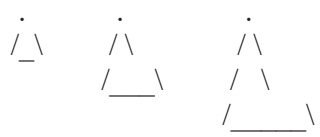
WEEK 4

1. Print the pattern upto N Lines:



N=2 N=3 N=4

2. Print a number as a 8 segment display N Lines:

N=2 N=3 N=4

3. Print the pattern upto N lines:

```
1 2          1 2 3          1 2 3 4
4 3          8 9 4         12 13 14 5
             7 6 5         11 16 15 6
                           10 9 8 7
N=2            N=3                N=4
```

4. Print the following pattern upto N lines:

```
1
1 1
1 2 1
1 3 3 1
1 4 6 4 1
1 5 10 10 5 1 …
```

5. Print the shape for Height = N

*** * * ***	**** * * * * ****	***** * * * * * * *****
N=3	N=4	N=5

6. Floyd's triangle is a right-angled triangular array of natural numbers as shown below:

```
1
2   3
4   5   6
7   8   9   10
11  12  13  14  15
```

Write a program to print the Floy'd triangle.

7. Write programs to print following patterns :

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

8.

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

9.

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

10.

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

11.

```
                                        1
                                       222
                                      33333
                                     4444444
                                    555555555
```

12.

```
    1
   212
  32123
 4321234
543212345
```

13. Write a program that prints the following diamond pattern:

```
  1
 123
12345
 123
  1
```

14. Write a program that takes an integer input n and prints a pattern using the multiplication table from 1 to n. Each cell in the pattern should contain the product of its row and column numbers. Here is a sample output:

Enter a number: 5

```
1 2  3  4  5
2 4  6  8  10
3 6  9  12 15
4 8  12 16 20
5 10 15 20 25
```

15. Write a program that takes an integer input n and prints all prime numbers from 2 to n using nested loops. Here is a sample output:

Enter a number: 20
2 3 5 7 11 13 17 19