# \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**CSC134 C++ Programming**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

# Lab 1: Writing Your First C++ Program

# Objectives

In this lab assignment, students will learn:

* How to write a simple C++ program
* How to document program using comments
* How to identify input, processing and output items
* How to use fundamental data types: (int, double, char and bool)
* How to use arithmetic operators
* How to use predefined functions in a program
* How to perform input and output operations with the string data type
* Practice how to debug syntax and logic errors

# COURSE PREPARATION

Read the following:

* CSC134-Coding Guidelines (Getting Started tab in BB)
* Read Chapters 1,2 and 3

## Grading:

Be sure to follow the Coding Standard Guidelines. You must properly indent and comment your code. Each program is worth 50 points.

Grading rubric:

* Indent code and insert comments to document your program. [5 pts]
* Program must be implemented and run as instructed to receive full credit. [40 pts]

**Program that does not compile and run will not receive any credit.**

* Source and executable files should be zipped up into a common folder. In addition, copy and paste the output of your program to a word document. Submit both the zip and document files to Blackboard [5 pts]

**Introduction to C++ Programming**

**Calculating Final Semester Grade:**

## Goals:

In this lab assignment, students will demonstrate the ability to:

* Learn how to create a basic procedural program in C++.

## Instructions:

Please read this lab exercise thoroughly, before attempting to write the program.

To help students calculate their final semester grade (FSG) in the C++ class, write a program that calculates the student’s FSG based on the following grade information:

**Midterm Exam Grade (20%)**

**Final Exam Grade (20%)**

**Lab Grade (50%) – Assume 4 Lab Assignments**

**Quiz Grade (10%) – Assume 3 quizzes**

***FSG = (Lab grade Average)x(.50) + (Quiz grade Average)x(.10) + (Midterm Exam Grade)x(.20) + (Final Exam Grade)x(.20)***

Once the final semester grade is calculated, determine the final letter grade using the following conditions listed in the table:

|  |  |
| --- | --- |
| FSG | Letter Grade |
| FSG >= 90 | A |
| FSG >= 80 and FSG< 90 | B |
| FSG >= 70 and FSG< 80 | C |
| FSG >= 65 and FSG< 70 | D |
| FSG < 65 | F |

**\*Include #include<iomanip> -- for formatting output.**

**Before outputting data, add the following statement: cout<<fixed<<setprecision(2);**

***REMINDER: You should not use any repetition statements (No while or for loops)***

In addition, prompt for student’s name.

**The following is a sample output:**

Sample Output: (user input in red)

***Enter Student Name: Susan Francis***

***Enter quiz grade: 70***

***Enter quiz grade: 60***

***Enter quiz grade: 100***

***Enter lab grade: 90***

***Enter lab grade: 50***

***Enter lab grade: 75***

***Enter lab grade: 45***

***Enter Midterm Exam grade: 80***

***Enter Final Exam grade: 90***

***Your Final Semester Grade for the class is 74.17***

***Your Final Semester letter Grade for the class is C***

***Press any key to continue . . .***

**NOTE: Susan Francis is a sample input. Use your first last name instead**