```
# Loop 2 : c = 1 go to if(True) Then c value changes to 0
# c = 0
# Loop 3 : c = 0  ( Same as Loop 1 and then Loop 2 )
# It will run again and again and again

# Note : We can put break statement in while loop to exit loop
```

2 Assignment 2 - 16 11 23

Level 1

1. Given two numbers A and B. Concatenate the two numbers and print it.

[1]:
```
a = '4'
b = '5'
print(a+b)
```

```
45
```

2. What is the result of the following expression in Python? print("1" == 1)

[2]:
```
print("1" == 1)
```

```
False
```

3.What is the output for the following statements?

[3]:
```
x = 55 / 11
print(x)
```

```
5.0
```

4. Write a program that asks the user to input their favorite programming language and output a specific string based on their answer. Based on the user minputs these are the outputs to be shown to the user.

[9]:
```
pro = input("Enter your favorite programming language:")
pro = pro.lower()
if pro == 'python':
    print("Nice choice!")
elif pro == 'java':
    print("That's cool!")
elif pro == 'javascript':
    print("Okay so your are the web developer!")
elif pro == 'c++':
    print("Too old school")
else:
    print("I don't know that language")
```

```
Enter your favorite programming language: JaVa
```

```
That's cool!
```

5. Write a program that takes a positive integer N as input from the user and prints all natural numbers from 1 to N, with each number followed by a space (including the last number).

[13]:
```
n = int(input("Enter positive integer:"))
for i in range(1,n+1):
    print(i,end=" ")
```

```
Enter positive integer: 30
```

```
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
```

Level 2

1. Given a number A and a digit B. Find the frequency of digit B in the number A. Return the frequency of digit B.

[15]:
```
a = input("Enter number:")
b = input("Enter digit:")
count = 0
for i in a:
    if i == b:
        count+=1
print(f"{b} occured {count} times in {a}")
```

```
Enter number: 34445566543453
Enter digit: 3
```

```
3 occured 3 times in 34445566543453
```

2. You are given lowercase string (A) and you have to return after reversing that.

[16]:
```
a = 'string'
print(a[::-1])
```

```
gnirts
```

3. You are given lowercase string (A) and you have to tell the count of vowels and consonants in it.

[18]:
```
s = input("Enter string")
vowel_count = 0
cons_count = 0
for i in s:
    if i in ['a','e','i','o','u']:
        vowel_count += 1
    else:
        cons_count += 1
print(f"There are total of {vowel_count} vowels and {cons_count} consonants in␣
 ↪given string {s}")
```

```
Enter string saiteja
```

```
There are total of 4 vowels and 3 consonants in given string saiteja
```

4. You are given uppercase string (S) and you have to return a string that is the lower case form of S.

- Uppercase strings are those which have all letters in uppercase (Example: MACHINE)
- Lowercase strings are those which have all letters in lowercase (Example: machine)

[21]:
```
s = 'MACHINE'
print(f"Upper Case: {s.upper()}")
print(f"Lower Case: {s.lower()}")
```

```
Upper Case: MACHINE
Lower Case: machine
```

5. Given the temperature of a day in Degrees Celsius, convert this given temperature from Celsius to Fahrenheit. Complete the function to do so. Round the output up to 2 decimal places

[23]:
```
def c_to_f(cel):
    return (cel * (9/5)) + 32
cel = int(input("Enter celsius degrees:"))
print(f"{cel} celsius degree is {round(c_to_f(cel),2)} in fahrenheit")
```

```
Enter celsius degrees: 44

44 celsius degree is 111.2 in fahrenheit
```

6. Write a program to calculate the total amount if the principal amount, simple interest rate per annum, and time in the number of days are given. The simple interest rate per annum is provided as a percentage. Assuming that there are 365 days in a year, print the total amount rounded up to 2 decimal places.

[37]:
```
def total_amount(p,i,t):
    i_dec = i / 100
    si = (p*i_dec*t)/365
    total_amount = round(p+si,2)
    return total_amount

p = float(input("Enter Principal Amount:"))
i = float(input("Enter Simple interest rate per annum:"))
t = int(input("Enter no of days are given:"))
print("================================")
print(f"Principal Amount        | {p}")
print(f"Simple Interest         | {i}")
print(f"Time (in days)          | {t}")
print(f"Total Amount to be paid | {total_amount(p,i,t)}")
```

```
Enter Principal Amount: 3500000
Enter Simple interest rate per annum: 18
Enter no of days are given: 365

================================
Principal Amount        | 3500000.0
```

```
Simple Interest          | 18.0
Time (in days)           | 365
Total Amount to be paid | 4130000.0
```

7. Write a program that takes the cost price of a vehicle as an argument and returns the road tax, that the vehicle owner has to pay according to the following criteria:

[45]:
```
def road_tax(cost):
    if cost > 100000:
        print(f"Road tax to be paid : {round(cost*(20/100),2)}")
    elif cost > 75000 and cost<=100000:
        print(f"Road tax to be paid : {round(cost*(15/100),2)}")
    elif cost > 50000 and cost <= 75000:
        print(f"Road tax to be paid : {round(cost*(10/100),2)}")
    elif cost <=50000:
        print(f"Road tax to be paid : {round(cost*(5/100),2)}")
cost = int(input("Enter cost price of a vehicle:"))
road_tax(cost)
```

```
Enter cost price of a vehicle: 100000

Road tax to be paid : 15000.0
```

[ ]:
```

```