

## # Decision Making Statements

# write a program : take a user input, check that number is equal to zero if so print zero else print it is an integer

### #1) If-----else

```
a=int(input("Enter the Number : "))
if a==0:
    print("It is Zero")
else:
    print("It is an Integer")
```

↩ Enter the Number : 0  
It is Zero

```
a=int(input("Enter the Number : "))
if a==0:
    print("It is Zero")
else:
    print("It is an Integer")
```

↩ Enter the Number : 2  
It is an Integer

### #2) if-----else

```
a=int(input("Enter the Number : "))
if a > 0:
    print("It is Positive Number")
else:
    print("It is Negative Number")
```

↩ Enter the Number : 10  
It is Positive Number

### #3) else----if (elif)

```
a=int(input("Enter the Number : "))
if a==0:
    print("It is Zero")
elif a>0:
    print("It is Positive Number")
else:
    print("It is Negative Number")
```

↩ Enter the Number : 20  
It is Positive Number

```
a=int(input("Enter the Number : "))
if a==0:
    print("It is Zero")
elif a>0:
    print("It is Positive Number")
else:
    print("It is Negative Number")
```

↩ Enter the Number : -10  
It is Negative Number

### #4) Nested if

```
a = int(input("Enter the number : "))
if a >= 0:
    if a == 0:
        print("It is Zero")
    else:
        print("It is Positive number")
else:
    print("It is Negative number")
```

↩ Enter the number : 18  
It is Positive number

```
# Loops
#1) For loop ( sum of all numbers in a list)

List=[]
sum=0;

a=int(input("Enter the Total Number of List : "))
for i in range(1,a+1):
    b=int(input("Enter the %d Elements : "%i))
    List.append(b)

for b in List:
    sum = sum + b

print("The Sum of Elements in the List : ",sum)
```

```
➡ Enter the Total Number of List : 5
Enter the 1 Elements : 2
Enter the 2 Elements : 3
Enter the 3 Elements : 4
Enter the 4 Elements : 5
Enter the 5 Elements : 6
The Sum of Elements in the List : 20
```

#2) Program to print letters in given Word

```
str=input("Enter the Word : ")
print("The Letters in given word are : ")
for letters in str:
    print(letters)
```

```
➡ Enter the Word : Omprakash
The Letters in given word are :
O
m
p
r
a
k
a
s
h
```

#3) range in for loop

```
a=int(input("Enter the First Number : "))
b=int(input("Enter the Last Number : "))
for i in range(a,b):
    print(i)
```

```
➡ Enter the First Number : 10
Enter the Last Number : 20
10
11
12
13
14
15
16
17
18
19
```

#4) Program to check if the number is present in given list

```
List=[]
a=int(input("Enter Total Number of Elements : "))
for i in range(0,a):
    b=int(input())
    List.append(b)
value=int(input("Enter Element to be searched in the List : "))

found = False
for i in List:
    if(i == value):
        found = True
        break
if(found):
```

```

    print("It is Present in the List!!!")
else :
    print("It is not Present in the List!!!")

➡ Enter Total Number of Elements : 5
10
20
30
40
50
Enter Element to be searched in the List : 20
It is Present in the List!!!

```

#5) While loop  
# Program to calculate the sum of n Natural Numbers

```

Number=int(input("Enter any Number : "))
Total = 0
i = 1

while (i <= Number):
    Total = Total + i
    i = i + 1

print("The Sum of Natural Numbers from 1 to {0} = {1}".format(Number, Total))

```

```

➡ Enter any Number : 20
The Sum of Natural Numbers from 1 to 20 = 210

```

#1) break statement

```

a=int(input("Enter the First Number : "))
b=int(input("Enter the Last Number : "))
for i in range(a,b):
    print(i)
    if i==7:
        break

```

```

➡ Enter the First Number : 2
Enter the Last Number : 10
2
3
4
5
6
7

```

#2) continue statement

```

a=int(input("Enter the First Number : "))
b=int(input("Enter the Last Number : "))
for i in range(a,b):
    print(i)
    if i==7:
        continue

```

```

➡ Enter the First Number : 2
Enter the Last Number : 15
2
3
4
5
6
7
8
9
10
11
12
13
14

```

#3) pass statement

```

str=input("Enter the String : ")
for i in str:
    if(i=="e"):

```

```
    pass
else:
    print(i)
```

Enter the String : Computer Science

C  
o  
m  
p  
u  
t  
r  
  
S  
c  
i  
n  
c

#6) While with else

```
i=1
while(i<=5):
    print("PYTHON")
    i=i+1
else:
    print("End of Program")
```

PYTHON  
PYTHON  
PYTHON  
PYTHON  
PYTHON  
End of Program

#7) Nested While loop

```
i = 1
while i <= 5:
    j = 1
    while j <= 20:
        print(j,end="")
        j = j + 1
    i = i + 1
    print()
```

1234567891011121314151617181920  
1234567891011121314151617181920  
1234567891011121314151617181920  
1234567891011121314151617181920  
1234567891011121314151617181920