laiba";
58            r.GenAppoint();
59            r.GenerateBill();
60            System.out.println("\n=== DOCTOR DETAILS ===");
61            Doctor d = new Doctor();
62            d.D_id = 101;
63            d.D_name = "Dr. Jawed";
64            d.CheckPatient();
65            System.out.println("\n=== PATIENT DETAILS ===");
66            Patient p = new Patient();
67            p.P_id = 301;
68            p.P_name = "Ali Khan";
69            p.PayBill();
70            System.out.println("\n=== BILLING DETAILS ===");
71            Billing b = new Billing();
72            b.B_no = 1001;
73            b.P_id = p.P_id;
74            b.P_name = p.P_name;
75            b.B_amt = 4500.75f;
76            b.displayBill();
77        }
78  }
```

Output:

```
=== USER MENU ===
Choose user type: Receptionist / Patient / Doctor

=== RECEPTIONIST DETAILS ===
Appointment generated by: Laiba
Bill generated by: Laiba

=== DOCTOR DETAILS ===
Doctor Dr. Jawed is checking a patient.

=== PATIENT DETAILS ===
Ali Khan (Patient ID: 301) has paid the bill.

=== BILLING DETAILS ===

===== BILL DETAILS =====
Bill No: 1001
Patient ID: 301
Patient Name: Ali Khan
Bill Amount: Rs. 4,500.75

=== Code Execution Successful ===
```