# **Student**

#### **Instance Variables**

- + String firstName
- + String middleInitial
- + String lastName
- + int studentID
- + String sex
- + int birthMonth //two digits
- + int birthDate //two digits
- + int birthYear //four digits
- + int graduatingYear //four digits
- + String email
- String password

#### Methods

- + printClassGrades( String className) //prints a 2D arrayList of all assignments and grades for a single class
- + printAssignments( String sortingType) //assignments sorted alphabetically, lo-hi, hi-lo
- + desiredAverageCalculator( float average ) // student inputs a desired average and the next test grade the student must get is returned
- + assignmentComment( String assignmentName, String message)
- + logout()

# **Teacher**

#### **Instance Variables**

- + String firstName
- + String lastName
- + String email
- String password
- + String StudentSortType
- + String ClassSortType

#### Methods

- + newClass()
- + printClasses( String ClassSortType)
- + printStudents( String StudentSortType)
- + newAssignment(String assignmentName) // makes a new column in the 2D array of grades
- + gradeAssignment(Object[] student, Object[] assignment, float grade)
- + classStats( String assignment, String statType) // returns a mean, histogram, etc.
- + assignmentComment( String studentFirstName, String studentLastNamre, String assignmentName, String message)
- + logout()

## **Parent**

#### **Instance Variables**

- + String childFirstName
- + String childLastName
- + String childStudentID
- + String firstName
- + String lastName
- + String email
- String password

#### Methods

- + printGrades() //prints a 2D arrayList of all assignments and grades
- + logOut() //logs out of account

# **Sorts**

### **Instance Variables**

- + Object[][] array **Methods**
- + mergeSort()
- + sortAlphabetically()
- + sortNumerically()

# **Stats**

### **Instance Variables**

+ Object[][] array

#### Methods

- + min()
- + max()
- + mode() + stanDev()
- + mean()
- + median()

# **Searches**

### **Instance Variables**

- + Object[][] array
- + Object inputValue

#### Methods

+ searchArray( Object inputValue)

# **StudentClass**

### **Instance Variables**

- + String name
- + int period

#### Methods

+ toString()

# **Assignment**

### **Instance Variables**

- + String name
- + int grade

#### Methods

+ toString()

# Woo

**Main Method** 

# **Test**

#### **Instance Variables**

- + String name
- + int grade

## Methods

- + test()
- + tes(String name)
- + test(String name, int grade)
- + toString()

# Quiz

#### **Instance Variables**

- + String name
- + int grade

### Methods

- + quiz()
- + quiz(String name) + quiz(String name, int grade)
- + toString()

# **Homework**

#### **Instance Variables**

- + String name
- + int grade

### Methods

- + homework()
- + homework(String name)
- + homework(String name, int grade)
- + toString()

# **Project**

### **Instance Variables**

- + String name
- + int grade

### Methods

- + project()
- + project(String name)
- + project(String name, int grade)
- + toString()