

# C++



## Lecture-1

# ARRAYS

- Arrays

Kartik Mathur

# Bubble Sort !

# Optimising Bubble Sort !

## Lets do some more problems?

- Write a function which takes an array as argument and sorts them using selection Sort.
- There are two sorted arrays. First one is of size  $m+n$  containing only  $m$  elements. Another one is of size  $n$  and contains  $n$  elements. Write a function to merge these two arrays into the first array of size  $m+n$ .

# Insertion Sort !

# Merge Sort !

# Binary Search!

# Binary Search Applications!

- Upper bound and Lower Bound
- Square Root
- Pivot Element



## Time to try?

- Write a function which takes a number  $X$  and an array and prints all pairs which sum to  $X$ .
- Write a function which takes two sorted arrays, and their lengths as arguments and returns combined median of them without using the third array.

# Max Sub-Array Sum?

# Pigeon-Hole Principle?

C++



Thank You!

Kartik Mathur

[kartik.mathur@codingblocks.com](mailto:kartik.mathur@codingblocks.com)

+91-9560196180