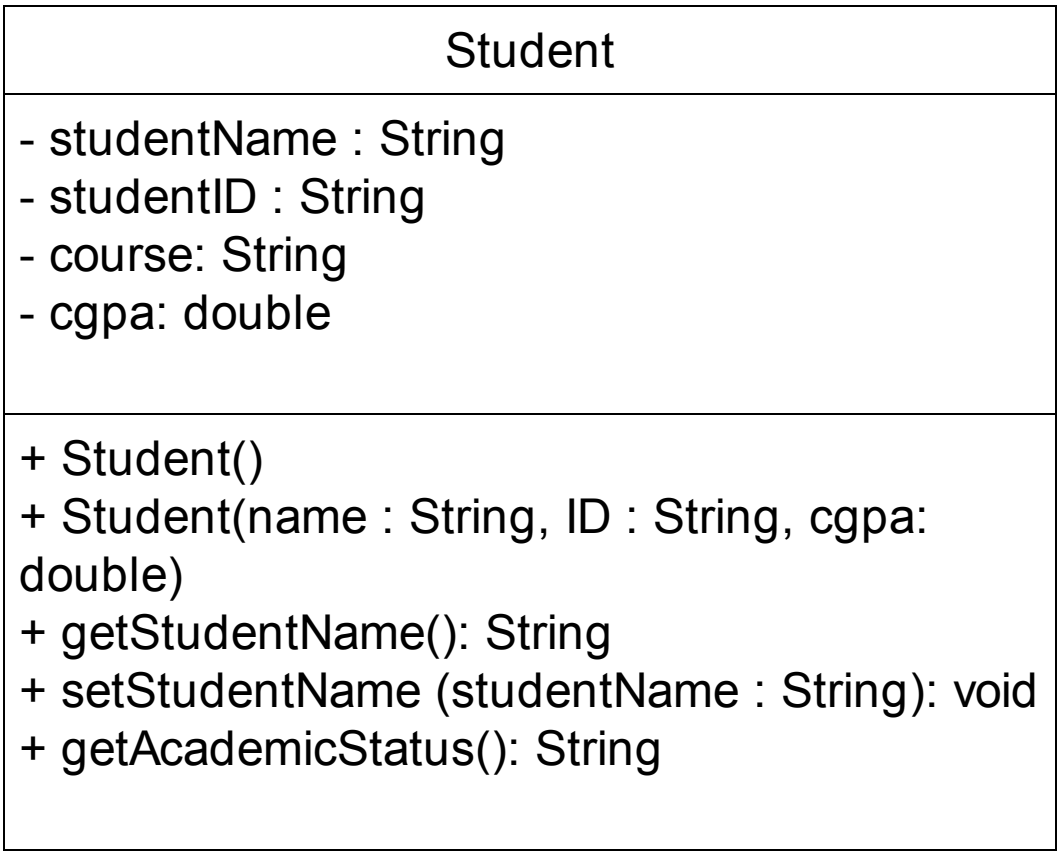
EXAMPLE IN CLASS (MON - 18/11) - STUDENT CLASS

```
public class Student
{
	private String studentID, studentName, course;
	private double cgpa;	//can have more data
//fields/instance variables

	//constructors
	public Student() {  } // this is default constructor or
non-argument contructor

	//constructors with new data for the object
	public Student(String name, String ID, double cgpa)
	{
		studentName = name;
		studentID = ID;
		this.cgpa = cgpa;
	}

	//accessor method
	public String getStudentName()
	{    return studentName;  }
```

```
    //mutator method
    public void setStudentName(String studentName)
    {
        this.studentName = studentName;
    }
    //can have many or others accessor & mutator
methods

    public String getAcademicStatus()  //can have other
methods
    {
        String status; //must declare here bcoz there is
//no data field declared in this class

        if(cgpa >=3.50 && cgpa <=4.00)
            status = “Distinction”;
        ……...
        else
            status = “not awarded”;

        return status;
    }

}//close class
```

The class can be represent as a diagram - UML CLASS DIAGRAM



mutator method for cgpa

+ setCgpa (c: double) : void

```
public void setCgpa (double c)
{
    cgpa = c;       //this.cgpa = cgpa;
}
```

THE APPLICATION PROGRAM (MAIN CLASS/ TEST PROGRAM/ DEMO PROGRAM)

Question:

1. - Ask user to input name, ID, course and cgpa
2. - Then create an object of Student and assign these data to the object
3. - Change the student name to “Michael J”
4. - Display student name
5. - Display student’s academic status

```
import java.util.Scanner;

public class DemoStudent
{
	public static void main(String [] args)
	{
		Scanner input = new Scanner(System.in);

		System.out.print(“Enter name:”);
		String n = input.nextLine();

		System.out.print(“Enter ID:”);
		String id = input.next();
```

```
            System.out.print("Enter course:");
            String course = input.nextLine();

            System.out.print("Enter cgpa:");
            double cgpa = input.nextDouble();

            //create object
            Student my = new Student(n,id,cgpa);

          //Q3
          my.setStudentName("Michael J");

        System.out.print("Name: "+my.getStudentName());
      System.out.print("Status: "+my.getAcademicStatus());

      }
}

//if add this statement in the DemoStudent
System.out.print("CGPA: "+my.cgpa);

System.out.print("Student ID: "+my.getStudentID());
```

Passing object to method

```
// another program using Student class

import java.util.Scanner;
public class Demo2
{
	public static void main(String [] args)
	{
		Scanner input = new Scanner(System.in);
		//same code as DemoStudent
		…….
		//create object
		Student one = new Student(n,id,cgpa);
		one.setStudentName(“Michael J”);
		printDetails(one);
	System.out.print(“Name: ”+one.getStudentName());
	}
	public static void printDetails (Student two)
	{
	System.out.print(“Name: ”+___.getStudentName());
	System.out.print(“Status: ”+__.getAcademicStatus());
	two.setStudentName(“Mimie”);
	}
```

```
}
```