

```

package programmingIILap;
class Student {
    private String name;
    private int id;
    private double gpa;

    public Student(int id, String name,
double gpa) {
        this.id = id;
        this.name = name;
        this.gpa = gpa;
    }

    public Student(int id, double gpa)
{
    this(id, "", gpa);
}

    public String getName() { return
name; }
    public int getId() { return id; }
    public double getGPA() { return
gpa; }
    public void setName(String newName)
{ this.name = newName; }

    public String toString() {
        return "Student: \n\tID: " + id
+ "\n\tName: " + name + "\n\tGPA: " +
gpa;
    }
}

class Undergrad extends Student {
    private String year;

    public Undergrad(int id, String
name, double gpa, String year) {
        super(id, name, gpa);
        this.year = year;
    }

    public String getYear() {
        return year;
    }

    public void setYear(String newYear)
{
    this.year = newYear;
}

    public String toString() {
        return "Undergraduate " +
super.toString() + "\n\tYear: " + year;
    }
}

class Graduate extends Student {
    private String thesisTitle;

    public Graduate(int id, String
name, double gpa, String thesisTitle) {
        super(id, name, gpa);
        this.thesisTitle = thesisTitle;
    }

    public String getThesisTitle() {
        return thesisTitle;
    }

    public void setThesisTitle(String
newThesisTitle) {
        this.thesisTitle =
newThesisTitle;
    }

    public String toString() {
        return "Graduate " +
super.toString() + "\n\tThesis: " +
thesisTitle;
    }
}

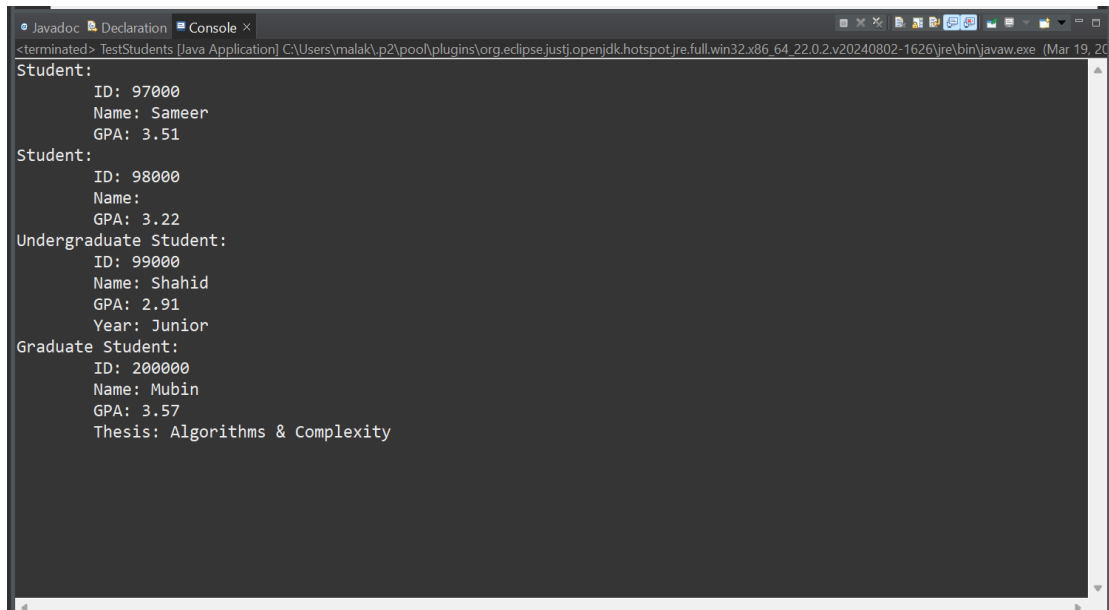
// Test class should be public because
it contains the main method
public class TestStudents {
    public static void main(String[]
args) {
        Student s1 = new Student(97000,
"Sameer", 3.51);
        Student s2 = new Student(98000,
3.22);
        Undergrad u1 = new
Undergrad(99000, "Shahid", 2.91,
"Junior");
        Graduate g1 = new
Graduate(200000, "Mubin", 3.57,
"Algorithms & Complexity");

        System.out.println(s1);
        System.out.println(s2);
        System.out.println(u1);
        System.out.println(g1);
    }
}

```

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The screenshot shows a Java application window titled "TestStudents [Java Application]". The console output displays the following data:

```
<terminated> TestStudents [Java Application] C:\Users\malak\p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_22.0.2.v20240802-1626\jre\bin\javaw.exe (Mar 19, 2024)

Student:
  ID: 97000
  Name: Sameer
  GPA: 3.51
Student:
  ID: 98000
  Name:
  GPA: 3.22
Undergraduate Student:
  ID: 99000
  Name: Shahid
  GPA: 2.91
  Year: Junior
Graduate Student:
  ID: 200000
  Name: Mubin
  GPA: 3.57
  Thesis: Algorithms & Complexity
```