**Learn Python**

Print statement

a = 10 and b = 20

print(a + b) # Output is 30

a = “10” and b = “20”

print(a + b) # Output is “1020”

a = int(“10”) and b = (“20”)

print(a + b) # Output is 30

use input() to accept a value from the user at run time.

My name is Mohan

My age is 61

Name = input()

Age = input()

print(“My name is “, Name)

print(“My age is “, age)

a = int(input())

b = int(input())

c = int(input())

d = a \* b \* c

e = a + b + c

f = d/e

print(f)

where 2 = 2, b = 3 and c = 4

if(True):

print(“Yes”) // indent is a must. if not present print(“Yes”) is not treated a part of the if statement

else

print(“No”) // indent is a must. if not present print(“No”) is not treated a part of the if statement

if(False):

print(“Yes”) // indent is a must. if not present print(“Yes”) is not treated a part of the if statement

else

print(“No”) // indent is a must. if not present print(“No”) is not treated a part of the if statement

print(“win” == “win”) will print True

print(“win” == “winn”) will print False

rcb = "win"

if(rcb == "win"):

print("We have won the cup")

else:

print("We have not won the cup")

rcb = "lose"

if(rcb == "win"):

print("We have won the cup")

else:

print("We have not won the cup")

income = int(input(“Enter income: “))

if(income > 7000):

print(“Not eligible for Scholarship”)

else:

print(“Eligible for scholarship”)

How to print quotient and reminder

a = 10

print(a/2)

print(“Quotient for 10/2 is: ”, a/2)

b = 11

print(b%2)

print(“Reminder for 11%2 is: ”, b%2)

score = int(input(“Score: “))

if(score < 35):

print("Poor Student")

if(score > 35 and score < 70): // combining two conditions with ‘and’

print("Average Student")

if(score > 70):

print("Good Student")

# use of elif and else. Look at else. It will not have any condition. Use the # symbol to comment a single line

score = int(input("Score: "))

if(score < 35):

print("Poor Student")

elif(score > 35 and score < 70):

print("Average Student")

else:

print("Good Student")

# How to comment multiple lines

# Comment Line 1

# Comment Line 2

# Comment Line 3

score = int(input("Score: "))

if(score < 35):

print("Poor Student")

elif(score > 35 and score < 70):

print("Average Student")

else:

print("Good Student")

# How to comment multiple lines the efficient way

"""

Comment Line 1

Comment Line 2

Comment Line 3

"""

score = int(input("Score: "))

if(score < 35):

print("Poor Student")

elif(score > 35 and score < 70):

print("Average Student")

elif(score > 70 and score < 101):

print("Good Student")

else:

print("Invalid Score")

# Implement a mini calculator

Num1 = int(input("Enter first number: "))

Num2 = int(input("Enter Second number: "))

Operation = input("Add/Sub/Mul/Div: ")

if(Operation == "Add"):

print("Addition Result: ", Num1 + Num2)

elif(Operation == "Sub"):

print("Subtraction Result: ", Num1 - Num2)

elif(Operation == "Mul"):

print("Multiplication Result: ", Num1 \* Num2)

elif(Operation == "Div"):

print("Division Result: ", Num1/Num2)

else:

print("Invalid Operation")

HackerRank# Let us learn about this

n = int(input())

if(n % 2 == 0):

    if(n >= 2 and n <=5):

        print("Not Weird")

    elif(n >= 6 and n <= 20):

        print("Weird")

    elif(n > 20):

        print("Not Weird")

else:

    print("Weird")

# For Loop

# unlike C. C++ or C# programing languages, there are no parenthesis around the for loop for python

for i in "Apple":

print(i)

# For Loop and range

# unlike C. C++ or C# programing languages, there are no parenthesis around the for loop for python

for i in range(5):

print(i)

# The above will print 0 through 4

# For Loop and range

# unlike C. C++ or C# there are no parenthesis around the for loop for python

for i in range(1, 5):

print(i)

# The above will print 1 through 4

Using for loop write a program to print the 2 tables from 1 through 10

# For Loop and range

# unlike C, C++ or C# programing languages, there are no parenthesis around the for loop for python

Range(1, 11) implies upto 10. Meaning 1 less than 11. 11 is the second parameter in the range function

for i in range(1, 11):

print(2 \* i)

# print even number from 1 to 10

for i in range(1, 11):

if(I % 2 == 0):

print(ii)

# print even number from 1 to 10 and the number of times print() is executed

iCount = 0

iCount = 0

for i in range(1, 11):

if(i % 2 == 0):

print(i)

iCount = iCount + 1

print("Iteration Count: ", iCount)

# print even number from 1 to 10 and the number of times print() is executed

iCount = 0

for i in range(1, 11):

if(i % 2 == 0):

print(i)

iCount = iCount + 1

print("Total Iteration Count: ", iCount)

# print all number divisible by 3 and 5 between 1 and 100 and the number of times print() is executed

iCount = 0

for i in range(1, 101):

if((i%3 == 0) and (i%5 == 0)):

print(i)

iCount = iCount + 1

print("Total Iteration Count: ", iCount)

Exercise

Program to find the sum of ‘N’ natural numbers

Program to read 10 numbers from the keyboard and display their total and average

Program to display the cube of ‘N’ natural numbers

Important ‘List’ can be used for a collection of data. This approach can be adopted for the 2nd problem.

A collection of data in Python is called a ‘List’.

List = []

a = [] # variable ‘a’ is a list

# List example

a = [1,2,3,4,5]

for i in a:

print(i)

# How to create a List programmatically

a = []

a.append(10)

print(a)

a.append(20)

print(a)

a.append(30)

print(a)

Adding to a list using input() at run time

a = []

a.append(10)

print(a)

a.append(20)

print(a)

a.append(30)

print(a)

a.append(40)

print(a)

b = int(input("Enter a number: "))

a.append(b)

print(a)

Adding to a list using input() at run time

a=[]

iCount = 0

for i in range(10):

b = int(input("Enter Number " + str(i + 1) + ": "))

a.append(b)

print(a)

# for loop. This example will print the stars in separate lines

for i in range(5):

print("\*")

# for loop. This example will print the stars in the same line

for i in range(5):

print("\*", end=(""))

# for loop. This example will print the stars in the same line comma separated

for i in range(1, 5):

print()

for j in range(i):

print(j + 1, end=(""))

Nested for loop

// Give an example and write a program for that

# While Loop

i = 0

while(i == 0):

print(i)

i = i + 1

# Print 10, 20, 30, 40,………160, 170, 180, 190, 200

i =10

while(i <=200):

print(i, end = ",")

i = i + 10

Python Collections (4:54:44)

List, Tuple, Set and Dictionary

# List[] -> Allows Duplicates. Any type of data can be stored. Ordered and changeable.

a=[1,2,3,4,5,6]

print(a)

a.append(7)

print(a)

a.append(70)

print(a)

a.append(True) # I can put a boolean value in a list too

a.append(1)

print(a)

a.append("emc") # List can contain any value

print(a)

# List[] -> Allows Duplicates. Any type of data can be stored. Ordered and changeable.

a=[1,2,3,4,5,6]

print(a)

a.append(7)

print(a)

a.append(70)

print(a)

a.append(True) # I can put a boolean value in a list too

a.append(1)

print(a)

a.append("emc") # List can contain any value

print(a)

a.insert(0, 11)

print(a)

a.insert(1, 11)

print(a)

a.pop(5)

print(a)

a.pop() # will remove the last element

print(a)

a.pop() # will remove the last element

print(a)

# List and Extend

a=[1,2,3,4,5,6]

b=[11,23,12]

print(a)

print(b)

a.extend(b)

print(a)

b.extend(a)

print(b)