Combination vs Permutation

- **Combination** – a set of value where order does NOT matter
  - A, B, C and B, A, C are same combination of the values

- **Permutation** – a set of value where order DOES matter
  - A, B, C and B, A, C are two permutation of the same values

- as programmer, we want our program to be as condense and efficient as problem to save storage space, memory, and processing time

- depending on the problem, sometime all (or most) possible permutation must be listed