

Programs Based loops concept.

for loop

1. for i in range(1, 6, 1):

 for j in range(1, i+1, 1):

 print("*", end=" ")

 print()

Output:-

*
* *

* * * * *
* * * * *

* * * * *

2. for i in range(1, 6, 1):

 for j in range(1, i+1, 1):

 print(j, end=" ")

 print()

Output:-

1 2 3 4 5

1 2 3 4

1 2 3 4 5

3. val = 1

 for i in range(1, 6, 1):

 for j in range(1, i+1, 1):

 print(val, end="\t")

 val = val + 1

 print()

while loop

i = 1
while i <= 5:

 j = 1
 while j <= i:

 print("*", end=" ")

 j += 1

 print()

 i += 1

 print(i)

 print(i)

Output:-

```

    i = 1
    j = 1
    k = 1
    l = 1
    m = 1
    n = 1
    o = 1
    p = 1
    q = 1
    r = 1
    s = 1
    t = 1
    u = 1
    v = 1
    w = 1
    x = 1
    y = 1
    z = 1
  
```

⑥ for i in range (1, 6, 1):

for j in range (1, 6, 1):

if (i==1 & i==5 & j==1 & j==5):

print ("*", end=" ")

else:

print (" ", end=" ")

print ()

z = 6

i - 3 < j, print()

(1, 2, 3) print()

Output:-

```

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

⑤ for i in range (5, 0, -1):

for j in range (i, 0, -1):

print(j, end=" ")

print()

Output:-

```

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

i = 1

while i <= 5:

i = 1

while j <= 5:

if i == 1 & i == 5

& j == 1 & j == 5

print ("*", end=" ")

else: print (" ", end=" ")

print ()

j += 1

print ()

i += 1

i = 5

while i >= 1:

j = i

while j >= 1:

print(j, end=" ")

j -= 1

print()

i -= 1

print()

i -= 1

print()

i -= 1

print()

i -= 1

print()



⑥ for i in range(1, 6, 1):
 for j in range(5, i-1, -1):
 print(j, end="")
 print()

i = 5
 while i >= 1:
 j = 5
 while j >= 6 - i:
 print(j, end="")
 i -= 1
 print()
 i = 1

Output:-

5 4 3 2 1

5 4 3 2 1

5 4 3

5 4

5

⑦ for i in range(1, 5, 1):
 for j in range(5, 5-i, -1):
 print(j, end="")
 print()

:(i=1, 5) square of i is 1 ①

:(i=2, 5) square of i is 4

:(i=3, 5) square of i is 9

(""=break ("*") printing

(""=break, "i"=5 printing

while i >= 1:

j = 5

while j >= 6 - i:

print(j, end="")

j -= 1

print()

i -= 1

while i <= 5:

j = 5

while j >= 6 - i:

print(j, end="")

j -= 1

print()

i += 1

for i in range(1, 6, 1):

for j in range(5, 5-i, -1):

print(j, end="")

print()

for i in range(1, 5, 1):

for j in range(5, 5-i, -1):

print(j, end="")

print()

1 5 4 3 2 1

5 4 3 2 1

5 4 3

5 4

5

5 9

5 4 3

5 4 3 2

5 4 3 2 1

1 8 2 4 2

1 8 8 1 8

1 8 6

1 8

1