

Explanation:

This code creates a basic trivia game by reading questions and answers from a text file, asking the user for their answers, tracking their score, and saving their score and name to a file. The user may then see all of the previous players' scores. The game will continue till the user decides not to play it again. The application reads a file that contains a series of questions and response options. It then asks the user each question and waits for them to answer. After that, the computer compares the user's answer to the proper response and increases the user's score if the answer is accurate. The software will keep asking questions until all of them have been answered. After completing the quiz, the user's name and score are saved to a file. The application then displays the user's score and the scores of all prior players.

Requirements :

The code is written in C++.

The program interacts with the user by prompting for their name and asking them questions.

The program gracefully handles incorrect user input by prompting the user to enter valid information until they do so.

The program has several functions other than the main, such as readQuestions, storeScore, and displayScores.

The program uses loops, such as a while loop for the play again prompt and a do-while loop for checking user input.

The program uses if statements to check if the user's answer is correct.

The program uses strings, such as the string type, for the question and answer prompts.

The program uses vectors to store player names and display scores.

The code is indented properly for readability.

Variables and functions are named appropriately, such as readQuestions and globalScore.

The program reads and writes to files with ifstream and ofstream for questions and scores, respectively.

The program has aesthetically pleasing formatted output, such as displaying questions in a box and displaying scores in a table.

Pseudocode :

```
DECLARE names AS empty vector of strings
DECLARE playAgain AS char
```

```
FUNCTION askQuestions() RETURNS int
    DECLARE globalScore AS int = 0
    OPEN "questions.txt" AS file
    WHILE GETLINE(file, line) IS TRUE
        PRINT question and options from line
        READ userAnswer
        IF userAnswer is correct THEN
            PRINT "Correct!"
            SET globalScore = globalScore + 1
        ELSE
            PRINT "Wrong answer."
            PRINT "The correct answer was " + answer
        END IF
    END WHILE
    CLOSE file
    RETURN globalScore
END FUNCTION
```

```
FUNCTION storeScore(name, playerScore)
    OPEN "scores.txt" AS file in append mode
    IF file is open THEN
        WRITE name + ": " + playerScore + endl TO file
        CLOSE file
    ELSE
        PRINT "Error opening file."
    END IF
END FUNCTION
```

```
FUNCTION displayScores()
    OPEN "scores.txt" AS file
    IF file is open THEN
        PRINT "+-----+"
        PRINT "| Final Scores |"
        PRINT "+-----+"
        WHILE GETLINE(file, line) IS TRUE
            PRINT line
        END WHILE
        CLOSE file
    ELSE
        PRINT "Error opening file."
    END IF
END FUNCTION
```

```
DECLARE playAgain AS 'y'
WHILE playAgain == 'y' OR playAgain == 'Y'
    DECLARE name AS empty string
```

```
PRINT "Enter your name: "
READ name
ADD name TO names

DECLARE playerScore AS askQuestions()
storeScore(name, playerScore)

PRINT "+-----+"
PRINT "|           |"
PRINT "| Your score is: " + playerScore + " out of 5"
PRINT "|           |"
PRINT "+-----+"

displayScores()

PRINT "Play again? (y/n): "
READ playAgain
END WHILE
```