

WEEK 2 - ASSIGNMENT 4

INTERMEDIATE WHILE LOOP

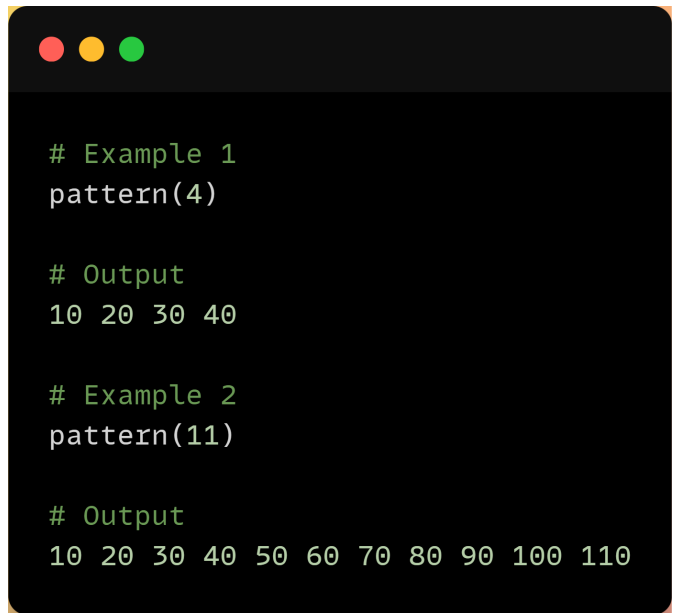
NOTE:

- No need to submit anywhere, just keep track of all the PDF you made in a specific folder.
- Compare your solution with the solution I'll provide, in case of doubts, kindly reach out to me.
- You may get assignment solution in format of PDF or VIDEO solution, depending on the difficulty level.

Q1. Create a function named **factorial** which takes a integer as an input and **returns** the factorial of that number.

Factorial of 5 means $5 \times 4 \times 3 \times 2 \times 1 = 120$

Q2. Create a function named **pattern** which takes an integer as an input and print the following pattern.



```
# Example 1
pattern(4)

# Output
10 20 30 40

# Example 2
pattern(11)

# Output
10 20 30 40 50 60 70 80 90 100 110
```

Q3. Create a function named **pattern** which takes an integer as an input and print the following pattern.

```
# Example 1
pattern(4)

# Output
1 2 4 8

# Example 2
pattern(7)

# Output
1 2 4 8 16 32 64 # Basically print upto 7 numbers
```

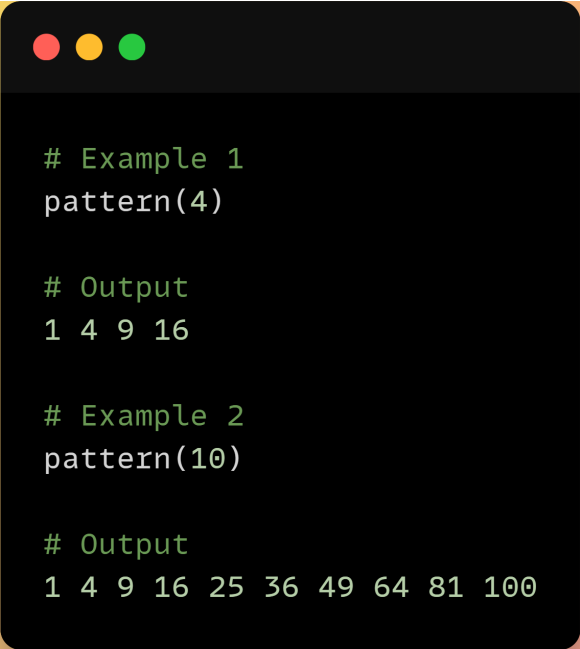
Q4. Don't create a function, just print the following pattern

1 11 111 1111 11111....n times (**Ask n from user**)

Q5. Keep asking numbers from user until the user enters **0**. Then display the average of all numbers.

```
Enter a number (enter 0 to finish): 54
Enter a number (enter 0 to finish): 14
Enter a number (enter 0 to finish): 63
Enter a number (enter 0 to finish): 98
Enter a number (enter 0 to finish): -111
Enter a number (enter 0 to finish): 521
Enter a number (enter 0 to finish): 3
Enter a number (enter 0 to finish): 0
The average of the entered numbers is: 91.71428571428571
```

Q6. Write a function named **pattern** which accepts an integer **n** as an argument. Then print the following pattern.



```
# Example 1
pattern(4)
```

```
# Output
1 4 9 16
```

```
# Example 2
pattern(10)
```

```
# Output
1 4 9 16 25 36 49 64 81 100
```