Submission Guideline:

- Please solve the problems in separate files (**One notebook/python file per task**).
- **Download the python files** as instructed in the class. (File -> Download -> Download .py)
- Create a new **folder** and put all your python files inside the folder.
- Rename the folder with your 9 digit student ID.
- Make a ZIP of the folder and **submit the .zip file**.

Offline assignment 1

Task 1: [5 marks] Take an input n. Print a diamond pattern using the value of n.

(Output samples are shown below)

n = 1	n = 2	n = 3	n = 4	n = 5

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Task 2: [5 marks] Print the first 100 fibonacci numbers.

To know more about fibonacci series: https://www.mathsisfun.com/numbers/fibonacci-sequence.html

First 10 numbers: 0, 1, 1, 2, 3, 5, 8, 13, 21, 34 …

Bonus task: [+2 marks] Write code to solve the following problem:
https://leetcode.com/problems/add-digits/

Given an integer `num`, repeatedly add all its digits until the result has only one digit, and return it.

Example 1:

```
Input: num = 38
Output: 2
Explanation: The process is
38 --> 3 + 8 --> 11
11 --> 1 + 1 --> 2
Since 2 has only one digit, return it.
```

Example 2:

```
Input: num = 0
Output: 0
```