

MODULE-2

PPT-2

Pattern printing

```
n = int(input("Enter any  
number"))
```

```
for i in range(n):
```

```
    for j in range(i):
```

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

```
    print(" ")
```

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

```
n = 5
```

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

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

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

```
    print("\r")
```

1

1 2

1 2 3

1 2 3 4

1 2 3 4 5

```
n = 5
```

```
m=1
```

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

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

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

```
    print("\r")
```

```
    m = m + 1
```

```
1 1 1 1 1
```

```
2 2 2 2
```

```
3 3 3
```

```
4 4
```

```
5
```

Practice

```
n = 5
for i in range(0,n+1,1):
    for j in
range(i+1,n+1,1):
        print(j, end=" ")
    print("\r")
```

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

Pyramid

- $n = 5$
- $k = n - 1$
- for i in $\text{range}(0, n)$:
 - for j in $\text{range}(0, k)$:
 - `print(end=" ")`
 - $k = k - 1$
 - for j in $\text{range}(0, i + 1)$:
 - `print("*", end=" ")`
 - `print("\r")`

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

Reverse pyramid

- `n=5`
- `k = n-1`
- `for i in range(n, -1, -1):`
- `for j in range(k, 0, -1):`
- `1):`
- `print(end=" ")`
- `k = k + 1`
- `for j in range(0, i +`
- `1):`
- `print("*", end=" ")`
- `print("\r")`

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

- `n=5`
- `for i in range(0, n):`
 - `for j in range(0, i + 1):`
 - `print("* ", end="")`
 - `print("\r")`
- `for i in range(n, -1, -1):`
 - `for j in range(0, i + 1):`
 - `print("* ", end="")`
 - `print("\r")`

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


Practice questions

```

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

```

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

Diamond and Pascal's Triangle Program

```

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

```

```

1
1 1
1 2 1
1 3 3 1
1 4 6 4 1
1 5 10 10 5 1
1 6 15 20 15 6 1

```

A
 A B
 A B C
 A B C D
 A B C D E
 A B C D E F
 G H I J K
 L M N O
 P Q R
 S T
 U

A B C D E F G F E D C B A
 A B C D E F F E D C B A
 A B C D E E D C B A
 A B C D D C B A
 A B C C B A
 A B B A
 A A

A
 A B A
 A B C B A
 A B C D C B A

1
 1 1
 1 2 1
 1 3 3 1
 1 4 6 4 1