

Write a syntax of while loop inside for loop:

Syntax:

```
for var in range():#outer loop
    initialisation of while loop
    while(condition):#inner loop
        statements of inner loop
        inc/dec of while loop
    statements of outer loop
```

Write a syntax of for loop inside while loop:

Syntax:

```
initialisation of while loop
while(condition): #outer loop
    for var in range():
        statements of inner loop
    statements of outer loop
    inc/dec of while loop
```

1. Write a program to print

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

Code:

```
i = 1  
while(i<=5):  
    for j in range(1,6,1):  
        if(i==1 or i==5 or j==1 or j==5):  
            print("*",end = " ")  
        else:  
            print(" ",end = " ")  
    print()  
    i = i+1
```

2. Write a program to print

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

4 4 4 4

3 3 3

2 2

1

Code:

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

```
    j = 5
```

```
    while(j>i):
```

```
        print(" ",end="")
```

```
        j=j-1
```

```
    k=1
```

```
    while(k<=i):
```

```
        print(i,end = " ")
```

```
        k = k + 1
```

```
    print()
```

```
for i in range(4,0,-1):
```

```
    j = 5
```

```
    while(j>i):
```

```
        print(" ",end="")
```

```
        j=j-1
```

```
    k=1
```

```
    while(k<=i):
```

```
        print(i,end=" ")
```

```
        k = k + 1
```

print()