Take-Home (Day 1)

Let's begin with some hands-on practice exercises

1. Write a program to convert the value of 'pi' to integer

```
In [6]:  # type your code here
         #fraction value of pi
         pi = 22/7
         #printing the data-typee of pi before converting it to integer
         print(type(pi))
         #converting value of pi to integer
         int_pi = int(pi)
         #printing the integer value of pi
         print(int_pi)
         #printing the data-type
         print(type(int_pi))

         <class 'float'>
         3
         <class 'int'>
```

2. Find the remainder after dividing 542 by 16

```
In [7]:  # type your code here
         #To get remainder we use "%" symbol
         z = 542%16
         #printing the remainder
         print(z)

         14
```

3. Display the following pattern using single print()

```
*
**
***
****
```

In [10]:
```python
# type your code here
print("*\n**\n***\n****")
```

```
*
**
***
****
```

4. Write a pseudo code to check whether an entered letter is a vowel or not

In [2]:
```python
# type your code here
#taking input from user
vow = input("Enter the letter")
#checking the input using if statement if condition is true it is a vowels if
 false it is not a vowel
if(vow == 'a' or vow == 'A' or vow == 'e' or vow == 'E' or
   vow == 'i' or vow == 'I' or vow == 'o' or vow == 'O' or vow == 'u' or vow =
= 'U'):
    print("It is a Vowel")
else:
    print("It is not a Vowel")
```

```
Enter the letterhello world
It is not a Vowel
```

5. Write a program to swap the two integers passed as runtime variables

```
In [9]:  # type your code here
         x = int(input("Enter the value of x "))
         y = int(input("Enter the value of y "))
         print("The value of x = %d"%x)
         print("The value of y = %d"%y)
         #initiating the swap
         x,y = y,x
         print("after the swap the values are")
         print("the value of x = {} and the value of y = {}".format(x,y))
```

```
Enter the value of x 23
Enter the value of y 56
The value of x = 23
The value of y = 56
after the swap the values are
the value of x = 56 and the value of y = 23
```

6. Write a program to print the product of two numbers 'x' and 'y'

x = 10 ; y = "15"

```
In [2]:  # type your code here
         #function to multiply 2 numbers
         def mult(x,y):
             return x*y
         #taking the input for 2 numbers
         x = int(input("enter a number for x "))
         y = int(input("enter a number for y "))
         #printing the value of the numbers using the function
         print("the product of the two numbers is: ",mult(x,y))
```

```
enter a number for x 10
enter a number for y 15
the product of the two numbers is:  150
```

7. Write a pseudo code to check whether input is even number or odd number (take input from user)

```
In [4]:  # type your code here
         #take integer input from user
         x = int(input("Enter a integer : "))
         #if the number is divisible by 2 and remainder is 0 the number is even else it
         is a odd number
         if(x%2 == 0):
             print(x," Is a even number")
         else:
             print(x," Is a odd number")
```

```
Enter a integer : 24
24  Is a even number
```

8. Write a pseudo code to print whether a number is divisible by 9 and a multiple of 6 (take input from the user)

In [12]:
```python
# type your code here
#taking integer input from the user
x = int(input("Enter a integer: "))
#if the number is divisible by 9 the remainder is 0 and if it is multiple of 6
its remainder is also 0
if((x%9==0) and (x%6)==0):
    print(x," Is a number which is a divisible by 9 and is a multiple of 6")
elif((x%9==0) and (x%6!=0)):
    print(x," Is a number which is divisible by 9 and is NOT a multiple of 6")
elif((x%9!=0) and (x%6==0)):
    print(x," is a number which is NOT divisible by 9 and is a multiple of 6")
else:
    print(x," is a number which is neither divisible by 9 or multiple of 6")
```

```
Enter a integer: 36
36  Is a number which is a divisible by 9 and is a multiple of 6
```

9. Write a pseudo to take 5 values from user and print their average using while loop (take input from user)

In [8]:
```python
# type your code here
#creating a empty list
list_num = []
print("Enter 5 numbers: ")
#iterating till 5 numners are entered
for i in range(0,5):
    num = int(input())
    #adding the elements to the list
    list_num.append(num)
print("The 5 numbers are: ",list_num)
#assiging 0 to total and element for initilization
total = 0
ele = 0
#iterating a while loop to add the numbers in the list
while(ele < len(list_num)):
    total = total + list_num[ele]
    ele+=1
#calculation the average
avg = total/5
#printing the average of 5 numbers
print("The average of 5 numbers is: ",avg)
```

```
Enter 5 numbers:
24
26
34
33
76
The 5 numbers are:  [24, 26, 34, 33, 76]
The average of 5 numbers is:  38.6
```