**Data types:**

1. Numbers
2. Strings
3. Boolean (True or False)

char\_name="Priya"

char\_age="30"

print("Myname is"+char\_name+",")

print("Myage is"+char\_age+",")

**Functions:**

phrase="SaiAcademy"

print(phrase.upper())

print(phrase.lower())

Print(phrase.isupper())

print(phrase.upper().isupper())

-**len (length fn)**

print(len(phrase))

**Index fn**

phrase="SaiAcademy"

print(phrase(index("S")) ==> 0

(index(i))==>2

--**Replace fn**

phrase="SaiAcademy"

print(phrase.replace("SaiAcademy","GiraffeAcademy")==> GiraffeAcademy

**Working with Numbers**

**Using Arithmetic operations**

Print(3 + 4), print (3\*4)

Modulus operation ==> print(10%3)==> 1

--**str()**

num = 5

print( str(Num) + " is my fav number")

Any number added along with string has to be added with str()

--**abs(**)

my\_num = -5

print( abs(my\_num)) ==> 5

**--pow()**

print( pow(4, 2)==> 4^2=16

**--max(), min(), round(), floor(), ceil(),sqrt()**

Print(max(2 3) ==> 3

Print (round(3.8)) ==> 4

Print(floor(3.6)) ==> 3

Print(ceil(3.6)) ==> 4

Print(sqrt(36)) ==> 6

-**getting input from users**.

name = input("Enter your name : ")

age = input("Enter your age : ")

print("Hello " + name + "!" + "Your age is " + age)

--**Building a basic calculator**

**--int**

num1 = input ( "Enter a no : ")

num2 = input ("Enter another no : ")

Result = int(num1) + int(num2)

==> 2 +2 =4

**--float**

num1 = input ( "Enter a no : ")

num2 = input ("Enter another no : ")

Result = float(num1) + float(num2)

==>2.3 + 2.2=4.5

**Mad Libs Game**

colour=input("Enter the colour:")

noun=input("Enter the noun:")

celebrity=input("Enter the celebrity:")

print("Roses are "+colour)

print(noun+" are blue")

print("I love "+celebrity)

**Lists Functions**

**extend()==> add elements together**

lucky\_num = [2, 4, 7, 8, 32, 45]

friends = ["Kevin", "Karen", "Jim", "Oscar"]

friends.extend(lucky\_num)

print(friends)

**Append()**

lucky\_num = [2, 4, 7, 8, 32, 45]

friends = ["Kevin", "Karen", "Jim", "Oscar"]

friends.append("James")

print(friends)

**Insert()**

lucky\_num = [2, 4, 7, 8, 32, 45]

friends = ["Kevin", "Karen", "Jim", "Oscar"]

friends.insert(1, "James")

print(friends)

==> Inserts after the Kevin

**Remove()**

lucky\_num = [2, 4, 7, 8, 32, 45]

friends = ["Kevin", "Karen", "Jim", "Oscar"]

friends.remove("Karen")

print(friends)

**Clear()**

lucky\_num = [2, 4, 7, 8, 32, 45]

friends = ["Kevin", "Karen", "Jim", "Oscar"]

friends.clear()

print(friends)

==> clear off all the names in the friends' list

**Pop()**

lucky\_num = [2, 4, 7, 8, 32, 45]

friends = ["Kevin", "Karen", "Jim", "Oscar"]

friends.pop()

print(friends)

==> removes the last name in the list.

**Index()** ==> To find out the name in the list

lucky\_num = [2, 4, 7, 8, 32, 45]

friends = ["Kevin", "Karen", "Jim", "Oscar"]

print(friends.index("Kevin"))

Count()

lucky\_num = [2, 4, 7, 8, 32, 45]

friends = ["Kevin", "Karen","Jim", "Jim", "Oscar"]

print(friends.count("Jim"))

==> 2

Sort()

lucky\_num = [2, 4, 7, 8, 32, 45]

friends = ["Kevin", "Karen","Jim", "Jim", "Oscar"]

friends.sort()

Print(friends)

==> arranges in asc

Reverse()

lucky\_num = [2, 4, 7, 8, 32, 45]

friends = ["Kevin", "Karen","Jim", "Jim", "Oscar"]

friends.reverse()

Print(friends)

==> prints in reverse order

Copy()

lucky\_num = [2, 4, 7, 8, 32, 45]

friends = ["Kevin", "Karen","Jim", "Jim", "Oscar"]

Friends2 = friends.copy()

Print(friends2)

**Tuples**

-Tuples is a type of data structure.

--Similar to lists

--it is immutable ( cannot change the elements)

Coordinates = (4, 5)

Print(coordinates[1])

==> 5

Diff b/w Lists and Tuples

--Brackets

--cannot modify in Tuples. Can be modified in Lists.

--Tuples used in spl situation.

**Functions**

**Functions is basically just a collection to perform a specific tasks.**

**We can call the function.**

def sayhi() : --all the codes after this fn will be inside. The code has to indented.

print("Hello user") -- indented

Sayhi()

**Parameters ;**

Pass the information in the function

def sayhi(name) :

print("Hello " + name)

Sayhi("Mike")

Sayhi("Steve")

**Multiple parameters:**

def sayhi(name, age) :

print("Hello " + name + ", you are " + age) or print("Hello " + name + ", you are " + str(age))

Sayhi("Mike", "35") sayhi("Mike",35)

Sayhi("jj", "23")

**Return Statements:**

Returns information from the function.

def cube(num) :

Return num\*num\*num

print(cube(num))

==>27

**Declaring the result in the variable**

def cube(num) :

return num\*num\*num

result = cube(num)

print(result)

**If Statement**

is\_male = False

is\_tall = False

if is\_male and is\_tall:

Print(“You are a tall man”)

else:

Print(“You are either not male or not tall or both)

**Dictionaries**

monthConversions = {

"Jan": "January",

"Feb": "February",

"Mar":"March"

}

Print(monthConversions["Mar"]) or print(monthConversions.get("Luv", "Not a valid key")