**Ques to practice after studying the topics**

- Find min/max of 3 numbers

- Form different types of patterns -diamond, triangle, empty square

- Patterns ques (you can do any number of questions from these which you like)-

- Given N, print patterns upto N lines. For eg For N=6 , the following pattern will be printed.

1

11

111

1001

11111

100001

- Take N (number of rows), print the following pattern (for N = 4).

                       1                 1

                       1 2           2 1

                       1 2 3    3 2 1

                       1 2 3 4 3 2 1

- Take N (number of rows), print the following pattern (for N = 4).

                          1

                       2 3 2

                    3 4 5 4 3

                 4 5 6 7 6 5 4

- Take N as input. For a value of N=7, we wish to draw the following pattern :

                              1

                        2 1   1 2

                    3 2 1     1 2 3

                4 3 2 1       1 2 3 4

                    3 2 1     1 2 3

                        2 1   1 2

                             1

- Take N (number of rows), print the following pattern (for N = 5)

1

2 2

3 0 3

4 0 0 4

5 0 0 0 5

- Take N as input. For a value of N=5, we wish to draw the following pattern :

             5                              5

             5 4                       4 5

             5 4 3                 3 4 5

             5 4 3 2          2 3 4 5

             5 4 3 2 1    1 2 3 4 5

             5 4 3 2 1 0 1 2 3 4 5

             5 4 3 2 1    1 2 3 4 5

             5 4 3 2           2 3 4 5

             5 4 3                 3 4 5

             5 4                       4 5

             5                              5

- Take as input N, an odd number(>=5) Print the following pattern for N = 7

\*    \*\*\*\*

\*    \*

\*    \*

\*\*\*\*\*\*\*

       \*    \*

       \*    \*

\*\*\*\*    \*

- Take N (number of rows), print the following pattern (for N = 5).

     \* \* \* \* \*

     \* \*    \* \*

     \*          \*

     \* \*    \* \*

     \* \* \* \* \*

- Take n as number of rows, print the following pattern ( for n=5)

1 2 3 4 5

1 2 3 4 \*

1 2 3 \* \* \*

1 2 \* \* \* \* \*

1 \* \* \* \* \* \* \*

- Print pascal triangle till n rows. For n=5 given below

    1

   11

  121

 1331

14641

- Ques on finding time complexity

- Checking prime number in sqrt(n)

- Implement sieve of eratosthenes <https://leetcode.com/problems/count-primes/>

- Find smallest prime factor

- Check if a number if a power of 2 or not in O(1)

- Count total set bits

- Divide Integers without / operator

- Power Set (this is very important)

- Find MSB in o(1)

- Find the square of a number without using multiplication or division

- Convert Binary to decimal and vice versa  
- Finding number of 1 in binary rep

- Count digits of number

- Reverse a number

- Factorial of a number

- Check whether a number is Palindrome <https://practice.geeksforgeeks.org/problems/palindrome0746/1>

<https://leetcode.com/problems/palindrome-number/>

- Check whether a number is armstrong number

<https://practice.geeksforgeeks.org/problems/armstrong-numbers2727/1>

- Calculate Npr and ncr

- Write code for Fast exponentiation <https://leetcode.com/problems/powx-n/>