Homework 0 (due 4/10)

1. (10 pts.) Write a C++ program that reads a positive integer n and outputs all possible subsets of {1,2,3,.., n} as well as the total count of those subsets. Do **not** use recursion for this problem; instead use a queue (review the algorithm to generate permutations).

   For example, if n is 3, then the output should be

   ```
   { 1 2 3 }
   { 1 2 }
   { 1 3 }
   { 1 }
   { 2 3 }
   { 2 }
   { 3 }
   { }
   Total count = 8
   ```

   If n is 20, the total count should be 1048576.

   Order does not matter in listing the subsets or listing the members of a subset, e.g., $\{1, 2, 3\}$ is the same as {1, 3, 2}.

You must turn in by noon of the due date:

- a hard copy of your code with sample output, your name, and your section; and
- send **one** email message with the subject line: `HW0 Your_last_name Your_section` to `cs61@math.scu.edu` with your code attached. Please do **not** zip your file.