

D.S.A

## Assignment - 6.1

DATE: 12-Feb  
PAGE: 44

Q.1 Explain the types and category of patterns with their coding structure?

ans => A "pattern" is a specific arrangement of characters or symbols in a systematic and predictable manner.

→ Patterns are often used for various purposes, such as

- creating shapes,
- printing formatted outputs, or
- recognizing specific sequence

→ Any type of pattern can be done using the coding structure of nested loop.

→ Generally, all patterns are done with nested for loop. But we can use any other loop also.

→ Any type of pattern can be easily solved by following steps.



- 1). Divide a pattern into row and column
- 2). Analyze the given pattern.
- 3). make a code.

E.g.

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

```
for (i=1; i<=5; i++)
{
    for (j=1; j<=i; j++)
    {
        cout << j;
    }
    cout << endl;
}
```