**ARITHMETIC OPERATORS WITHOUT USER VALUES**

a=10

b=2

add=a+b

sub=a-b

mul=a\*b

div=a/b

mod=a%b

print("addition is:",add)

print("subraction is:",sub **)**

print("multiplication is:",mul)

print("division is:",div)

print("modulus is:",mod)

**OUTPUT:**

addition is: 12

subraction is: 8

multiplication is: 20

division is: 5.0

modulus is: 0

**ARITHMETIC OPERATORS WITH USER VALUES**

a=int(input("enter a value1:"))

b=int(input("enter b value2:"))

add=a+b

sub=a-b

mul=a\*b

div=a/b

mod=a%b

print("addition is:",add)

print("subraction is:",sub)

print("multiplication is:",mul)

print("division is:",div)

print("modulus is:",mod)

**OUTPUT:**

enter a value1:10

enter b value2:5

addition is: 15

subraction is: 5

multiplication is: 50

division is: 2.0

modulus is: 0

**COMPARISION OPERATORS**

a=int(input("enter the first value:"))

b=int(input("enter the second value:"))

print(a<b)

print(a>b)

print(a<=b)

print(a>=b)

**OUTPUT:**

enter the first value:10

enter the second value:25

True

False

True

False

**SWAPPING TWO VALUES**

a=int(input("enter a value1:"))

b=int(input("enter b value2:"))

a=a+b

b=a-b

a=a-b

print("the value of a after swapping:",a)

print("the value of b after swapping:",b)

**OUTPUT:**

enter a value1:10

enter b value2:15

the value of a after swapping: 15

the value of b after swapping: 10

**AREA OF TRIANGLE**

h=int(input("enter height of triangle:"))

b=int(input("enter base of triangle:"))

print("area of triangle:",0.5\*a\*b)

**OUTPUT**

enter height of triangle:10

enter base of triangle:5

area of triangle: 37.5

**AREA AND PERIMETER OF RECTANGLE**

l=int(input("enter a length value:"))

b=int(input("enter a breadth value:"))

print("area of rectangle:",l\*b)

print("perimeter of rectangle:",2\*(l+b))

**OUTPUT:**

enter a length value:10

enter a breadth value:5

area of rectangle: 50

perimeter of rectangle: 30

**RADIUS OF CIRCLE**

d=int(input("enter a diameter;"))

radius=d/2

print(radius)

**OUTPUT:**

enter a diameter;15

7.5

**DECISION CONTROL STSTEMENTS**

**1.SIMPLE-IF STATEMENT:**

**1.TO ACCEPT THE USER NAME AND CHECK AUTHORIZED OR NOT**

name=input("enter the name:")

if name=="python":

print("the given user is authorized")

**OUTPUT:**

enter the name:python

the given user is authorized

**2.IF –ELSE STATEMENT:**

**1.CHECK NUMBERS EVEN OR ODD**

num=int(input("enter any number:"))

if num%2==0:

print("the given number is even")

else:

print("the given number is odd")

**OUTPUT:**

enter any number:14

the given number is even

**3.CHECK THE GIVEN YEAR IS LEAP YEAR OR NOT**

year=int(input("enter any year:"))

if year%4==0:

print("the given year is leap year")

else:

print("the given year is not leap yaer")

**OUTPUT:**

enter any year:2003

the given year is not leap year

**4.PRINT NUMBERS B/W 1 TO 100**

n=int(input("enter any number:"))

if n>=1 and n<=100:

print("the given number",n,"is in between 1 and 100")

else:

print("the given number",n,"is in between 1 and 100")

**OUTPUT:**

enter any number:50

the given number 50 is in between 1 and 100

**5.TO FIND BIGGEST NUMBER AMONG 2 NUMBERS**

num1=int(input("enter the first number:"))

num2=int(input("enter the second number:"))

if num1>num2:

print("the given num1 is biggest number")

else:

print("the given num2 is biggest number")

**OUTPUT:**

enter the first number:17

enter the second number:20

the given num2 is biggest number

**6.ACCEPT 3 NUMBERS AND FIND WHICH IS GREATER NUMBER**

a=int(input("enter the first number:"))

b=int(input("enter the second number:"))

c=int(input("enter the third number:"))

if a>b>c:

print("a is biggest number")

elif b>c:

print("b is biggest number")

else:

print("c is biggest number")

**OUTPUT:**

enter the first number:10

enter the second number:12

enter the third number:20

c is biggest number

**7. ACCEPT A NUMBER AND PRINT WORD IN ENGLISH FORMAT**

num=int(input(" enter a number: "))

if num==0:

print("zero")

elif num==1:

print("one")

elif num==2:

print("two")

elif num==3:

print("three")

elif num==4:

print("four")

elif num==5:

print("five")

else:

print(" number is out of range")

**OUTPUT:**

enter a number: 4

four

**LOOPING STATEMENTS**

**1.FOR LOOP**

**8. TO PRINT NUMBERS FROM 0 TO 10**

for i in range(11):

print(i)

**OUTPUT:**

0

1

2

3

4

5

6

7

8

9

10

**9.TO PRINT ODD NUMBERS BETWEEN FROM 0 TO 20**

for x in range(21):

if x%2!=0:

print(x,end=' ')

**OUTPUT:**

1 3 5 7 9 11 13 15 17 19

**10.TO PRINT NUMBERS FROM 10 TO 1**

for x in range(10,0,-1):

print(x)

**OUTPUT:**

10

9

8

7

6

5

4

3

2

1

**11. TO PRINT NUMBER FROM 0 TO 6 EXCEPT 3 AND 5**

for x in range(7):

if x!=3 and x!=5:

print(x)

**OUTPUT:**

0

1

2

4

6

**12.ACCEPT A NUMBER AND PRINT MULTIPLICATION**

n=int(input("enter any number:"))

print("multiplication table of:",n)

print("===========================")

for i in range(1,11):

print(n,"\*",i,"=",(n\*i))

**OUTPUT:**

enter any number:5

multiplication table of: 5

===========================

5 \* 1 = 5

5 \* 2 = 10

5 \* 3 = 15

5 \* 4 = 20

5 \* 5 = 25

5 \* 6 = 30

5 \* 7 = 35

5 \* 8 = 40

5 \* 9 = 45

5 \* 10 = 50

**13.ACCEPT THE LIST AND PRINT THE LIST ELEMENTS AND PRINT SUM OF LIST ELEMENTS**

list=eval(input("enter some list elements:"))

sum=0

for x in list:

sum=sum+x

print("the sum value is:",sum)

**OUTPUT:**

enter some list elements:10,20,30,40,50

the sum value is: 150

**14.TO FIND THOSE NUMBERS ARE DIVISION BY 7 AND MULTIPLICATION OF 5 IN BETWEEN 1 TO 100**

n=int(input("enter a number;"))

for x in range(1,n+1):

if x%7==0 and x%5==0:

print(x)

**OUTPUT:**

enter a number;100

35

7

**2.WHILE LOOP**

**15. TO PRINT NUMBERS FROM 1 TO 10**

i=1

while i<=10:

print(i,end=' ')

i=i+1

**OUTPUT:**

1 2 3 4 5 6 7 8 9 10

**16. TO PRINT NUMBERS FROM 10 TO 1**

i=10

while i>=1:

print(i,end=' ')

i=i-1

**OUTPUT:**

10 9 8 7 6 5 4 3 2 1

**17.ACCEPT A NUMBER AND FIND SUM OF N NATURAL NUMBER**

n=int(input("enter any number:"))

i=1

sum=0

while i<=n:

print(i)

sum=sum+i

i=i+1

print("sum is:",sum)

**OUTPUT:**

enter any number:10

1

2

3

4

5

6

7

8

9

10

sum is: 55

**18. TO FIND THOSE NUMBER ARE DIVISIBLE BY 7 AND MULTIPLICATION OF 5 IN B/W 1 TO 100**

n=int(input("enter any number:"))

i=1

while i<=n:

if i%7==0 and i%5==0:

print(i)

i=i+1

**OUTPUT:**

enter any number:100

35

70

**FUNCTIONS**

**1.TO CREATE A EMPTY LIST AND STORE THE ELEMENTS**

mylist=[]

n=int(input("enter any number:"))

for x in range(n):

num=int(input("enter a number:"))

mylist.append(num)

print("my updated list is :",mylist)

**OUTPUT:**

enter any number:5

enter a number:10

enter a number:20

enter a number:30

enter a number:40

enter a number:50

my updated list is : [10, 20, 30, 40, 50]

**2.TO ACCESSING AND REMOVING ELEMENT FROM A LIST**

l=[10,20,30,"milky",(10+20j),True,1]

print(l[3])

print(l[-3])

print(l[1:4])

print(l)

l.remove(30)

print(l)

**OUTPUT:**

milky

(10+20j)

[20, 30, 'milky']

[10, 20, 30, 'milky', (10+20j), True, 1]

[10, 20, 'milky', (10+20j), True, 1]

**3.TO FIND MIN,MAX AND LENGTH OF A LIST**

l=[10,20,30,40,60,True,1]

print(len(l))

print(l)

print(max(l))

print(min(l))

**OUTPUT:**

7

[10, 20, 30, 40, 60, True, 1]

60

True

**4.TO FIND SUM OF THE ELEMENTS IN A LIST**

mylist=[10,20,0,55,15]

sum=0

for i in mylist:

sum=sum+i

print("the sum is:",sum)

**OUTPUT:**

the sum is: 100

**5.TO ACCEPT A STRING AND CONVERTED INTO A LIST**

s=input("enter the string : ")

print(s.split())

**OUTPUT:**

enter the string : python is very simple programming language

['python', 'is', 'very', 'simple', 'programming', 'language']

**6.TO ACCEPT N NUMBES AND STORE THEM IN LIST,THEN PRINT THE LIST WITHOUT ODD NUMBERS IN IT**

n=int(input("enter the value of n:"))

mylist=[]

for i in range(n):

num=int(input("enter a number:"))

mylist.append(num)

print("even numbers are")

print("[",end="")

for num in mylist:

if num%2==0:

print(num,end=" ")

print("]")

**OUTPUT:**

enter the value of n:5

enter a number:12

enter a number:11

enter a number:14

enter a number:15

enter a number:8

even numbers are

[12 14 8 ]

**7.TO REMOVE SPECIFIC ELEMENT REVERSE THE LIST,COPY THE LIST INTO ANOTHER LIST**

list=[10,20,30,"milky",True,0,(10+20j),False,1,True]

print(list)

x=list.copy()

print(x)

list.pop(3)

print(list)

del list[2]

print(list)

list.reverse()

print(list)

list.clear()

print(list)

**OUTPUT:**

[10, 20, 30, 'milky', True, 0, (10+20j), False, 1, True]

[10, 20, 30, 'milky', True, 0, (10+20j), False, 1, True]

[10, 20, 30, True, 0, (10+20j), False, 1, True]

[10, 20, True, 0, (10+20j), False, 1, True]

[True, 1, False, (10+20j), 0, True, 20, 10]

[]