Slicing on String

As we know that, string is an alphabetic and alphanumeric words and their combination enclosed with double qoutation marks. We can play with string with the help of the slicing concept. Slicing is a concept of extracting sub-string from the string just like there is a word Jupiter and i want to get sub-string from second letter till fifth letter. For that we use the concept of slicing.

In [14]:
```python
#Slicing on String
name = "Ashwagandha"
print(name[3:7])
print(name[3:11:2])
```

```
waga
wgnh
```

After writing the name of the string variable we use square bracket both first open bracket and then close bracket. Between these two bracket we write the two position first one is starting position and after colon the end position. If you use two colon then after second colon you set number of steps it jumps. Here, the letter in seventh position is excluded but the third position letter of the word is included. Now, in third line I am using "2" as a step jumper so it jumps 2 step then print letter. The rule of slicimg says that the given position before colon is included but after colon the given position is excluded. If you not giving position at start then by default it takes 0 as starting index and if you not given end position then it takes last index of the string by default.

Slicing Rule :- [Start : End : Step]

In [17]:
```python
#Slicing using Negative Indexing
job = "Scientist"
print(job[-9:-2])
#Reverse using Negative Indexing
print(job[::-1])
```

```
Scienti
tsitneicS
```

In slicing in python there is a concept of negative indexing in which we consider indexing from the end of the string along with negative sign. One more thing is that from the end of the string, the negative indexing starts from "-1" then "-2" till "-n" where n is length of the string. Here one interesting thing is that if you wnt to reverse the string you can do it with the help of negative indexing by not giving start and end position but giving the step as "-1" it jumps the string from the end till start which reverse the string.

Concatation on Strings

Here, concatation of string is the concept where we add two or more strings together to form a single string. Just like adding your first name, middle name and last name to form your full name. Here, we concate string by using one arithematic operator named **"+"** addition operator. Here, we use this operator to add two or more strings.

In [37]:
```python
#Concatation of strings
start = "Bramha"
middle = "Vishnu"
end= "Mahesh"
#Concate two strings
print(start+middle)
#Concate more than two strings
print(start+middle+end)
```

```
BramhaVishnu
BramhaVishnuMahesh
```

String and Their Functions

Here, by using some functions on string we can edit the string from its original form to edited format. Just like replacing a letter instead of target letter to change the string. Just like if we have a sentence having 5 words to split these words in sentence using comma then we use split it. Just like to change the case of the string. Just like to remove whitespaces from the given string. This is called updation on string.

In [41]:
```python
#Convert into uppercase
sign = "ashok chakra"
print(sign.upper())
#Convert into lowercase
sign = "ASHOK CHAKRA"
print(sign.lower())
```

```
ASHOK CHAKRA
ashok chakra
```

1. upper() function is used in the name of the string variable then use dot after that call the upper() function. It change the lowercase in the string to uppercase and if string is in uppercase then it print uppercase with no change.
2. lower() function is used on string to convert the uppercase letter in string into lowercase letter but if the letter is in lowercase then it remains same there is no change.

3. strip() function is used on string to remove white spaces at the starting of the string and at the ending of the string.
4. replace() function is used on string to replace any targeted letter into desired letter by passing both in the arguments of the replace() function. In first argument we pass the targeted letter in second argument we pass the desired letter.

```
In [46]:  word= " Bramhos my favorite "
          #Remove white spaces
          print(word.strip())
          #Split the sentence
          print(word.split(","))
          #Replace B to G
          print(word.replace("B","G"))
```

```
Bramhos my favorite
[' Bramhos my favorite ']
 Gramhos my favorite
```

Format Strings Concept

To embed string in any other string we use the format string. In format string, we write the small letter **f** and then we use double quotation marks "text" and between the double quotation we write the text and if we have to embed any other string in that string then we write the embed string in curly braces {embedString}. This will help simple python programs to show output with a meaningful sentence.

```
In [50]:  #F-String Code 1
          name = "Amrit Keshari"
          print(f"Welcome!{name}")
```

```
Welcome!Amrit Keshari
```

f"any string or text{embed string}"

```
In [52]:  #F-String Code 2
          name = "Amrit Keshari"
          txt = f"Author of the Book is {name}"
          print(txt)
```

```
Author of the Book is Amrit Keshari
```