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| --- | --- | --- | --- | --- |
|  | Variables | Input | Calculations | outputs |
| Menu | logofile  charMenu | charMenu = con.readChar(); | If charMenu == 1 🡪play game  Else If charMenu == 2 🡪insturctions  Else If charMenu ==3 🡪High scores  Else If charMenu ==4 🡪exit | Print “Quiz machine” at the top  Print “a. play game” under the title  Print “b. instructions “under play game  Print “c. high scores” under instructions  Print “d. exit” under high scores. |
| Selecting quiz | charQuizMenu | charQuizMenu = con.readChar(); | If charQuizMenu == ‘a’{  Run quiz 1  }  Else if charQuizMenu == ‘b’{  Run quiz 2  }  Else if charQuizMenu == ‘c’{  Run quiz 3  } | print “Select a quiz” at the top  print available quizzes on the screen under “select a quiz” |
| Reading the number of lines in a quiz | intFileCount  intQuestionCount |  | Import quiz.txt  While quiz.eof() == false{  quiz.readLine()  intFileCount = intFileCount+1  }  quiz.close();  intQuestionCount = intFileCount/6 |  |
| Assigning strings from the text file to the array | strQuestion[6 columns][#of questions]  intCount  intQuestionCount |  | for (intCount = 0;intCount<intQuestionCount;intCount++){  strQuestion [0][intCount] = quiz.readLine();  strQuestion [1][intCount] = quiz.readLine();  strQuestion [2][intCount] = quiz.readLine();  strQuestion [3][intCount] = quiz.readLine();  strQuestion [4][intCount] = quiz.readLine();  strQuestion [5][intCount] = quiz.readLine();  } |  |
| Printing the questions and getting input for the question. | intCount  intScore = 0 | strAnswerInput = con.readLine(); (asking the user to enter a letter to answer the question) | for (intCount=0;intCount <intQuestionNumber;intCount++){  con.println(strQuestion[0][intCount];  con.println(strQuestion[1][intCount];  con.println(strQuestion[2][intCount];  con.println(strQuestion[3][intCount];  con.println(strQuestion[4][intCount];  } | Prints out the question and 4 options. Doesn’t print the answer. |
| Assigning one of the options as the correct answer | strAnswer |  | Set option 1 as a  Set option 2 as b  Set option 3 as c  Set option 4 as d  Scan through each option in the text file. If one of the options matches the answer, assign the answer the same letter as the option it matches.  if (strQuestion[5][intCount].equals( strQuestion[1][intCount])){  strAnswer=(”a”);  }  Else If (strQuestion[5][intCount].equals (strQuestion[2][intCount])){  strAnswer=(”b”);  }  Else If (strQuestion[5][intCount].equals( strQuestion[3][intCount])){  strAnswer=(”c”);  }  Else {  strAnswer=(“d”);  } |  |
| Checking if the input is correct or not | strAnswerInput  strAnswer | strAnswerInput = con.readLine(); | If strAnswer.equalsIgnoreCase(strAnswerInput){  intScore = intScore+1;  con.println(“Correct”);  }  Else{  Print (“Wrong. The answer is “+strAnswer);  } | Print “correct” if the answer is correct  Print “wrong” and the correct answer if it is incorrect. |
| Write High score | strHighScore[3][# of scores]  strName  strPercentage (get it at the end of the game) | strName = con.readLine(); (this would be at the beginning of the game) | strHighScore[0] = strName  strHighScore[1] = strPercentage  strHighScore[2] = “quiz name”  Set highscore.txt as a new output file and does not overwrite old data  Write strHighScore[0], strHighScore [1], strHighScore[2] to the text file |  |
| High Score Menu |  |  | Import scores.txt  Read the number of lines using the code above  for (intCount = 0;intCount<intLineCount;intCount++){  print strHighScore[0] on the left  print strHighScore[1] in the middle  print strHighScore[2] on the right  } |  |
| Sorting the high scores | strHighScore[3][# of scores] |  | Open the high scores file for reading  assign the name to strHighScore[0][score number]  assign the percentage to [1][score number]  assign the quiz name to [2][score number]  Bubble sort the scores by highest percentage  If the percentage to the right is greater than the percentage to the left, swap places along with the name and quiz name. |  |
| Print the top 5 high scores |  |  | For (intCount=0;intCount<5;intCount++){  Con.println(strHighScore[0][intCount]  Con.println(strHighScore[1][intCount]  Con.println(strHighScore[2][intCount]  } | Print the name, percentage, and quiz name of the top 5 scores in the text file. |