

Tutorial 6 - Inheritance

CS 2882 – Object Oriented Programming using C++

Prepared by: Dr. Manoj Ranaweera

Scope: Inheritance

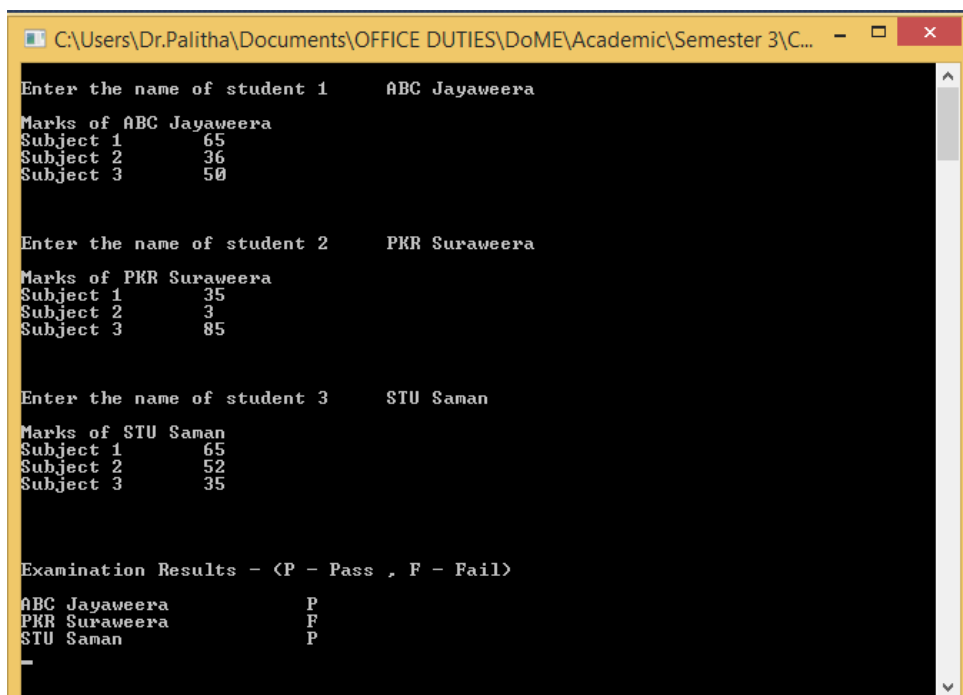
Background knowledge required: classes, separating interface from implementation, inheritance, and basic control structures and variables.

- 1) You are required to write a program to handle results of an examination. The examination has 3 subjects. However, you are NOT required to develop the code from scratch. You are given the class “Marks” (the header file and the object file). The class “Marks” can record the marks of 3 subjects and the name of a student (up to 20 characters long). Using the class interface and the object code provided, derive a class named “Results” from “Marks” class (use public inheritance). The class “Results” should have the following data members and member functions.
 - A char type data member to hold the result (either F for fail or P for pass)
 - A public function named “PrintResults” to get the results printed on screen once called.
 - A private function named “SetResults”, which calculates the result of the student and save to the data member mentioned above. This function should be called within “PrintResults” function. (i.e. results are calculated just before printing).

Passing Criteria:

A student MUST have obtained a minimum of 30 marks for EACH subject AND the average mark of three subjects must be 50 or above to pass the examination.

Write a program appropriately in such a way that the program is capable of handling results of 3 students. Names of three students and the results of each subject should be taken from the users. Thereafter, the results of each students must be printed against the name of the student (see the sample screen given below).



```
C:\Users\Dr.Palitha\Documents\OFFICE DUTIES\DoME\Academic\Semester 3\C... - [X]
Enter the name of student 1   ABC Jayaweera
Marks of ABC Jayaweera
Subject 1                     65
Subject 2                     36
Subject 3                     50

Enter the name of student 2   PKR Suraweera
Marks of PKR Suraweera
Subject 1                     35
Subject 2                      3
Subject 3                     85

Enter the name of student 3   STU Saman
Marks of STU Saman
Subject 1                     65
Subject 2                     52
Subject 3                     35

Examination Results - (P - Pass , F - Fail)
ABC Jayaweera                 P
PKR Suraweera                 F
STU Saman                     P
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