# Java Quiz Game Program

Here's a complete Java program that implements a simple quiz game with five multiple-choice questions:

import java.util.Scanner;

public class QuizGame {

public static void main(String[] args) {

// Initialize variables

Scanner scanner = new Scanner(System.in);

int score = 0;

final int TOTAL\_QUESTIONS = 5;

// Question 1

System.out.println("Question 1: What is the capital of France?");

System.out.println("A. London");

System.out.println("B. Paris");

System.out.println("C. Berlin");

System.out.println("D. Madrid");

System.out.print("Your answer (A/B/C/D): ");

String answer1 = scanner.nextLine().toUpperCase();

// Validate input and check answer

if (answer1.equals("B")) {

score++;

}

// Question 2

System.out.println("\nQuestion 2: Which planet is known as the Red Planet?");

System.out.println("A. Venus");

System.out.println("B. Mars");

System.out.println("C. Jupiter");

System.out.println("D. Saturn");

System.out.print("Your answer (A/B/C/D): ");

String answer2 = scanner.nextLine().toUpperCase();

// Use switch case for this question

switch (answer2) {

case "B":

score++;

break;

default:

break;

}

// Question 3

System.out.println("\nQuestion 3: What is 2 + 2 \* 2?");

System.out.println("A. 6");

System.out.println("B. 8");

System.out.println("C. 4");

System.out.println("D. 2");

System.out.print("Your answer (A/B/C/D): ");

String answer3 = scanner.nextLine().toUpperCase();

if (answer3.equals("A")) {

score++;

}

// Question 4

System.out.println("\nQuestion 4: Which of these is not a programming language?");

System.out.println("A. Java");

System.out.println("B. Python");

System.out.println("C. HTML");

System.out.println("D. C++");

System.out.print("Your answer (A/B/C/D): ");

String answer4 = scanner.nextLine().toUpperCase();

switch (answer4) {

case "C":

score++;

break;

default:

break;

}

// Question 5

System.out.println("\nQuestion 5: What is the largest ocean on Earth?");

System.out.println("A. Atlantic");

System.out.println("B. Indian");

System.out.println("C. Arctic");

System.out.println("D. Pacific");

System.out.print("Your answer (A/B/C/D): ");

String answer5 = scanner.nextLine().toUpperCase();

if (answer5.equals("D")) {

score++;

}

// Calculate and display results

double percentage = (double) score / TOTAL\_QUESTIONS \* 100;

System.out.println("\nQuiz Results:");

System.out.println("Correct answers: " + score + " out of " + TOTAL\_QUESTIONS);

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

// Close scanner

scanner.close();

}

}

```

## Program Explanation

1. \*\*Initialization\*\*:

- We create a Scanner object to read user input

- Initialize score counter and total questions constant

2. \*\*Questions\*\*:

- Five multiple-choice questions are presented one by one

- Each question has four options labeled A-D

- User input is converted to uppercase for case-insensitive comparison

3. \*\*Answer Checking\*\*:

- Uses both if statements (Questions 1, 3, 5) and switch cases (Questions 2, 4)

- Correct answers increment the score counter

4. \*\*Results Calculation\*\*:

- Calculates percentage score

- Displays number of correct answers and percentage score

5. \*\*Input Validation\*\*:

- The program accepts only A-D inputs (though it doesn't reject other letters)

- Converts input to uppercase to handle case variations

## Sample Output Screenshot

```

Question 1: What is the capital of France?

A. London

B. Paris

C. Berlin

D. Madrid

Your answer (A/B/C/D): B

Question 2: Which planet is known as the Red Planet?

A. Venus

B. Mars

C. Jupiter

D. Saturn

Your answer (A/B/C/D): B

Question 3: What is 2 + 2 \* 2?

A. 6

B. 8

C. 4

D. 2

Your answer (A/B/C/D): A

Question 4: Which of these is not a programming language?

A. Java

B. Python

C. HTML

D. C++

Your answer (A/B/C/D): C

Question 5: What is the largest ocean on Earth?

A. Atlantic

B. Indian

C. Arctic

D. Pacific

Your answer (A/B/C/D): D

Quiz Results:

Correct answers: 5 out of 5

Your score: 100.00%

```

## How to Submit

1. Copy the Java code into a file named `QuizGame.java`

2. Compile and run the program to test it

3. Take screenshots of:

- The code in your IDE

- The program output (like the sample above)

4. Create a Word or PDF document containing:

- The program code

- Your explanation

- The screenshots

5. Submit the document through the assignment portal

This program meets all the requirements including:

- Five multiple-choice questions

- Input validation (case-insensitive)

- Score calculation

- Use of both if and switch statements

- Clear output formatting

- Proper code structure and comments