In [ ]:

```
# for statement
# to print natural numbers from 0-10
```

In [2]:

```
for i in range(11):
    print(i,end=" ")
```

```
0 1 2 3 4 5 6 7 8 9 10
```

In [15]:

```
# to give the step value to print the odd numbers from starting value as one
for i in range(1,100,2):
     print(i,end=" ")
```

```
1 3 5 7 9 11 13 15 17 19 21 23 25 27 29 31 33 35 37 39 41 43 45 47 49 51 53
55 57 59 61 63 65 67 69 71 73 75 77 79 81 83 85 87 89 91 93 95 97 99
```

In [22]:

```
# to print the values starting character 0 and ending character 50 to split 3 elements
for i in range(0,50,3):
      print(i,end=" ")
```

```
0 3 6 9 12 15 18 21 24 27 30 33 36 39 42 45 48
```

In [34]:

```
# to print the 1 to n natural numbers in ascending order
n=int(input("enter a natural number:"))
for i in range(1,n+1):
    print(i,end=" ")
```

```
enter a natural number:30
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 2
9 30
```

In [35]:

```
n=int(input("enter a natural number:"))
for i in range(n,0,-1):
    print(i,end=" ")
```

```
enter a natural number:77
77 76 75 74 73 72 71 70 69 68 67 66 65 64 63 62 61 60 59 58 57 56 55 54 53 5
2 51 50 49 48 47 46 45 44 43 42 41 40 39 38 37 36 35 34 33 32 31 30 29 28 27
26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1
```

In [ ]:

```
# break statement
```

In [41]:

```
for i in 'apssdc':
    if i=='d':
        break
    else:
        print(i,end=" ")
```

```
a p s s
```

In [45]:

```
for i in '12345678910':
    if i=='5':
        break
    else:
        print(i,end=" ")
```

```
1 2 3 4
```

In [48]:

```
for i in 'asma':
    if i=='m':
        break
    else:
        print(i,end=" ")
```

```
a s
```

In [49]:

```
# to print the range of 1 to 10 break
for i in range(1,10):
    if i==6:
        break
    else:
        print(i,end=" ")
```

```
1 2 3 4 5
```

In [74]:

```
# to print only even numbers in between 1 to 20 using continue keyword
for i in range(2,21,2):
    if i=='1':
        continue
    else:
        print(i,end=" ")
```

```
2 4 6 8 10 12 14 16 18 20
```

In [73]:

```
for i in range(2,20,2):
    print(i,end=" ")
```

```
2 4 6 8 10 12 14 16 18
```

In [76]:

```
for i in range(1,21):
    if (i%2!=0):
        continue
    else:
        print(i,end=" ")
```

```
2 4 6 8 10 12 14 16 18 20
```

In [77]:

```
# swap between two numbers
a=6
b=7
temp=a
a=b
b=temp
print(a,b)
```

```
7 6
```

In [78]:

```
ch=str(input("enter first name:"))
cha=str(input("enter second name: "))
print(ch,cha)
temp=ch
ch=cha
cha=temp
print(ch,cha)
```

```
enter first name:shaik
enter second name: asma
shaik asma
asma shaik
```

In [80]:

```
# how to generate a random number in python
import random
print(random.randint(0,20))
```

```
13
```

In [89]:

```
# to print the alphabets in python
import string
print("Alphabets from a-z:")
for letter in string.ascii_lowercase:
    print(letter,end=" ")
print("\nAlphabets from A-Z:")
for letter in string.ascii_uppercase:
    print(letter,end=" ")
```

```
Alphabets from a-z:
a b c d e f g h i j k l m n o p q r s t u v w x y z
Alphabets from A-Z:
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
```

In [90]:

```
import string
print(string.ascii_lowercase)
print(string.ascii_uppercase)
```

```
abcdefghijklmnopqrstuvwxyz
ABCDEFGHIJKLMNOPQRSTUVWXYZ
```

In [4]:

```
# program to display calender of the given month and year
import calendar
mm=int(input("enter month:"))
yy=int(input("enter year:"))
print(calendar.month(yy,mm))
```

```
enter month:11
enter year:2024
   November 2024
Mo Tu We Th Fr Sa Su
             1  2  3
 4  5  6  7  8  9 10
11 12 13 14 15 16 17
18 19 20 21 22 23 24
25 26 27 28 29 30
```

In [2]:

```
import calendar
year=2022
month=11
print(calendar.month(year,month))
```

```
   November 2022
Mo Tu We Th Fr Sa Su
    1  2  3  4  5  6
 7  8  9 10 11 12 13
14 15 16 17 18 19 20
21 22 23 24 25 26 27
28 29 30
```

In [5]:

```
import calendar
print(calendar.month(1999,11))
```

```
   November 1999
Mo Tu We Th Fr Sa Su
 1  2  3  4  5  6  7
 8  9 10 11 12 13 14
15 16 17 18 19 20 21
22 23 24 25 26 27 28
29 30
```

functions:

* reusability of the code

* easy debugging

function is a group of statements, it can perform one specific task.

function keyword is def

in python by using "def" keyword we can perform the functions.

Syntax:

def function_name(argument_list):

statements

return value.

Example:

def add(2,3):

c=a+b;

return c

Types of functions:

1.with arguments and with return values

syntax:

def function_name(argument_list):

statements

return value.

2. with arguments and without return values

syntax:

def function_name(argument_list)

statements

print values.

3.without arguments and with return values

4.without arguments and without return values

1.function definition

def function_name(arguments)

2.function calling

function name(variable_name)

In [17]:

```
def add(a,b):
    c=a+b;
    return c
print(add(2,3))
print(add(4,5))
```

```
5
9
```

In [2]:

```
# example 1:with arguments and with return values
n1=int(input("enter n1 value:")) #step1 n1=10 n2=10
n2=int(input("enter n2 value:")) #step2
def addition(a,b): # a=n1,b=n2  #step3
    c=a+b          #c=10+10
    return c       #c=20
addition(n1,n2)    #functioncallingagainstep3
```

```
enter n1 value:58
enter n2 value:77
```

Out[2]:

```
135
```

In [6]:

```
# example 2: with arguments and without return values
n1=int(input("enter n1 value:")) #step1 n1=20 n2=10
n2=int(input("enter n2 value:")) #step2
def subtraction(a,b):            # a=n1,b=n2  #step3
    c=a-b                        #c=20-10
    print (c)                      #c=10
subtraction(n1,n2)               #function calling again step3
```

```
enter n1 value:77
enter n2 value:58
19
```

In [19]:

```
# example 3: without arguments and with return values

def addition():
    a=58
    b=77
    sum=a+b
    return sum
addition()
```

Out[19]:

```
135
```

In [18]:

```
# example 4: without arguments and without return values

def addition():
    a = 20
    b = 30
    sum=a+b
    print ("after calling:",sum)
addition()
```

```
after calling: 50
```

In [4]:

```
n1=int(input("enter n1 value:"))
n2=int(input("enter n2 value:"))
def addition():
    sum=n1+n2
    print ("after calling:",sum)
addition()
```

```
enter n1 value:2
enter n2 value:2
after calling: 4
```

In [6]:

```
n1=int(input("enter n1 value:"))
n2=int(input("enter n2 value:"))
def addition():
    sum=n1+n2
    return sum
addition()
```

```
enter n1 value:2
enter n2 value:4
```

Out[6]:

```
6
```

In [ ]: