Below is a Java program that implements a simple quiz with five multiple-choice questions, tracks the user's answers, and computes the final score as a percentage. Each section of the code is commented to enhance readability and explain its purpose.

Input:

import java.util.Scanner;

public class QuizProgram {

public static void main(String[] args) {

// Scanner object for user input

Scanner scanner = new Scanner(System.in);

// Array of questions

String[] questions = {

"What is the capital city of United State?",

"What is the name of KC Chiefs Stadium?",

"What animal is considered as the king of the jungle?",

"Who is the president of the United State?",

"Who is the CEO of TESLA?"

};

// Array of answer options

String[][] options = {

{"A) Washington DC", "B) Madrid", "C) Paris", "D) Rome"},

{"A) Children mercy park", "B) Wembley", "C) Arrowhead", "D) Park of prince"},

{"A) Elephant", "B) Tiger", "C) Giraffe", "D) Lion"},

{"A) Emmanuel Macron", "B) Donald Trump", "C) Joe Biden", "D) Vladmir Putin"},

{"A) Elon Musk", "B) Bill Gates", "C) Warren Buffet", "D) Jeff Bezos"}

};

// Array of correct answers

char[] answers = {'A', 'C', 'D', 'C', 'A'};

// Variable to keep track of the number of correct responses

int correctCount = 0;

// Loop through each question

for (int i = 0; i < questions.length; i++) {

// Display the question

System.out.println((i + 1) + ". " + questions[i]);

// Display the options

for (String option : options[i]) {

System.out.println(option);

}

// Prompt user for their answer

System.out.print("Enter your answer (A, B, C, or D): ");

char userAnswer = scanner.next().charAt(0);

// Input validation

while (userAnswer != 'A' && userAnswer != 'B' && userAnswer != 'C' && userAnswer != 'D') {

System.out.print("Invalid input. Please enter A, B, C, or D: ");

userAnswer = scanner.next().charAt(0);

}

// Compare the user's answer to the correct answer

if (userAnswer == answers[i]) {

correctCount++;

}

System.out.println();

}

// Compute the final score as a percentage

double score = ((double) correctCount / questions.length) \* 100;

// Display the final score

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

}

}

Output:

PS C:\Users\rachi\OneDrive\Documents\main.py> & 'C:\Program Files\Java\jdk-21\bin\java.exe' '-XX:+ShowCodeDetailsInExceptionMessages' '-cp' 'C:\Users\rachi\AppData\Roaming\Code\User\workspaceStorage\de142e2d33f4acd9ebc3b78c07bad81e\redhat.java\jdt\_ws\main.py\_a1b1e1b5\bin' 'QuizProgram'

1. What is the capital city of United State?

A) Washington DC

B) Madrid

C) Paris

D) Rome

Enter your answer (A, B, C, or D): A

2. What is the name of KC Chiefs Stadium?

A) Children mercy park

B) Wembley

C) Arrowhead

D) Park of prince

Enter your answer (A, B, C, or D): C

3. What animal is considered the king of the jungle?

A) Elephant

B) Tiger

C) Giraffe

D) Lion

Enter your answer (A, B, C, or D): D

4. Who is the president of the United State?

A) Emmanuel Macron

B) Donald Trump

C) Joe Biden

D) Vladmir Putin

Enter your answer (A, B, C, or D): C

5. Who is the CEO of TESLA?

A) Elon Musk

B) Bill Gates

C) Warren Buffet

D) Jeff Bezos

Enter your answer (A, B, C, or D): A

Your final score is: 100.00%

PS C:\Users\rachi\OneDrive\Documents\main.py>

Reference

Eck, D. J. (2022). Introduction to programming using java version 9, JavaFX edition.

blondiebytes. (2019, July 9). Learn java in 25 minutes | Java tutorial for beginners [Video]. YouTube.