

TASK 4) QUIZ APPLICATION WITH TIMER

```
import java.util.*;
class Question {
String question;
String[] options;
int correctAnswer;
Question(String question, String[] options, int correctAnswer) {
this.question = question;
this.options = options;
this.correctAnswer = correctAnswer;
}
void display() {
System.out.println("\n" + question);
for (int i = 0; i < options.length; i++) {
System.out.println((i + 1) + ". " + options[i]);
}
}
boolean isCorrect(int userAnswer) {
return userAnswer == correctAnswer;
}
}
```

```
public class QuizApp {
public static void main(String[] args) {
Scanner sc = new Scanner(System.in);
List<Question> questions = new ArrayList<>();
questions.add(new Question("Which language is used for Android app development?", new String[]{"Python", "Java", "Swift", "C++"}, 2));
questions.add(new Question("What does CPU stand for?", new String[]{"Central Program Unit", "Central Processing Unit", "Computer Power Unit", "Control Processing Unit"}, 2));
questions.add(new Question("Which planet is known as the Red Planet?", new String[]{"Earth", "Venus", "Mars", "Jupiter"}, 3));
questions.add(new Question("What is 5 x 5?", new String[]{"20", "10", "25", "15"}, 3));
questions.add(new Question("Who is known as the father of computers?", new String[]{"Bill Gates", "Charles Babbage", "Steve Jobs", "Alan Turing"}, 2));
questions.add(new Question("What is the capital of France?", new String[]{"Berlin", "Madrid", "Paris", "Rome"}, 3));
questions.add(new Question("Which device is used to input data into a computer?", new String[]{"Monitor", "Printer", "Keyboard", "Speaker"}, 3));
int score = 0;
List<String> summary = new ArrayList<>();
```

```

System.out.println("Welcome to the Quiz! You have 10 seconds to answer each question.");
for (int i = 0; i < questions.size(); i++) {
    Question q = questions.get(i);
    q.display();
    int seconds = 10;
    System.out.print("You have " + seconds + " seconds to answer... ");
    long startTime = System.currentTimeMillis();
    int userAnswer = 0;
    boolean answered = false;
    while ((System.currentTimeMillis() - startTime) / 1000 < seconds) {
        if (sc.hasNextInt()) {
            userAnswer = sc.nextInt();
            answered = true;
            break;
        }
    }
}

```

```

if (!answered) {
    System.out.println("\nTime's up!");
    summary.add("Q" + (i + 1) + ": Skipped");
} else if (q.isCorrect(userAnswer)) {
    System.out.println("Correct!");
    score++;
    summary.add("Q" + (i + 1) + ": Correct");
} else {
    System.out.println("Incorrect!");
    summary.add("Q" + (i + 1) + ": Incorrect");
}
}
System.out.println("\n=== Quiz Completed ===");
System.out.println("Your Score: " + score + "/" + questions.size());
System.out.println("\nAnswer Summary:");
for (String result : summary) {
    System.out.println(result);
}
sc.close();
}
}

```

OUTPUT:-

```
C:\1348>java QuizApp
Welcome to the Quiz! You have 10 seconds to answer each question.
```

```
Which language is used for Android app development?
```

1. Python
2. Java
3. Swift
4. C++

```
You have 10 seconds to answer... 2
```

```
Correct!
```

```
What does CPU stand for?
```

1. Central Program Unit
2. Central Processing Unit
3. Computer Power Unit
4. Control Processing Unit

```
You have 10 seconds to answer... 2
```

```
Correct!
```

```
Which planet is known as the Red Planet?
```

1. Earth
2. Venus
3. Mars
4. Jupiter

```
You have 10 seconds to answer... 3
```

```
Correct!
```

```
What is 5 x 5?
```

1. 20
2. 10
3. 25
4. 15

```
You have 10 seconds to answer... 3
```

```
Correct!
```

```
Who is known as the father of computers?
```

1. Bill Gates
2. Charles Babbage
3. Steve Jobs
4. Alan Turing

```
You have 10 seconds to answer... 2
```

```
Correct!
```

```
What is the capital of France?
```

1. Berlin
2. Madrid
3. Paris
4. Rome

```
You have 10 seconds to answer... 2
```

```
Incorrect!
```

Which device is used to input data into a computer?

1. Monitor
2. Printer
3. Keyboard
4. Speaker

You have 10 seconds to answer... 2

Incorrect!

=== Quiz Completed ===

Your Score: 5/7

Answer Summary:

- Q1: Correct
- Q2: Correct
- Q3: Correct
- Q4: Correct
- Q5: Correct
- Q6: Incorrect
- Q7: Incorrect