Lab 4 C++

Draft

Deadline December 5th 9 am

Your name and student number must be at the top of every file.

Create appropriate classes to represent questions and results.

You may use vector and string class in your code.

All code must be your own.

To Upload:

Code upload all source files and data files you create .

You must upload the code to blackboard before even if not all the questions are completed.

Upload code ,before the deadline.

**You must upload the code and Demo the code to get a mark.**

Lab Book Diary

You must also show your lab book, when demoing the code.

The lab book shows your work as you do it and illustrates your approach to solving the problems below.

Part 1-60%

Write a multi choice quiz program.

The program will run, and the user will be shown each multi choice questions in turn.

The order of the questions is randomised for every quiz.

Use the srand and rand() function to get a random number.

#include <time.h>

#include <stdlib.h>

using namespace std;

int main()

{

srand(time(0)); // seed the random number generator, otherwise the rand() will return the same sequence of numbers

int num = rand() % 10; // returns random int between 0 and 9.

}

The user inputs an answer using the keyboard, then “Correct” or “Wrong” is displayed and the user press a key to move onto the next question.

When all questions are completed the user is shown their result.

The user can repeat the quiz or exit.

Store the quiz data (questions, options and correct option) in a single file. The first number in the file should be the number of questions that are stored in the file.

Part 2. High Score table 20%

Add a high score table to the quiz, which is saved as a separate file. Before starting the quiz the user enters their name. When the user completes the quiz, their score is displayed and then the high score table of all users and their previous score is shown.

Part 3. Data stored as a json files 20%

Write a 2nd version of the quiz (in a separate project) which uses json to store the data. Use rapidjson library to read in the data in the format you create.