

DAY-13

SEPTEMBER-22

1. Write a program to print the pattern

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

CODE:

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

OUTPUT:

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

Manual tracing:

i = 1,2,3,4,5

Whenever i=1

j=(5,i,-1)=5,4,3,2

k=(1,i+1,1)=1

it prints 4 spaces and 1 star.

For i=2 j=5,4,3 k=2

For i=3 j=5,4 k=3

For i=4 j=5 k=4

For i=5 j=0 k=5

2. Write a program to print

*

* *

* * *

* * * *

* * * * *

* * * *

* * *

* *

*

Code:

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

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

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

```
    print()
```

```
for x in range(1,5,1):
    for y in range(5,x,-1):
        print("*",end=" ")
    print()
```

Output:

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

3. Write a program to print

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

Code:

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

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

```
    print(" "(2*(5-i)),end="")
```

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

```
    print("")
```

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

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

```
    print(" "(2*(5-j)),end="")
```

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

```
    print("")
```