WEEK 2 - ASSIGNMENT 5 INTERMEDIATE LOOPS

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.**

Just solve the following patterns using FOR / WHILE loop.

Q1. 2 22 222 2222 22222 ... upto **n.** (Ask n from user)

Q2. Write a program to display the **n terms** of a harmonic series and their sum.

1 + 1/2 + 1/3 + 1/4 + 1/5 ... 1/n terms

Lets suppose **n=5.**

1/1 + 1/2 + 1/3 + 1/4 + 1/5 = **2.283334**

Q3. Ask **x** and **n** from user and then calculate the following answer.

```
# Example 1
pattern(x=6,n=4)

# Output
6/1 + 6/3 + 6/5 + 6/7
10.057142857142857 (OUTPUT)

# Example 2
pattern(x=9,n=11)

# Output
9/1 + 9/3 + 9/5 + 9/7 + 9/9 .... upto n times
19.627871200007426 (OUTPUT)
```

Q4. Ask **x** and **n** from user and then calculate the following answer.

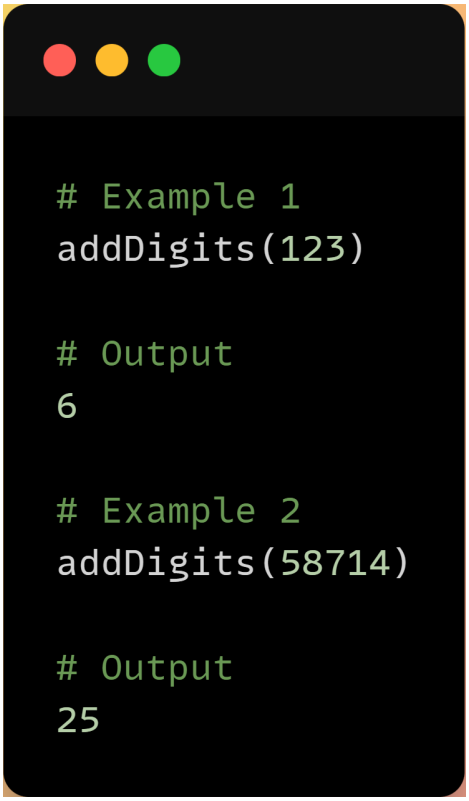
```
# Example 1
pattern(x=6,n=4)

# Output
6^1 - 6^3 + 6^5 - 6^7
-272370 (OUTPUT)

# Example 2
pattern(x=9,n=11)

# Output
9^1 - 9^3 + 9^5 - 9^7 + 9^9 .... upto n times
108084611215274403609 (OUTPUT)
```

Q5. Create a function **addDigits()** that takes an integer as an argument. Calculate the sum of digits of that number.



```
# Example 1
addDigits(123)

# Output
6

# Example 2
addDigits(58714)

# Output
25
```