

Programming Assignment Unit 1

Introduction

The South African Trivia Quiz Game is a Java program that allows users to answer multiple-choice questions related to South Africa. The program prompts users with questions, accepts their answers, compares them to the correct answers, and computes the final score.

Features

1. **Questions:** The program includes five multiple-choice questions, each with four options (labeled A, B, C, and D).
2. **User Input:** Users enter their answers by typing the corresponding letter (A, B, C, or D).
3. **Scoring:** The program keeps track of correct responses and calculates the final score as a percentage.
4. **Code Readability:** The code follows best practices, uses appropriate variable names, and includes comments for clarity.

Here is the code:

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

```
public class QuizGame {  
    public static void main(String[] args) {  
        // Initialize the quiz questions and correct answers  
        String[] questions = {  
            "Which human rights activist became South Africa's first black president in 1994?",  
            "Named after politician Paul Kruger, what exactly is the tourist attraction Kruger?",  
            "What 'City' is a luxury casino and holiday resort in South Africa and the subject of an anti-apartheid song?",  
            "Which South African actress won an Oscar for Best Actress for her performance in the 2003 movie 'Monster'?",  
            "Born in Pretoria in 1970, which business magnate and investor is the founder, CEO, and Chief Engineer at SpaceX?"  
        };  
        String[] options = {  
            "A) Nelson Mandela", "B) Desmond Tutu", "C) Thabo Mbeki", "D) Jacob Zuma",  
            "A) Kruger National Park", "B) Kruger Museum", "C) Kruger Bridge", "D) Kruger Diamond Mine",
```

```

        "A) Sun City", "B) Cape Town", "C) Johannesburg", "D) Durban",
        "A) Charlize Theron", "B) Naomi Watts", "C) Kate Winslet", "D) Rachel Weisz",
        "A) Elon Musk", "B) Mark Zuckerberg", "C) Jeff Bezos", "D) Richard Branson"
    };

    char[] correctAnswers = {'A', 'A', 'A', 'A', 'A'};

    // Initialize variables for tracking correct answers
    int totalQuestions = questions.length;
    int correctCount = 0;

    // Create a Scanner object for user input
    Scanner scanner = new Scanner(System.in);

    // Display the questions and prompt for answers
    for (int i = 0; i < totalQuestions; i++) {
        System.out.println("Question " + (i + 1) + ": " + questions[i]);
        for (int j = 0; j < 4; j++) {
            System.out.println(options[i * 4 + j]);
        }
        System.out.print("Enter your answer (A/B/C/D): ");
        char userAnswer = Character.toUpperCase(scanner.next().charAt(0));

        // Compare user's answer with correct answer
        if (userAnswer == correctAnswers[i]) {
            correctCount++;
        }
    }

    // Calculate the score as a percentage

```

```
double score = (double) correctCount / totalQuestions * 100;
```

```
// Display the final score
```

```
System.out.println("\nQuiz completed!");
```

```
System.out.println("Correct answers: " + correctCount + " out of " + totalQuestions);
```

```
System.out.printf("Your score: %.2f%%\n", score);
```

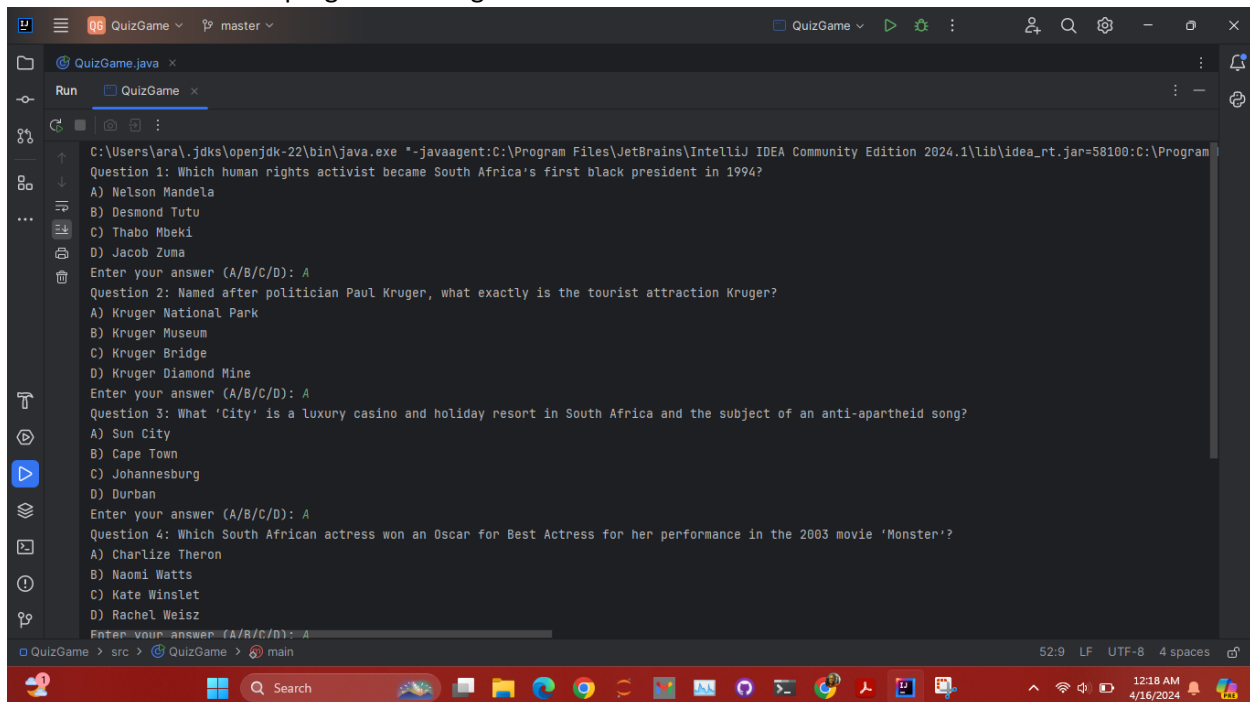
```
// Close the scanner
```

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

```
}
```

```
}
```

The screenshots of the program running are below:



```
C:\Users\ara\.jdk\openjdk-22\bin\java.exe "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.1\lib\idea_rt.jar=58100:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.1\bin" -Didea.config.path=C:\Users\ara\.IntelliJ2024\config -Didea.copyright.path=C:\Users\ara\.IntelliJ2024\copyright -Didea.home.path=C:\Users\ara\.IntelliJ2024\home -Didea.platform.prefix=JDK -Didea.vendor.id=jetbrains -Didea.version=2024.1 -jar C:\Users\ara\.IntelliJ2024\bin\idea_rt.jar 58100
Question 1: Which human rights activist became South Africa's first black president in 1994?
A) Nelson Mandela
B) Desmond Tutu
C) Thabo Mbeki
D) Jacob Zuma
Enter your answer (A/B/C/D): A
Question 2: Named after politician Paul Kruger, what exactly is the tourist attraction Kruger?
A) Kruger National Park
B) Kruger Museum
C) Kruger Bridge
D) Kruger Diamond Mine
Enter your answer (A/B/C/D): A
Question 3: What 'City' is a luxury casino and holiday resort in South Africa and the subject of an anti-apartheid song?
A) Sun City
B) Cape Town
C) Johannesburg
D) Durban
Enter your answer (A/B/C/D): A
Question 4: Which South African actress won an Oscar for Best Actress for her performance in the 2003 movie 'Monster'?
A) Charlize Theron
B) Naomi Watts
C) Kate Winslet
D) Rachel Weisz
Enter your answer (A/B/C/D): A
```

