Assignment-2

1. **Accept a character from keyboard.**

Write a program to check if a given character is a vowel or consonant.

Note: Vowels are a,e,i,o,u.

In [1]:

```
def CheckVowel(inpt): #inpt is for input variable from user.
    inpt1 = inpt.lower()
    if inpt1 in ['a', 'e', 'i', 'o', 'u']:
        print(inpt, "is a Vowel")
    else:
        print(inpt, "is a consonant.")
```

In [2]:

```
inpt = input("Please enter a character: ")
```

```
Please enter a character: R
```

In [3]:

```
answer = CheckVowel(inpt)
print(answer)
```

```
R is a consonant.
None
```

In [5]:

```
# We can minimize like below
def CheckVowel(inpt): #inpt is for input variable from user.
    if inpt.lower() in ['a', 'e', 'i', 'o', 'u']: #Here i am merging two lines into one.
        print(inpt, "is a Vowel")
    else:
        print(inpt, "is a consonant.")
```

In [6]:

```
inpt = input("Please enter a character: ")
```

```
Please enter a character: A
```

In [7]:

```
answer = CheckVowel(inpt)
print(answer)
```

```
A is a Vowel
None
```

1. **Write a program to check if a given number is prime or not.**

Note: Prime number is a number that is not divisible by any other number except by 2 and itself.

In [22]:

```
def PrimeNumber(n):
    if n <= 1:
        return False
    for i in range(2, n):
        if n % i == 0:
```

```
            print(n, "is not a prime number.")
            return False
    print(n, "is a prime number.")
    return True
```

In [23]:

```
n = int(input("Please enter a number: "))
```

```
Please enter a number: 6
```

In [24]:

```
prime_checker = PrimeNumber(n)
print(prime_checker)
```

```
6 is not a prime number.
False
```

1. **Write a program to generate prime number series.**

Note: you have to display n primes as: 2,3,5,7,11,13,17,19, etc.

In [37]:

```
# 1st have to define a fucntion to check n is a prime or not.

def PrimeNumber(n):
    if n <= 1:
        return False
    for _ in range(2, n):
        if n%_ == 0:
            return False
    return True
```

In [41]:

```
# 2nd have to define a fuction to craete prime series

def prime_series(n):
    primes = []
    number = 2
    while len(primes) < n:
        if PrimeNumber(number):
            primes.append(number)
        number += 1
    return primes
```

In [42]:

```
n = int(input("Enter the number to generate a prime series: "))
```

```
Enter the number to generate a prime series: 20
```

In [43]:

```
generate = prime_series(n)
print(f"As you are interested to check first {n}, the series is: {generate}")
```

```
As you are interested to check first 20, the series is: [2, 3, 5, 7, 11, 13, 17, 19, 23,
29, 31, 37, 41, 43, 47, 53, 59, 61, 67, 71]
```

8.Write a Python program to reverse a list of numbers given.

Ex: the given list is [10, 20, 5, 4, 33, 22]

Your program should print [22, 33, 4, 5, 20, 10]

Note: Do the above program without using slicing and reverse() methods.

In [5]:

```
def reverse_list(numbers):
    reversed_numbers = []
    for j in range(len(numbers) - 1, -1, -1):
        reversed_numbers.append(numbers[j])
    return reversed_numbers
```

In [6]:

```
numbers = []
while True:
    number = input("Enter a number (or press Enter to finish): ")
    if not number:
        break
    numbers.append(int(number))
```

```
Enter a number (or press Enter to finish): 1
Enter a number (or press Enter to finish): 2
Enter a number (or press Enter to finish): 3
Enter a number (or press Enter to finish): 4
Enter a number (or press Enter to finish): 5
Enter a number (or press Enter to finish): 10
Enter a number (or press Enter to finish):
```

In [7]:

```
reversed_numbers = reverse_list(numbers)
```

In [8]:

```
print("Original list:", numbers)
print("Reversed list:", reversed_numbers)
```

```
Original list: [1, 2, 3, 4, 5, 10]
Reversed list: [10, 5, 4, 3, 2, 1]
```