

Java Programming Assignment: Simple Console Quiz Game

Objective: Create a basic console-based quiz in Java that demonstrates fundamental programming concepts.

Requirements:

1. **Conditionals:** Your program must use if-else statements to evaluate user answers and provide feedback (e.g., "Correct!" or "Incorrect.").
2. **Boolean Logic:** Incorporate boolean variables and boolean expressions (e.g., using true/false values, or comparing strings with methods like equalsIgnoreCase()).
3. **Several Datatypes:** Utilize at least three different Java data types (e.g., String, int, boolean) to store and manipulate information within your quiz.
4. **User Input:** The program should take input from the user for their answers.
5. **Output:** Display questions, options, and the final score to the user.

Estimated Completion Time: This assignment is designed to be completed by a beginner in approximately one hour.

Instructions:

- Design a simple quiz with a question.
- Display the question and possible answer options.
- Read the user's answer.
- Compare the user's answer to the correct answer using conditional statements.
- Tell the user if their answer was correct.

```
import java.util.Scanner;
```

```
public class Main {  
    public static void main(String[] args) {  
        Scanner scanner = new Scanner(System.in);  
  
        // Variables to track quiz progress  
        int score = 0;  
        int totalQuestions = 3;  
        boolean quizCompleted = false;  
  
        System.out.println("=== Welcome to the Java Programming Quiz ===");  
        System.out.println("Answer the following questions to test your knowledge!");  
        System.out.println();  
  
        // Question 1: String comparison with boolean logic  
        System.out.println("Question 1: What is Liverpools Home Stadium?");
```

```

System.out.println("A) Anfield");
System.out.println("B) Emirates Stadium");
System.out.println("C) Camp Nou");
System.out.println("D) Old Trafford");
System.out.print("Enter your answer (A, B, C, or D): ");

String answer1 = scanner.nextLine();
boolean isCorrect1 = answer1.equalsIgnoreCase("A") ||
answer1.equalsIgnoreCase("Anfield");

if (isCorrect1) {
    System.out.println("Correct!");
    score++;
} else {
    System.out.println("Incorrect. The correct answer is A) Anfield.");
}
System.out.println();

// Question 2: Integer comparison
System.out.println("Question 2: What is Ronaldo's Number?");
System.out.println("A) 6");
System.out.println("B) 7");
System.out.println("C) 8");
System.out.println("D) 9");
System.out.print("Enter your answer (A, B, C, or D): ");

String answer2 = scanner.nextLine();
int correctAnswer = 7;
boolean isCorrect2 = false;

if (answer2.equalsIgnoreCase("B")) {
    isCorrect2 = true;
}

if (isCorrect2) {
    System.out.println("Correct! Ronaldo wears the number " + correctAnswer);
    score++;
} else {
    System.out.println("Incorrect. The correct answer is B) " + correctAnswer);
}
System.out.println();

// Question 3: Boolean logic question

```

```

System.out.println("Question 3: In Java, which keyword is used to declare a constant?");
System.out.println("A) const");
System.out.println("B) final");
System.out.println("C) static");
System.out.println("D) immutable");
System.out.print("Enter your answer (A, B, C, or D): ");

String answer3 = scanner.nextLine();
boolean isCorrect3 = answer3.equalsIgnoreCase("B") ||
answer3.equalsIgnoreCase("final");

if (isCorrect3) {
    System.out.println("Correct! 'final' is used to declare constants in Java.");
    score++;
} else {
    System.out.println("Incorrect. The correct answer is B) final.");
}
System.out.println();

// Quiz completion
quizCompleted = true;

// Final score calculation and feedback
System.out.println("=== Quiz Complete ===");
System.out.println("Your final score: " + score + "/" + totalQuestions);

double percentage = (double) score / totalQuestions * 100;

if (score == totalQuestions) {
    System.out.println("Perfect score! Excellent work!");
} else if (score >= 2) {
    System.out.println("Good job! You scored " + String.format("%.1f", percentage) + "%");
} else if (score == 1) {
    System.out.println("You got one right. Keep studying!");
} else {
    System.out.println("Better luck next time. Review the material and try again!");
}

// Boolean check for quiz completion
if (quizCompleted) {
    System.out.println("Thank you for taking the quiz!");
}

```

```
        scanner.close();  
    }  
}
```