

Quin'darius Ali Lyles-Woods

Soloman Walker

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Pseudocode Assignment

Module 1A

This pseudocode will be giving a walk through of writing a class called test. Within Test there will be certain instance variables that will carry information about the class defined as test. The variables that the class called test will carry are the first name, last name, five test scores, average tests score, class average and grade. As the instruction said the grades will be stored in a data container called an array to keep things organized. I will explain what I want to and the write out everything in pseudocode afterwards.

To start we will need to have a class created. After the class is created we can then add all the instance variables. Then within the class I'm going to need some methods for setting and getting and changing around data. I need the get and set method for the first and last name. The get and set method for the array/container of variables that the user will input. Also I will need a method to get and set the average test score. After the average test score is set I will need a method to get the average test score. I will also need another method to tell me what the letter grade of the student is. Lastly in the class Test I will have a method that turns all of these instance variables into an easy to read chart of all the students, which will be ten students and five test scores.

Lastly I would like to write a tester program even the the assignment doesn't say to do so but if I am going to show the user interaction this is going to be necessary. Within this tester method I will have to create an array/container of ten students of the test class that we did before. Then I will insert a scanner to have the user input values and a loop to have the user be able to put everything in a user friendly manner.

Class Pseudocode

CREATE CLASS Test

CREATE VARIABLE Grade Average

CREATE VARIABLE Letter Grade

CREATE VARIABLE First Name

CREATE VARIABLE Last Name

CREATE VARIABLE Grades « Will hold five values.

CREATE VARIABLE Test Number « Initial value of Zero

CREATE VARIABLE Class Average

CREATE METHOD First and Last Name

SET First and Last name when the method is called

CREATE METHOD Add Test Grades « Will use a counter called addedTest

CREATE Added Test

SET Grades at the Test Number TO Added Test

INCREASE Test Number value by one

CREATE METHOD Set Average « Will use the Grades Array

CREATE Average Score

FOR The entire grade array

ADD Grades at each instance END LOOP

DIVIDE Average Score BY Five

SET Grade Average TO Average Score

CREATE METHOD Set Letter Grade « Will use the Grade Average

CREATE Grade

IF Grade Average is between 100-90 SET Grade TO A

ELSE IF Grade Average is between 89-80 SET Grade TO B

ELSE IF Grade Average is between 79-70 SET Grade TO C

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ELSE IF      Grade Average is between 69-60      SET   Grade TO   D
ELSE        Grade Average is below 60            SET   Grade TO   F
SET         Letter Grade          TO   Grade
CREATE METHOD Set Class Average          «Will take in Each Students Average
CREATE Average Score
ADD         Each value moved into this Method TO   Average Score
DIVIDE      Average Score          BY          Ten
SET         Class Average          TO          Average Score

```

```

CREATE METHOD Get Average
GET   Grade Average

```

```

CREATE METHOD Get Letter Grade
GET   Letter Grade

```

```

CREATE METHOD Get First Name
GET   First Name

```

```

CREATE METHOD Get Last Name
GET   Last Name

```

```

CREATE METHOD Get Class Average
GET   Class Average

```

```

CREATE METHOD Print Everything
PRINT First Name
PRINT Last Name
FOR   The entire grade array
PRINT Each value   END LOOP
PRINT Grade Average
PRINT Letter Grade

```

Tester Pseudocode

```
CREATE      Five Test Objects named      Student

FOR          Each Student      USER INPUT      First Name
USER INPUT  Last Name
FOR          Five iterations      USE  METHOD      Add Test Grades
      TO      Student at Each iteration      END LOOP

FOR          Each Student      USE  METHOD      Print Everything
END LOOP
PRINT      Class Average:      USE  Get Class Average
```