Heading1

Heading2

Heading3

Heading4

Heading5

Heading6

Python Programming
Python Programming
Bold
Italic

https://www.google.com [(https://www.google.com)](https://www.google.com)

- unOrdered List
  - Sublst1
    - Sublist
    - sublist
  - sublist2
  - sublist3

1. Ordered List
2. Orderes List2

Python Basics

In [3]:

```python
#Print Statement
print("Hello World")
print("Hello APSSDC")
```

```
Hello World
Hello APSSDC
```

Variables In Python

In [9]:

```python
# Syntax:Variable_name = value
a = 10
b = 20
s = "Python"
c = 55.4
d = True
#If you want know the variable data type there is a
#  predefined method called type()
print(type(a))
print(type(b))
print(type(s))
print(type(c))
print(type(d))

```

```
<class 'int'>
<class 'int'>
<class 'str'>
<class 'float'>
<class 'bool'>
```

In [10]:

```python
k = "50"
m = "77.9"
n = "True"
print(type(k))
print(type(m))
print(type(n))
```

```
<class 'str'>
<class 'str'>
<class 'str'>
```

In [14]:

```python
a,b,c = 60,70,80
print(a)
print(b)
print(c)
```

```
60
70
80
```

In [16]:

```python
s = "python"
print(s)
```

```
python
```

In [19]:

```python
1  a,b,c = 80,"Python",True
2  print(a)
3  print(b)
4  print(c)
```

```
80
Python
True
```

In [20]:

```python
1  a = b = c = d = 80
2  print(a,b,c,d)
```

```
80 80 80 80
```

In [24]:

```python
1  a = "50"#To integer there is
2  print(type(a))              #predefined method called int()
3  b = int(a)
4  print(type(b))
5
```

```
<class 'str'>
<class 'int'>
```

In [28]:

```python
1  #If you want to convert any value into a string then
2  #  there is predefined method called str()
3  s = 555
4  n = str(s)
5  print(type(n))
6  print(type(s))
```

```
<class 'str'>
<class 'int'>
```

In [31]:

```python
1  a = 60
2  c = float(a)
3  print(type(a))
4  print(type(c))
```

```
<class 'int'>
<class 'float'>
```

In [34]:

```python
a = 10
b = 60
print(id(a))
print(id(b))
```

140706476495968
140706476497568

Operators in Python

- Arithmetic operators(+,-,,/,%,*,//)
- Assignment operators(=,+=,-=,=,/=,*=)
- Comparison operators(<,<=,>,>=,!=,==)
- Logical operators(and,or,not)
- Identity operators(is,is not)
- Membership operators(in,not in)
- Bitwise operators(&,|,^,~,<<,>>)

In [35]:

```python
# Arithmetic operators(+,-,*,/,%,**,//)
a = 20
b = 10
print(a+b)#It gives addition
print(a-b)#Substraction
print(a*b)#multiplication
print(a/b)#float Division
print(a%b)#modulus division(It gives Reminder)
print(a**b)# power of
print(a//b)## Integer Division
```

30
10
200
2.0
0
10240000000000
2

In [45]:

```python
#If you want to access the input from the user
#   there is predefined method called input()
a = input()
print(type(a))
a = int(a)
print(a)
print(type(a))
```

```
50
<class 'str'>
50
<class 'int'>
```

In [4]:

```python
a = input("Enter a value ")
```

```
Enter a value 70
```

In [20]:

```python
#Task
#1.Read the two values from the user and
#   then perform the arthematic operations
#       by using arthematic operators
#Input: a = 10
#       b = 10
#output:Sum of 10 and 10 is : 20
#       Multiplication of 10 and 10 is : 100
a = int(input("Enter a value "))
b = int(input("Enter b value "))
print("sum of ",a,"and",b,"is : ",a+b)
print("Substraction of ",a,"and",b,"is : ",a-b)
print("multiplication of ",a,"and",b,"is : ",a*b)
print("Division of ",a,"and",b,"is : ",a/b)
print("Modular Division of ",a,"and",b,"is : ",a%b)
print(a," Power of ",b,a**b)



```

```
Enter a value 10
Enter b value 5
sum of  10 and 5 is :  15
Substraction of  10 and 5 is :  5
multiplication of  10 and 5 is :  50
Division of  10 and 5 is :  2.0
Modular Division of  10 and 5 is :  0
10  Power of  5 100000
```

In [ ]:

```python

```

In [31]:

```python
#Assignment operators(=,+=,-=,*=,/=,**=)
a = 10
b = 4
print(a==b)
a+=1#a = a+1
a-=1#a=a-1
a*=1#a = a*1
a/=4#a = a/4
print(a)
```

False
2.5

In [37]:

```python
#Comparison operators(<,<=,>,>=,!=,==)
a = 10
b = 50
print(a<b)
print(a>b)
print(a<=b)
print(a>=b)
print(a!=b)
print(a==b)
```

True
False
True
False
True
False

In [46]:

```python
#Logical operators(and,or,not)
a = 10
b = 60
print(a<5 and b>6)
print(a<5 or b>6)
print(not a<5)
```

False
True
True

In [55]:

```python
#Bitwise operators(&,|,^,~,<<,>>)
#8421
a = 5  #0101  #0010
b = 4  #0100
#      ======
#       0100
print(a&b)
print(a|b)
print(~a)#-(a+1)
print(a<<1)
print(a>>6)
```

```
4
5
-6
10
0
```

Conditional Statements

- If
- If else
- nested If
- elif

In [60]:

```python
#If Statement
#Syntax :
# if condition:
#     statements
a = 6
if a%2 == 0:
    print("Even")


```

```
Even
```

In [62]:

```python
#If else Statement
# Syntax:
# if condtion:
#     statements..
# else:
#     statements..
# To check given number is a odd or even
n = int(input())
if n%2 != 0:
    print("ODD")
else:
    print("EVEN")


```

```
6
EVEN
```

In [63]:

```python
#To check given number positive number or not
#     If the number is postive then print("POSITIVE")
#     If the number is negative the print("NEGATIVE")
```

In [64]:

```python
# To heck given number is divisible by 3 and 7
# if it is divisible by both numbers(3,7) then
# print that number other wise
# print "not divisible by 3 and 7"
```

In [67]:

```python
#nested IF
#Syntax:
# if condition:
#     if condition:
#         statements..
# else:
#     statments..
#If the given number is positive then check that number
# Even or Odd
n = int(input())
if n>0:
    if n%2 == 0:
        print("Even")
    else:
        print("Odd")
else:
    print("The given number is negative")
```

```
5
Odd
```

In [ ]:

```python
#syntax:
# if condition1:
#     statement1
# elif condition2:
#     statement2
# elif condition3:
#     statement3
# elif conditionn:
#     statementn
# else:
#     statement

```

In [68]:

```python
n = int(input())
if n%3==0:
    print(n,"is Divisible by 3")
elif n%5==0:
    print(n,"is Divisible by 5")
elif n%7==0:
    print(n,"is Divisible by 7")
else:
    print(n)
```

11
11

In [69]:

```python
n = int(input())
if n>0:
    print("POSITIVE")
else:
    print("NEGATIVE")
```

-345
NEGATIVE

In [ ]:

```
# userid: 455
# pin: 1010

# Input: Enter userid: 566
#        Enter pin: 255
# Output: Invalid userid 566 or pin

# Input: Enter userid: 455
#        Enter pin: 154
# Output: Invalid userid 455 or pin

# Input: Enter userid: 455
#        Enter pin: 1010
# Output: Welcome User 455

```

In [75]:

```python
print("Registration Process details")
print("----------------------------------")
fuid = int(input("Enter userid to fix: "))
fpin = int(input("Enter pin to fix: "))
print("----------------------------------")
print("Userid pin Validation")
print("----------------------------------")
uid = int(input("Enter Userid: "))
pin = int(input("Enter pin: "))
if uid == fuid and pin == fpin:
    print("Welcome User ",uid)
else:
    print("Invalid userid ",uid,"or pin")
```

```
Registration Process details
----------------------------------
Enter userid to fix: 100
Enter pin to fix: 101
----------------------------------
Userid pin Validation
----------------------------------
Enter Userid: 100
Enter pin: 101
Welcome User   100
```

In [ ]:

```
# Userid: 500
# pin: 250


# Input: Enter userid: 250

# Ouput: Invalid userid 250

# Input: Enter userid: 500
#         Enter pin: 256
# Ouput: Invalid pin

# Input: Enter userid: 500
#         Enter pin: 250
# Output: Welcome userid: 500
```

In [78]:

```
uid = int(input("Enter userid: "))
if uid == 500:
    pin = int(input("Enter pin: "))
    if pin == 250:
        print("Welcome Userid: ",uid)
    else:
        print("Invalid pin")
else:
    print("Invalid userid ",uid)
```

```
Enter userid: 500
Enter pin: 250
Welcome Userid:   500
```

In [ ]:

```python
# Iterations:

#      For
#      while


#      for
#      syntax:

#          for itervariable in range(start,stop,step):
#              stmnts

#      while
#      syntax:

#          while condition:
#              stmnts
#              updation of itervariable


```

In [80]:

```python
n = int(input())
for i in range(n):
    print(i,end=" ")
```

```
5
0 1 2 3 4
```

In [82]:

```python
n = int(input())
for i in range(5,n+1):
    print(i,end=" ")
```

```
20
5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
```

In [87]:

```python
n = int(input())
for i in range(n-1,0,-2):
    print(i,end=" ")
```

```
10
9 7 5 3 1
```

In [ ]:

```
20
11AK1A0501           12AK1A0501
11AK1A0502           12AK1A0502
11AK1A0503           12AK1A0503
.......              .......
......               ........
.......              .......
.....                .......
11AK1A0520           12AK1A0520
```

In [89]:

```python
n = int(input())
for i in range(1,n+1):
    if i<=9:
        print("11AK1A050"+str(i))
    else:
        print("11AK1A05"+str(i))
```

```
11
11AK1A0501
11AK1A0502
11AK1A0503
11AK1A0504
11AK1A0505
11AK1A0506
11AK1A0507
11AK1A0508
11AK1A0509
11AK1A0510
11AK1A0511
```

In [ ]:

```
1
```