Lab 8

Logical Implementation

- Read about the previous lab session here.
- Writing code is like art; Do it beautifully with *Indentation and Comments*
- Don't cram everything in the main function, create a different function for each question

*OJ submission

1. *Two player coin game: given an array of size N denoting the value of the coins, two players can remove the coin from the either end of the current horizontal pile.
   1.1. N <= 2000; T<= 10
2. Given an array of size N, print all the subsets of the array.
   2.1. N <= 20
3. *Given an array of size N, each element can be multiplied with either -1, 0 or 1. There will be Q queries, each having one integer X. If you can form X from the array after multiplying each element with either -1, 0 or 1, print 1, else print 0.
   3.1. N <= 12
   3.2. Q <= 10^6
4. *Given an array of N elements, each element being the size of a chopstick. Find the total number of valid triangles you can form from the chopstick. A triangle is valid if sum of any two sides is strictly greater than the third side.
   4.1. N <= 2000; T <= 10
5. Given 2 strings S1 and S2, find/remove all occurrences of S2 from S1.
   5.1. |S1|, |S2| <= 1000, T <= 10
6. Given a grid of size NxM, there are K points where BONUS is kept. There will be Q queries, each having two integers X and Y, the location where you will spawn. You have to print the location of the nearest BONUS.
   6.1. N, M <= 1000; K <= N*M; N*M*K <= 10^7; Q <= 10^6;
   6.2. 1 <= X <= N; 1 <= Y <= N;