

The Copperbelt University
CS150: Introduction to Programming Fundamentals

Assignment 1

(Groups of 4)

Instructions

- (i) Place the source code and text files in one zipped folder
- (ii) Upload the folder on the portal (only one member of the group must upload the folder) by 21st June 2021
- (iii) Your group will be required to demonstrate your system and respond to questions on 22nd June 2021 starting at 14:00hrs
- (iv) Creativity, efficient code, clear documentation within the code and ability to explain your code will be considered when awarding marks

Scenario

ZIT primary School is designing a student information system to keep records of their pupils. The information they wish to keep about each pupil

- Pupil ID
- First name
- Surname
- Age
- Grade
- Guardian phone number.

The expected users of the system will include the head teacher, deputy head teacher and two teachers. The privileges of editing, adding and deleting records will only be handled by the head teacher and the deputy head teacher. Teachers will only be allowed to search or view records of students.

Your group has been hired to design a demo program that uses arrays, files, loops and selection structures in C++ to meet the needs of ZIT primary school.

For testing purposes, assume that there are only two Grades (1 & 2) and each grade has only 5 pupils.

Your program must meet the following additional requirements

- a) Allow only authorised users (i.e whose credentials are stored in the text file) to logon
- b) After the user has logged on, the program should display the menu below

1. Add New Pupil
 2. Delete Pupil
 3. Search for Pupil
 4. Edit Pupil Record
 5. Display All Pupils by Grade
 6. Exit
- c) All records should persist between program executions (i.e information must be save to the file when the user exits and reloaded from the file when the program is executed)