**Python**

**Factorial for using loop**

number=int(input("Enter the number of the factorial="))

factorial=number

number-1

for number in range(number,1,-1):

print(factorial,"\*",number-1,"=",factorial\*(number-1))

factorial\*=number-1

print("The Factorial of the number is:",factorial)

**Table using for loop**

number=int(input("Enter the number of the table:"))

start=int(input("Enter the number of the table where you want to start:"))

terminate=int(input("Enter the number of the table where you want to terminate:"))

for start in range(start,terminate+1):

print(number,"\*",start,"=",number\*start)

for a in range (10):

print(a+1,"Faizan Nadeem")

numbers=5,10,11,15,20,45,60,80

for b in range(10,1,-1):

print(b)

cities=("KARACHI","QUETTA","LAHORE","SIALKOT")

for city in cities:

print("{city}")

country="Pakistan"

for char in country:

print(char)

num1="FAIZAN"

num2="NADEEM"

print(num1+num2)

a=15

b=15

if(a<b):

print("A is smaller than b")

#print("HY")

else:

print("A is greater than b")

print(type(a))

sum=a//b

print(sum)

print(type(sum))

if(num1=="FAIZAN"):

print("You are FAIZAN")

else:

print("You are not FAIZAN")444

names=["FAIZAN","NADEEM","ABDULLAH","SARFRAZ","AZAN","RAHMAN","MANI"]

print(names[-1])

fruits=[]

print(len(names))

print(len(fruits))

fruits.append("APPle")

print(fruits[0])

names.insert(3,"RAHMaN")

print(names[3])

names.insert(8,"HAIDER")

print(names[8])

names.index("RAHMaN")

print(names.index("RAHMaN"))

print(names.index("FAIZAN"))

names.clear()

#print(names.index("FAIZAN"))

#print(names.index("RAHMaN"))

name=["FAIZAN","NADEEM","ABDULLAH","SARFRAZ","AZAN","RAHMAN","MANI"]

print(name.index("FAIZAN"))

new\_names=["FAIZAN","NADEEM","ABDULLAH","SARFRAZ","AZAN","RAHMAN","MANI"]

print(new\_names.index("FAIZAN"))

num=["ABDULLAH","ZOHAIB"]

print(num.index("ZOHAIB"))

num1=input("Enter the name:")

print("Your name is:",num1)

**calculator**

**num1=input("Enter the 1st number=")**

**num2=input("Enter the 2nd number=")**

**print("Press\n1.for Addition\n2.for subtraction\n3.for multiplication\n4.for division")**

**num3=input("Please Enter=")**

**if(num3==1):**

**sum=num1+num2**

**print("The Sum of TWO numbers is=",sum)**

**elif(num3==2):**

**subtract=num1-num2**

**print("The subtraction of TWO numbers is=",subtract)**

**elif(num3==3):**

**mult=num1\*num2**

**print("The multiplication of TWO numbers is=",mult)**

**elif(num3==4):**

**div=num1//num2**

**print("The division of TWO numbers is=",div)**

**else:**

**print("You Enter an invalid number")**

**num1=int(input("Enter the 1st number="))**

**num2=int(input("Enter the 2nd number="))**

**print("The number is",num1)**

**print(type(num1))**

**sum=num1+num2**

**print("The sum of two numbers is=",sum)**

**print(type(sum))**

**if(num1>num2):**

**print(num1, " is greater than ",num2)**

**elif(num1<num2):**

**print(num1,"is smaller than",num2 )**

**elif(num1==num2):**

**print(num1,"is equal",num2 )**

**else:**

**print("You enter invalid number")**

print("\n\tPress 1. for Addition")

print("\n\tPress 2. for subtraction")

print("\n\tPress 3. for Multiplication")

print("\n\tPress 4. for Division")

x=int(input("Enter your choice here"))

if(x==1):

num1=int(input("Enter the 1st number:"))

num2=int(input("Enter the 2nd number:"))

sum=num1+num2

print("The Sum of ",num1," and ",num2,"is:",sum)

elif(x==2):

num1=int(input("Enter the 1st number:"))

num2=int(input("Enter the 2nd number:"))

Subtraction=num1-num2

print("The Subtraction of ",num1," and ",num2,"is:",Subtraction)

elif(x==3):

num1=int(input("Enter the 1st number:"))

num2=int(input("Enter the 2nd number:"))

Multiplication=num1\*num2

print("The Multiplication of ",num1," and ",num2,"is:",Multiplication)

elif(x==4):

num1=int(input("Enter the 1st number:"))

num2=int(input("Enter the 2nd number:"))

Division=num1//num2

print("The Sum of ",num1," and ",num2,"is:",Division)

else:

print("You enter an invalid number")

def Addition():

num1=int(input("Enter the 1st number:"))

num2=int(input("Enter the 2nd number:"))

sum=num1+num2

print("The Sum of ",num1," and ",num2,"is:",sum)

def Subtraction():

num1=int(input("Enter the 1st number:"))

num2=int(input("Enter the 2nd number:"))

subtraction=num1-num2

print("The Subtraction of ",num1," and ",num2,"is:",subtraction)

def Multiplication():

num1=int(input("Enter the 1st number:"))

num2=int(input("Enter the 2nd number:"))

multiplication=num1\*num2

print("The Multiplication of ",num1," and ",num2,"is:",multiplication)

def Division():

num1=int(input("Enter the 1st number:"))

num2=int(input("Enter the 2nd number:"))

division=num1//num2

print("The Division of ",num1," and ",num2,"is:",division)

print("\n\tPress 1. for Addition")

print("\n\tPress 2. for subtraction")

print("\n\tPress 3. for Multiplication")

print("\n\tPress 4. for Division")

x=int(input("Enter your choice here"))

if(x==1):

Addition()

elif(x==2):

Subtraction()

elif(x==3):

Multiplication()

elif(x==4):

Division()

else:

print("You Enter Invalid number")

def Addition(num1,num2):

sum=num1+num2

print("The Sum of ",num1," and ",num2,"is:",sum)

def Subtraction(num1,num2):

subtraction=num1-num2

print("The Subtraction of ",num1," and ",num2,"is:",subtraction)

def Multiplication(num1,num2):

multiplication=num1\*num2

print("The Multiplication of ",num1," and ",num2,"is:",multiplication)

def Division(num1,num2):

division=num1//num2

print("The Division of ",num1," and ",num2,"is:",division)

print("\n\tPress 1. for Addition")

print("\n\tPress 2. for subtraction")

print("\n\tPress 3. for Multiplication")

print("\n\tPress 4. for Division")

x=int(input("Enter your choice here"))

if(x==1):

num1=int(input("Enter the 1st number:"))

num2=int(input("Enter the 2nd number:"))

Addition(num1,num2)

elif(x==2):

num1=int(input("Enter the 1st number:"))

num2=int(input("Enter the 2nd number:"))

Subtraction(num1,num2)

elif(x==3):

num1=int(input("Enter the 1st number:"))

num2=int(input("Enter the 2nd number:"))

Multiplication(num1,num2)

elif(x==4):

num1=int(input("Enter the 1st number:"))

num2=int(input("Enter the 2nd number:"))

Division(num1,num2)

else:

print("You Enter Invalid number")

**File Handling in python**

File Handling

The key function for working with files in Python is the open() function.

The open() function takes two parameters; *filename*, and *mode*.

There are four different methods (modes) for opening a file:

"r" - Read - Default value. Opens a file for reading, error if the file does not exist

"a" - Append - Opens a file for appending, creates the file if it does not exist

"w" - Write - Opens a file for writing, creates the file if it does not exist

"x" - Create - Creates the specified file, returns an error if the file exists

In addition you can specify if the file should be handled as binary or text mode

"t" - Text - Default value. Text mode

"b" - Binary - Binary mode (e.g. images)

Syntax

To open a file for reading it is enough to specify the name of the file:

f = open("demofile.txt")

The code above is the same as:

f = open("demofile.txt", "rt")

Because "r" for read, and "t" for text are the default values, you do not need to specify them.

**Note:** Make sure the file exists, or else you will get an error.

**Classes in Python**

class Person:  
  def \_\_init\_\_(self, name, age):  
    self.name = name  
    self.age = age  
  
  def myfunc(self):  
    print("Hello my name is " + self.name)  
  
p1 = Person("John", 36)  
p1.myfunc()