

ECT 361 – Programming Structures Fall 2014 Exercise 3

Assigned 23 September 2015. Due 30 September 2015 at the beginning of class on Isidore
Assignment turn in tool

Be sure to provide the following information on each page for all turned in work.

Name: (Last Name first then first name)

Assignment: Exercise 3

Class: ECT 361 Programming Structures

Term: Fall 2015

Problem Statement:

You are charged with making your professor a program that receives an input from the user for each member of the class's test scores. You must source the data, names and scores, from the list below. The names may be "hard coded", but the scores MUST be inputted from the user. Your program must calculate each students test score in percent as a whole number. It will receive the scores from the user and calculate the class average of the students, as a percent and number showing 1 decimals precision. Be sure to display to the user, when you are asked for an input, what type of information is required. Your program must use the command "constant" for the total possible score (25). The names and beginning of score shall be lined up using tabs.

Table providing names and test scores.

<u>Student Name</u>	<u>Test Scores</u> 25 pts possible
Robert	22
Joeseeph	18
Amar	23
Jin	21
Kelly	24
Class Average:	21.6

Sample output

Input from user: 22

Robert 22 out of 25 or 88%
Joseph 18 out of 25 or 72%
William 23 out of 25 or 92%
Mary 21 out of 25 or 84%
Jonah 24 out of 25 or 96%

Class Average 21.6 out of 25 or 86.4%

You need to provide the following 3 files turned in electronically:

Design Document (Using the Format below, as a portable document file ".pdf" with file format: *ECT361_EX3_Fall2015_Lastname_First.pdf*) you must provide all turn in work in a typed form.

Code Sample (your source code file: *ECT361_EX3_Fall2015_Lastname_First.cpp*)

You need to provide the following in paper form (sheet will be passed out in class the day it is due):

Grade Sheet (Sample shown below, be sure you put your name on the paper)

Format for the Design Documentation:

Title Page to your Design Document

Your title page must include the following information:

Title of the program includes a descriptive name with assignment number

Name: (Last Name first then first name Separated by a comma)

Filename: ECT361_EX3_Fall2015_<Lastname_First>.cpp

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Analysis and Design Phase

You must provide the following information in your Design Documentation:

Requirements analysis

1. What requirements are required to develop your algorithm?

Specification

1. What Inputs and Outputs does the system provide?
2. Provide the methodology you used to develop your algorithm. Provide any assumptions you made.
3. Provide All formulas used and what each formula does in your algorithm.

Software architecture

1. Provide Flow Chart on the process to make your algorithm.
2. Provide Pseudocode on the process to make your algorithm.

Write Code

Provide a Copy of your source code.

Grade Sheet

Provide a copy of the grade sheet in paper form the day the assignment is due (professor will provide a printed copy)

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EX3 Grade Sheet

Student Name: _____

	Points	Description
Program Format and documentation	___/ 12	_____ Analysis and Design Steps (7 pt.) <ul style="list-style-type: none"> • Design Document _____ Source Code Comments (2 pt.) _____ Source Code Formatting (3 pt.) <ul style="list-style-type: none"> • Indentation / 80 cols. • Information blocks • Proper use of Template (From Lesson 3)
Program Syntax	___/ 8	_____ Program builds and runs correctly (2) _____ Correct use of syntax (3) <ul style="list-style-type: none"> • Data types & literal values • Only use provided syntax from in class lessons • Program I/O _____ Correctly satisfies problem statement (3) <ul style="list-style-type: none"> • Calculates correctly • Input stored in the correct locations • Format of output
TOTAL	___/20	