**Lab task 15**

Q1 - Assuming that a text file named FIRST.TXT contains some text written into it, write a function named vowelwords(), that reads the file FIRST.TXT and creates a new file named SECOND.TXT, to contain only those words from the file FIRST.TXT which start with a lowercase vowel (i.e., with 'a', 'e', 'i', 'o', 'u').

For example, if the file FIRST.TXT contains

Carry umbrella and overcoat when it rains

Then the file SECOND.TXT shall contain

umbrella and overcoat it

Q2 - Create a C++ program that interacts with users to conduct a quiz on file handling concepts.

* Ask the user to enter their name.
* Create a file named "<user\_name>.txt" where "<user\_name>" is the name entered by the user.
* Read a set of file handling-related questions along with options (a, b, c, d) from a file named "questions.txt."
* Display each question to the user and prompt them to choose an option (a, b, c, or d).
* Save the user's selected options for each question in their corresponding file "<user\_name>.txt"
* Calculate and write the user's final score out of the total number of questions in scores.txt file.
* Conduct a quiz for at least 5 students. (Five studentName.txt files, one questions.txt file & one scores.txt file)

Ensure that the program handles file-related errors appropriately.

Here is the content of questions.txt file. You can create this file manually & copy paste the content. Please note that in each line the last option is the right option.

What is the capital of France?;Paris;Berlin;Madrid;Rome;a

Which programming language is known for its simplicity?;Java;C++;Python;JavaScript;c

What is the result of 2 + 2?;3;4;5;6;b

In which year was the first computer invented?;1945;1950;1970;1985;a

What is the command to initialize a Git repository?;git start;git begin;git init;git create;c

Q3 - Write a C++ program to input data for three students (roll number, name, and marks) and store it in a binary file named "students.dat". The program should use binary file handling techniques.

* Extend the program to read and display the details of all students from the "students.dat" file.
* Implement a function void updateMarks(int roll, float newMarks) that takes a roll number and a new marks value, and updates the marks for the corresponding student in the "students.dat" file. Ensure that the update is performed using binary file handling.
* Add the function to display the details of a specific student based on the user input for roll number. If the student is not found, display an appropriate message.

**Note**

Use appropriate file handling modes (ios::binary) while working with binary files.

Ensure error handling for file opening, reading, and writing operations.