

**CSIT110**  
**File Name:**  
**YourName\_ClassListNo\_Lab\_4**

You are invited by the Ministry of Education to design a system to test the skill of students in doing some simple arithmetic. The system generates at least 5 and not more than 10 questions; and displays three different types of arithmetic expressions of operations plus, minus and times randomly. The system marks and displays the scores at the end of the test together with some relevant messages.

Upon running the program, you will see the following interaction:

```
Welcome to arithmetic test
You have to do 7 questions
Good Luck

Question 1: 7 * 5 = ?
Your answer: 12
wrong

Question 2: 8 - 6 = ?
Your answer: 2
ok

Question 3: 4 - 2 = ?
Your answer: 2
ok

Question 4: 4 - 4 = ?
Your answer: 8
wrong

Question 5: 4 + 7 = ?
Your answer: 11
ok

Question 6: 1 - 9 = ?
Your answer: -8
ok

Question 7: 1 - 4 = ?
Your answer: -3
ok

Your score: 5 / 7
Marks = 71.4%
You passed the test
Please improve it
```

You can see in the above screen, the system generates 7 questions, and the student provides the answers to each of the questions. The system marks the questions and displays the score at the end of the session.

The system prints out the following messages according to

Less than 50% – **You failed the test. Work harder!**

50% and above and less than 80% – **You passed the test. Please improve it.**

80% and above and less than 100% - **Well done, keep it up.**

100% - **Excellent.**

In your design, you should have the following functions (feel free to adjust and add more);

- Generate and return 2 single digits function.
- Generate and return an operator (+, -, \*).
- Print an arithmetic expression function → (a, b, operator)
- Result of an arithmetic expression result → (a, b, operator)
- Print message function

