

Applications Programming

Repetition (Loop) Statement - 4
Typical Loop Applications

Algorithm with Loop

- Examples:
 - Read in a positive number
 - Translate numerical mark to letter grade

Process many items

- Example
 - Process a list of transactions using same steps
- General idea: same process, different data

Count/Sum/Average

- Example:
 - Given a list of items, count them, or calculate sum/average
- General idea: go through every item

Look Up Operation

- Example
 - Given a list of products, and one product's id/name, find its price
 - With a given condition, find all qualified items
- General Idea: go through every item, test to see whether the item meets the qualification

Max/Min

- Example:
 - Given a list of ordinal items, find the largest/smallest item among them
- General idea: keep track of the max/min item among the examined items, go through every item and compare it with the max/min item to see whether it is the new max/min