

In [3]:

```
1 j = 1
2 while j <= 10:
3     print(j)
4     j+=1
5
```

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

In [4]:

```
1 i= 1
2 while(i<4):
3     j = 1
4     while(j<4):
5         print(1, end=' ')
6         j+=1
7     print()
8     i+=1
```

```
1 1 1
1 1 1
1 1 1
```

In [8]:

```
1 i = 1
2 while((i < 10)):
3     print(i,end=',')
4     i+=1
5
```

```
1,2,3,4,5,6,7,8,9,
```

In [11]:

```

1 i = 1
2 while i<= 3:
3     j = 1
4     while j<=2:
5         print(i,j)
6         j+=1
7         break
8     print(i,j)
9     i+=1

```

```

1 1
1 2
2 1
2 2
3 1
3 2

```

In [6]:

```

1 n = int(input('Enter number of rows : '))
2
3 i = 1
4 while i <= n :
5     j = n
6     while j >= i:
7         print("*", end = " ")
8         j -= 1
9     print()
10    i += 1

```

Enter number of rows : 5

```

* * * * *
* * * *
* * *
* *
*

```

In [3]:

```

1 n = int(input("Enter number of rows:"))
2
3 i = 1
4 while(i<=n):
5     j = 1
6     while(j<=i):
7         print("*", end = " ")
8         j += 1
9     print()
10    i += 1

```

Enter number of rows:4

```

*
* *
* * *
* * * *

```

In [6]:

```
1 x = range(2)
2 x
3
```

Out[6]:

```
range(0, 2)
```

In [44]:

```
1 n = 3
2 i = 1
3
4 while i<=n:
5     # printing stars
6     print("* " * i)
7     i+=1
8
```

```
*
* *
* * *
```

In [46]:

```
1
```

In [13]:

```
1 n = int(input("Enter number of rows:"))
2
3 i = 1
4 while(i<=n):
5     j = n
6     while(j>=i):
7         print(i, end = " ")
8         j -= 1
9     print()
10    i += 1
```

```
Enter number of rows:5
```

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

In [13]:

```
1 n = int(input("Enter number of rows:"))
2
3 i = 1
4 while(i<=n):
5     j = 1
6     while(j<=i):
7         print(j, end = " ")
8         j += 1
9     print()
10    i += 1
```

Enter number of rows:3

```
1
1 2
1 2 3
```

In []:

```
1 n = int(input("Enter number of rows:"))
2
3 i = 1
4 while(i<=n):
5     j = 1
6     while(j<=i):
7         print(j, end = " ")
8         j += 1
9     print()
10    i += 1
```

In [13]:

```
1 n = int(input("Enter number of rows:"))
2
3 i = 1
4 while(i<=n):
5     j = 1
6     while(j<=i):
7         print(i, end = " ")
8         j += 1
9     print()
10    i += 1
```

Enter number of rows:5

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

In [15]:

```

1 n = int(input("Enter number of rows:"))
2 k = 1
3 i = 1
4 while(i<=n):
5     j = 1
6     while(j<=i):
7         print(k, end = " ")
8         j += 1
9         k += 1
10    print()
11    i += 1

```

Enter number of rows:5

```

1
2 3
4 5 6
7 8 9 10
11 12 13 14 15

```

In [52]:

```

1 n = int(input("Enter number of rows:"))
2 m = int(input("Enter number of col:"))
3 k = 1
4 i = 1
5 while(i<=n):
6     j = 1
7     while(j<=m):
8         print("{:4d}".format(k), end = " ")
9         j += 1
10        k += 1
11    print()
12    i += 1

```

Enter number of rows:3

Enter number of col:5

```

1      2      3      4      5
6      7      8      9     10
11     12     13     14     15

```

In [7]:

```

1 n = int(input("Enter number of rows:"))
2 for i in range(1,n+1):
3     for j in range(n,i,-1):
4         print(" ",end='')
5     for k in range(1,i+1):
6         print(i,end='')
7     print()
8

```

Enter number of rows:3

```

1
22
333

```

In [21]:

```
1 n = 5
2 for i in range(1,n):
3     for j in range(1,i+1):
4         print(chr(j+64), end=" ")
5     print()
```

A

AB

ABC

ABCD

In [1]:

```
1 n = int(input("Enter number of rows:"))
2 for i in range(1,n+1):
3     for j in range(n,i,-1):
4         print(" ",end=' ')
5     for k in range(1,i+1):
6         print(i,end=' ')
7     print()
```

Enter number of rows:5

```
1
22
333
4444
55555
```

In [2]:

```
1 n = int(input("Enter number of rows:"))
2 for i in range(1,n+1):
3     for j in range(n,i,-1):
4         print(" ",end=' ')
5     for k in range(0,i):
6         print(i,end=' ')
7     print()
```

Enter number of rows:4

```
1
22
333
4444
```

In [55]:

```

1  n = int(input("Enter number of rows:"))
2  for i in range(1,n+1):
3      for j in range(n,i,-1):
4          print(" ",end='')
5      for k in range(1,i+1):
6          print(k ,end='')
7      for l in range(i-1,0,-1):
8          print(l,end='')
9      print()

```

Enter number of rows:4

```

1
121
12321
1234321

```

In [61]:

```

1  n = int(input("Enter number of rows:"))
2  for i in range(1,n+1):
3      for j in range(n,i,-1):
4          print(" ",end='')
5      for k in range(1,i+1):
6          print('*',end='')
7      for l in range(i,1,-1):
8          print('*',end='')
9      print()

```

Enter number of rows:4

```

*
***
*****
*****

```

In [22]:

```

1  n = int(input("Enter number of rows:"))
2  k = n-1 #number of spaces
3  for i in range(1,n+1):
4      for j in range(n,i,-1):
5          print(' ',end='')
6      for k in range(1,i+1):
7          print('* ',end='')
8      print()
9

```

Enter number of rows:4

```

*
* *
* * *
* * * *

```

In [29]:

```
1 #Write a program that prints all unique combinations of 1,2, and 3.
2
3 a,b,c = input("Enter three different digits").split()
4 print(a,b,c)
5 int(a)
6 int(b)
7 int(c)
8
9 for i in range(3)
```

Enter three different digits1 2 3
1 2 3

Out[29]:

3

In [1]:

```
1 count = 0
2 while(count<3):
3     count += 1
4     print("Hello")
5
6
```

Hello
Hello
Hello

In [11]:

```
1 i = 0
2 while(i<10): i += 1; print(i, end = ' ')
```

1 2 3 4 5 6 7 8 9 10

In [7]:

```
1 count = 0
2 while(count < 3): count += 1; print("hello")
```

hello
hello
hello

In [34]:

```
1 i = 7
2 while(i > 1):
3     i -= 1
4     if i == 5:
5         # pass
6         # print("in if block")
7         print('Current variable value :',i)
8     print("Good bye!")
```

Current variable value : 5
Good bye!

In [31]:

```
1 i = 0
2 string = "Programming is Fun"
3
4 while(i < len(string)):
5     if(string[i]=='m'):
6         #         i += 1
7         pass
8     print(string[i],end = "")
9     i += 1
```

Programming is Fun

In [12]:

```
1 value = 7
2 while(value > 1):
3     value = value -1
4     if value == 5:
5         break
6     print('Current variable value :',value)
7 print("Good bye!")
```

Current variable value : 6

Good bye!

In [15]:

```
1 value = 7
2 while(value > 1):
3     value = value -1
4     if value == 5:
5         pass
6     print("This is a pass block...")
7     print('Current variable value :',value)
8 print("Good bye!")
```

Current variable value : 6

This is a pass block...

Current variable value : 5

Current variable value : 4

Current variable value : 3

Current variable value : 2

Current variable value : 1

Good bye!

In [29]:

```
1  # Python program to demonstrate
2  # while-else loop
3
4  i = 0
5  while i < 4:
6      i += 1
7      print(i)
8      break
9  else:
10     print("No Break\n")
11
12 a=10
13 print(a)
```

```
1
10
```

In []:

```
1
```

In [37]:

```
1  i = 0
2  while i < 4:
3      i += 1
4      print(i)
5      break
6  # else:
7  #     print("No Break")
8
```

```
1
```

In [30]:

```
1  a = int(input('Enter a number (-1 to quit): '))
2
3  while a != -1:
4      a = int(input('Enter a number (-1 to quit): '))
5
```

```
Enter a number (-1 to quit): -1
```

In [4]:

```
1 i=1
2 while i<=10:
3     print(i)
4     pass
5     if(i<10):
6         print("Good Bye..")
7         continue
8     else:
9         print("True")
10    i += 1
11
12 print("End of Program")
13
```

```
1
Good Bye..
1
Good Bye..
1
Good Bye..
1
Good Bye..
1
Good Bye..
1
Good Bye..
1
Good Bye..
1
Good Bye..
1
Good Bye..
1
~ ~ ~
```

In [10]:

```
1 i = 10
2 while True:
3     print(i*i, end = "..")
4     pass
5     print("Printing square")
6     break
7
8
```

```
100..Printing square
```

In [12]:

```
1 a = 10
2 a = not not a
3 print(a)
4
5
```

```
True
```

In [31]:

```
1 a = 10
2 b = 60
3
4 if a and b > 70:
5     print("hello")
6 else:
7     print("Hi")
```

Hi

In [15]:

```
1 n = int(input("Enter number of rows:"))
2 m = int(input("Enter number of col:"))
3 k = 1
4 i = 1
5 while(i<=n):
6     j = 1
7     while(j<=m):
8         print("{:4d}".format(k), end = " ")
9         j += 1
10        k += 1
11    print()
12    i += 1
```

Enter number of rows:4

Enter number of col:2

```
1      2
3      4
5      6
7      8
```

In [5]:

```
1 n = 10
2 avg = 0.0
3 sum = 0
4
5 for i in range(1, n+1):
6     sum = sum + i
7 avg = sum/n
8 print("Avg =", avg)
9
```

Avg = 5.5

In [16]:

```

1 m = int(input("Enter the value:"))
2 n = int(input("Enter the value:"))
3
4 for i in range(m,n+1):
5     if(i%2==0):
6         print(i,"is even")
7     else:
8         print(i,"is odd")
9

```

Enter the value:4
Enter the value:6
4 is even
5 is odd
6 is even

In [36]:

```

1 m = int(input("Enter the value:"))
2 for i in range(1,11):
3     print(m,"x",i,"=",m*i)

```

Enter the value:2
2 x 1 = 2
2 x 2 = 4
2 x 3 = 6
2 x 4 = 8
2 x 5 = 10
2 x 6 = 12
2 x 7 = 14
2 x 8 = 16
2 x 9 = 18
2 x 10 = 20

In [18]:

```

1 for i in range(7,13):
2     for j in range(7,13):
3         #print(i, end='')
4         print("{:3d}".format(i),end=' ')
5     print()

```

```

7   7   7   7   7   7
8   8   8   8   8   8
9   9   9   9   9   9
10  10  10  10  10  10
11  11  11  11  11  11
12  12  12  12  12  12

```

In [20]:

```

1 i = 2
2 for i in range(5,2,-1):
3     print(i,end=' ')
4

```

5 4 3

In [18]:

```

1 r,l,b = 1.5678,10.5,12.66
2 name,age,salary='Rakshita',30,53000.55
3
4 print('radius={} length={} breadth={}'.format(r,l,b))
5 print('radius={2} length={1} breadth={0}'.format(l,r,b))
6
7 print('name={1:10} salary={1:10}'.format(name,salary))
8
9 print('radius={0:5.2f}'.format(r))

```

```

radius=1.5678 length=10.5 breadth=12.66
radius=12.66 length=1.5678 breadth=10.5
name= 53000.55 salary= 53000.55
radius= 1.57

```

In [12]:

```

1 #to print pythagorus triplets
2
3 for a in range(1,101):
4     for b in range(1,101):
5         for c in range(1,101):
6             if(a*a+b*b == c*c):
7
8                 print(a,b,c)
9
10
11

```

```

3 4 5
4 3 5
5 12 13
6 8 10
7 24 25
8 6 10
8 15 17
9 12 15
9 40 41
10 24 26
11 60 61
12 5 13
12 9 15
12 16 20
12 35 37
13 84 85
14 48 50
15 8 17
15 20 25
15 28 29

```