SCIT, University of Wollongong
CSIT110/CSIT810
Autumn Session 2018

Assignment 6 (5%) due on **Sunday 6 May 2018 23:59PM**

Objectives

- Able to write clear code with comments and follow coding convention
- Able to get user input
- Able to use if-else statement
- Able to use the for loop and the while loop

Instructions

Put all your python code into a single file and submit it via the eLearning site (Assignment 6 Submission on Moodle).

You may be asked questions about your code in the lab. Your **marks will be deducted** if you could not answer the questions presented by the tutors.

Late submissions will be marked with a 20% marks deduction for one day late, including weekend. Submissions more than 3 days late will not be marked.

If you need an extension, please apply for an Academic Consideration through SOLS on or before the assignment due date.

Plagiarism is treated seriously. If we suspect any work is copied, all students involved are likely to receive zero for the entire assignment.

Assignment questions.

Write clear code with **comments** and follow **coding convention**. Comments should include your name, student number and subject code on top of your code.

Question 1. Write a program for the user to practice addition and multiplication The program should **run forever** until the user wishes to quit. The program should generate **5 random questions** for each round. Each question consists of two numbers: the first number is in the range **from 1 to 100**, and the second number is in the range **from 1 to 9**. The program should check the user's answer to see if it is correct or incorrect. **If the answer is incorrect, then it should also provide the solution**. The program should work as follows, the text in **bold** indicates the user input.

```
a > Addition
m > Multiplication
q > Quit
Enter command (a/m/q): a

95 + 4 = 99
Correct

3 + 5 = 7
Incorrect. The correct answer is 8.

12 + 4 = 16
Correct

72 + 7 = 79
Correct

8 + 5 = 13
Correct

a > Addition
m > Multiplication
q > Quit
Enter command (a/m/q): m

25 x 2 = 45
Incorrect. The correct answer is 50.
```

```
1 x 3 = 3
Correct

10 x 5 = 50
Correct

10 x 3 = 48
Incorrect. The correct answer is 30.

11 x 7 = 77
Correct

a > Addition
m > Multiplication
q > Quit
Enter command (a/m/q): m

2 x 2 = 4
Correct

10 x 6 = 60
Correct

30 x 5 = 50
Incorrect. The correct answer is 150.

12 x 1 = 12
Correct

39 x 2 = 78
Correct

a > Addition
m > Multiplication
q > Quit
Enter command (a/m/q): q

Good bye!
```

Question 2. Write a program for the guessing number game. The program should run until the user guess the correct number. First, the program **generates a secret random integer** (in the range from 0 to 100). Then the program **invites the user to guess the secret number**. The program should check the user's answer to see if it is correct or incorrect. If the user makes an **incorrect guess** then the program invites the user to guess it again **using an updated range**. If the user's answer is **not in the specified range**, then the program should **notify the user about the invalid input**. The program should work as follows, the text in **bold** indicates the user input.

```
A secret random integer between 0 and 100 has been generated.
Can you guess what it is?

Make a guess between 0 and 100:  80
Wrong number! The secret number is less than 80.

Make a guess between 0 and 79:  40
Wrong number! The secret number is larger than 40.

Make a guess between 41 and 79:  30
Invalid input! Please make a guess between 41 and 79.

Make a guess between 41 and 79:  55
Wrong number! The secret number is larger than 55.

Make a guess between 56 and 79:  62
Congratulation! You got the right number.
```

END OF THE ASSIGNMENT