Solutech Enterprise Computer Science Internal Assessment

Group Name : Solutech Enterprize llc.

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Academic Year:2018-2019

Problem Definition

Oakland Group of Schools is located in the parish of St. Catherine Jamaica. It was founded by Pastor Oakland Whyte in the year 1984. The school contact information is (876) 989-2343. In the year 1984 the school started out with a population of 20 students, presently the school has 170 students’ grades 1-6 with 6 teachers on campus. The school offers English, Math, Social Studies and General Science. The native method the teachers used to get reports to students was by hand. Currently, the teachers at the school have been using excel, access and the web to get the report to the students.

This current process is described by teachers as being too time-consuming as they have to be moving from one program to another to get the student’s reports ready for each term. This result in inaccurate grades being placed at student’s names. This results in students receiving a grade that does not reflect their academic performance. Teachers also brought up the issue of security and requested for a system that was secure and allowed only authorized persons to have access to the different subject departments.

The program that will be created that should store the names of the teachers and their class. The password for each teacher will be pre-set. When the teacher inputs the correct password, they will now have access to their class which they can now enter the term the current year, the name of the students, their age, their sex and the grades they got for each subject.

The program will then be able to output the report for the class which includes the name of the class, the number of students within the class, the grade of the class including the top achiever for each subject as well as the top achiever for that class. The program should also produce a report for each student show their name, class, age, grades for each subject and their average. The content of the file should show on the screen for the teacher’s viewing.

Narrative

**Procedure Main**

**Start**

Prompt user to add class, remove class, get class report and manage class

Get input that corresponds with the user’s actions

If user wants to add class call procedure addClass

If user wants to remove class call procedure removeClass

If user wants to get class report call procedure getClassReport

If user wants to manage class call procedure mngClass

Ask the user if they want to exit the program, if they don’t rub main again

**Stop**

**Procedure addClass**

**Start**

Prompt user for the name of the class

Create a text file with .txt extension, with the class name as the name of the class

Prompt user for their user name and password for the class

Write the username and password at the top of the file

Prompt the user to enter the amount of students they wish to enter

Prompt the user to enter the names and the average grades for the students for the subjects, integrated science, physical education, English and mathematics

Write the information from each student, line by line, with every information separated by tabs

Close the file

**Stop**

**Procedure removeClass**

**Start**

Prompt the user the name of the class

Check if the file exists

If the file exists, prompt the user their username and password for that class

Read the username and password from the top of the file

Check If the read username and password and the input username and password matches

If the corresponding variables are equal to each other call a built in method to delete the file

**Stop**

**Procedure manageClass**

**Start**

Prompt user if they would like to add student to a class or remove student from a class

Get the value that corresponds with their actions

If the user wishes to remove student from a class call sub routine removeStudent

If the user wishes to add student to a class, call sub routine addStudent

**Stop**

**Procedure addStudent**

**Start**

Prompt user for the class that they’d like to add student to

Open the file

Prompt user name and password from the user

Read the top of the file and check if the corresponding variables are equal

If the variables are equal prompt for the name of the student they like to add and the grades for the four subjects

Close the reopen the file in append mode to append the student name and their grades for each subject, all separated by tab

Close the file

**Stop**

**Procedure removeStudent**

**Start**

Prompt user for the class that they’d like to add student to

Open the file

Prompt user name and password from the user

Read the top of the file and check if the corresponding variables are equal

If the variables are equal prompt for the name of the student they like to remove.

Read the file, including the username and the password at the top of the file, and the student’s information in the file

Store the student information and the teacher’s information in arrays and interim varibles

Close the file

Delete the file

Create the file with the same class name, write the teacher’s information to the newly created file, and thereafter the students’ information, skipping the student prompted to be removed using continue statement

Close the file

**Stop**

**Procedure getClassRpt**

**Start**

Prompt user for the class that they’d like to add student to

Open the file

Prompt user name and password from the user

Read the top of the file and check if the corresponding variables are equal

Read the file for students’ information into an array

Calculate the highest values for maths, English , physical education and integrates science.

Print to the screen, the students’ names, grades for each subject, and the students who score high for each subject.

**Stop**