**COSC 1436- Spring 2015**

**Lab/Program #4**

**Total Points: 10**

Implement the following as a C++ program for full credit. Please submit only you .cpp file only. Name the file GradeBookXX.cpp. Where XX are your initials. Use you knowledge that you learn in class to develop this program. **Hint it will beneficial for you to use arrays and functions**

You are going to implement a grading program for this course. See below for sample run.

Labs 35% 6 labs 1 lowest grade dropped

Quiz 35% 10 quizzes 1 lowest grade dropped

Exams 30% 2 exams no grades dropped

Acceptance criteria:

* Create a console base program to calculate students overall grade.
* Display a title to the user what this program will do.
* Prompt the user to enter the grades for a particular section. Labs, quizzes and etc.
* Provide data validation checks. Do not let the user continue if invalid data is incorrect. If your want to make room for extra credit than add the range to allow for it. However, inform the user of the range. If the user enters an invalid value do not accept the value and prompt again. If the user keeps entering an invalid amount keep prompting the user until the data is valid.
* When all values are entered. Create a file called GradeReport.txt the user can open up and inspect the results. **Make sure the report looks professional**. See example below. Do not just list all the grades straight down and spread multiple pages. The report must contain the following:
  + The report should consist of a title.
  + The report should also display all the grades the user entered based on what category; example lab, quiz and exam.
  + The report should display what grade was dropped in the lab and quiz category.
  + The report should display the average per each of the section with taken into the consideration of the lowest grade dropped.
  + The weighted percentage totals for each section.
  + The weighted grade for each section
  + The final average
  + The letter grade.
* The program should prompt the user if he or she would like to run the program again. Remember to check for data validation. If you prompt for a Y/N and the user enters in an ‘A’ or lower case y.



