

# **SORTING**

# SORTING

- sorting = process of arranging group of items into ascending/descending order based on some criteria
- examples:
  - alphabetize list of names
  - sort list of numbers from highest to lowest
  - sort people by height
  - sort people by age

# SORTING

- We've been using `Collections.sort()` or a lambda function
- How do we actually describe an algorithm used to sort?
- Is there more than one?

# ACTIVITY

- Need 5 volunteers

# SELECTION SORT

- Goes through list positions one by one
- Selects value that should go there
- More formally:
  - go through list to find smallest value
  - swap that value with value in first spot
  - scan rest of list to find next smallest value
  - swap that value with value in second spot
  - continue with remaining spots for each position in the list

# SELECTION SORT - COMPLEXITY

- Think about the work it does:
  - How many times does it go through the list?
  - For each pass, how many elements does it look at?