

Lab Goal : This lab was designed to teach you more about arrays of references.

Lab Description : You will create a Class that will store information about grades for an entire class of students. The Class will store a class name and an array of Students. Each Student will have a name and a list of grades. You must use the Student class methods to write the Class.

Class Class :

```
public class Class
{
    private String name;
    private Student[] studentList;

    //constructors

    public void addStudent(int stuNum, Student s){ }

    public String getClassname(){ return ""; }

    public double getClassAverage(){
        return 0.0;
    }

    public double getStudentAverage(int stuNum){
        return 0.0;
    }

    public double getStudentAverage(String stuName){
        return 0.0;
    }

    public String getStudentName(int stuNum){
        return "";
    }

    public String getStudentWithHighestAverage(){
        return "";
    }

    public String getStudentWithLowestAverage(){
        return "";
    }

    public String getFailureList(double failingGrade){
        return "";
    }
}
```

Files Needed ::

Grades.java
GradesRunner.java
Student.java
StudentRunner.java
Class.java
ClassRunner.java

Sample Input(ClassRunner.java) :

See the main of ClassRunner.java.

Sample Output :

```
Comp Sci 1
Jimmy = 100.0 A 90.0 A 80.0 B 60.0 D      82.50
Sandy = 100.0 A 100.0 A 80.0 B 70.0 C     87.50
Fred = 50.0 F 50.0 F 70.0 C 68.0 D 23.0 F      52.20
Sam = 100.0 A    100.00
```

```
Jimmy's average = 82.50
Sandy's average = 87.50
Fred's average 52.20
Sam's average 100.00
Sandy's average 87.50
Failure List = Fred
Highest Average = Sam
Lowest Average = Fred
```

Class Average = 80.55