Python Learning

String operation

Name = ’python for beginners’

len(name)

replace(‘python’,’Javascript)

name.upper()

name.lower()

‘python’ in name // returns Boolean

Name.find(p) // retuns the index

Operator Precedence

order

paranthesies

exponentiation

multiplication or division

addition or subtraction

Math Function

Math.round(2.9) // 3

Math.abs(-2.9) // 2.9

import math  
x = 2.9  
  
print(round(2.9))  
print(abs(-2.9))  
  
print(math.ceil(2.6))  
  
print(math.floor(2.9))

if else in python

is\_hot = True  
is\_cold = True  
  
if is\_hot:  
 print("It's a hot day")  
elif is\_cold:  
 print("It's a cold day")  
else:  
 print('Enjoy your day')  
  
print("It's a lovely day")

price = 1000000  
has\_goodCredit = True  
  
if(has\_goodCredit):  
 down\_payment = 0.1 \* price  
else:  
 down\_payment = 0.2 \* price  
print(f"Down Payment ${down\_payment}")

**LOGICAL OPERATORS**

has\_high\_income = False  
has\_good\_credit = True  
  
if not has\_high\_income and has\_good\_credit:  
 print('Eliogible for loan')  
  
elif has\_good\_credit or has\_high\_income:  
 print("Eligble for partial Loan")

**WEIGHT from kilos to pounds**

weight = int(input("Enter the weight:"))  
scale = input("k(Kilos) or p(Pounds):")  
  
if(scale.lower() == 'k'):  
 output = weight \* 2.20  
 print(f"Weight is {output} pounds")  
elif(scale.lower() == 'p'):  
 output = weight \* 0.45  
 print(f"Weight in {output} Kilos")

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**While Loop**

guess\_count = 0  
guess\_limit = 3  
secret\_number = 9  
while (guess\_count < guess\_limit):  
 guess = int(input('Guess: '))  
 guess\_count += 1  
 if(guess == secret\_number):  
 print("Correct Guess")  
 break;  
  
 else:  
 print("Wrong Guess")

**Elif in while**

guess\_count = 0  
guess\_limit = 3  
secret\_number = 9  
while (guess\_count < guess\_limit):  
 guess = int(input('Guess: '))  
 guess\_count += 1  
 if(guess == secret\_number):  
 print("Correct Guess")  
 break;  
  
 else:  
 print("Wrong Guess")

**while with elseif**

command = ""  
while(command != 'quit'):  
 command = input(">").lower()  
 if command =='start':  
 print("car is started")  
 elif command == 'stop':  
 print("car has stopped")  
 elif command == 'help':  
 print("""start - to start the car  
 stop - to stop the car  
quit - to quit""")  
 else:  
 print("Sorry, wrong command")

**For Loops in Python**

prices = [10,20,30]  
total = 0  
for price in prices:  
 total += price  
  
print(f"Total Price {total}")

**Nested Loops**

for x in range(4):  
 for y in range(3):  
 print(f"({x}, {y})")

**Printing F using nested loop**

numbers = [5,2,5,2,2]  
  
for x\_count in numbers:  
 output = ''  
 for count in range(x\_count):  
 output += 'x'  
 print(output)

**C:\Users\Bindu\PycharmProjects\helloWorld\venv\Scripts\python.exe C:/Users/Bindu/PycharmProjects/helloWorld/venv/test.py**

**xxxxx**

**xx**

**xxxxx**

**xx**

**xx**

**Largest number in the list**

numbers = [10,120,45,574,1]  
max = numbers[0]  
for number in numbers:  
 if number > max:  
 max = number  
print(max)

**Remove Duplicates in the list**

numbers = [10,120,45,574,1,10]  
for x in numbers:  
 print(numbers.count(x) + numbers.index(x))  
 if(numbers.count(x) > 1):  
 numbers.pop()  
  
print(numbers)

numbers = [2,2,4,6,3,5,4,6,6,1]  
uniques = []  
for number in numbers:  
 if number not in uniques:  
 uniques.append(number)  
print(uniques)

**Tuples are immutable , cannot change them**

# tupils  
numbers = (1,2,2,2,3)  
  
print(numbers.index(2))  
  
  
# Tupil Unpacking  
coordinates = (1,2,3)  
  
x,y,z = coordinates  
  
print(x)

**Dictonaries**

# Dictionary  
  
customer = {  
 "name" : "Bindu",  
 "age": 28,  
 "is\_verified": True  
}  
  
customer.get("birth date", "6 June 1989")  
  
print(customer)

**Input : 1234**

**Output : one two three four**

# Dictionary  
  
phone = input("Phone:")  
  
digits\_mapping = {  
"1" : "one",  
"2" : "Two",  
"3" : "Three",  
"4" : "four"  
}  
  
output = ""  
for ch in phone:  
 output += digits\_mapping.get(ch, "!" ) + " "  
print(output)

**Functions in Python**

#Define Functions  
  
def greet\_user(name, last\_name):  
 print(f"HI {name} {last\_name}")  
 print("Welcome Abroad")  
  
print("Start")  
greet\_user(last\_name="Bindu" , name = "Priya")

greet\_user("Bindu" , last\_name="Priya")

**//use keywords for the arguments**

#Define Functions  
  
def square(x):  
 return x\*x  
  
result = square(3)  
print(result , square(2))  
  
# python returns none if there is no return Statement for any function

**Try and except in python**

try:  
 age = int(input("Age:"))  
 print(age)  
except ValueError:  
 print('Invalid Value')

**Classes and methods in Python**

class Point:  
 def move(self):  
 print("Move")  
 def draw(self):  
 print("Draw")  
  
point1 = Point()  
point1.draw()  
  
point1.x = 10  
print(point1.x)

class Point:  
 def \_\_init\_\_(self, x,y):  
 self.x = x  
 self.y = y  
  
 def move(self):  
 print("Move")  
 def draw(self):  
 print("Draw")  
  
point1 = Point(10,20)  
print(point1.x)  
  
point1.draw()  
point1.x = 10  
print(point1.x)  
  
point1.move()

**Differenct Class**

class Person:  
 def \_\_init\_\_(self, name):  
 self.name = name  
  
 def talk(self):  
 print(f"Hi, I am {self.name}")  
  
  
bindu = Person("Bindu")  
print(bindu.name)  
bindu.talk()  
  
phani = Person("phani")  
print(phani.name)  
phani.talk()

**Inheritance**

# Inheritance  
class Mammal:  
 def walk(self):  
 print("Walk")  
  
class Dog(Mammal):  
 pass  
  
class Cat(Mammal):  
 def annoying(self):  
 print("Cat is annoyinh")  
  
dog1 = Dog()  
dog1.walk()  
  
cat1 = Cat()  
cat1.annoying()  
cat1.walk()

**Random Method in PY**

import random  
print(random.random())  
  
for i in range(3):  
 print(random.randint(10,20))  
  
members = ['bindu', 'phani', 'koushik']  
  
print(random.choice(members))