

# STARTING WITH ALGORITHMS - SORTING

# SORTING

THE ALGORITHM TO SORT ENTITIES  
IN ASCENDING OR DESCENDING  
ORDER IS AN INTERVIEW FAVORITE

THERE ARE MANY FLAVORS OF SORTING  
ALGORITHMS WITH MARKEDLY DIFFERENT  
COMPLEXITIES IN TIME AND SPACE

MANY MORE DIFFICULT INTERVIEW PROBLEMS  
BUILD ON TOP OF SORTED ENTITIES,  
UNDERSTANDING SORTING, AND ITS COMPLEXITY  
FORMS A FOUNDATION FOR THESE

# TRADEOFFS IN SORTING

WHAT IS THE COMPLEXITY  
OF THE ALGORITHM USED?

HOW DOES IT SCALE AS THE  
INPUT SIZE INCREASES?

HOW MUCH SPACE DOES  
IT OCCUPY?

DOES IT NEED EXTRA SPACE TO  
HOLD INFORMATION DURING SORTING?

IS THE SORT STABLE?

DO EQUAL ELEMENTS MAINTAIN  
THEIR ORIGINAL ORDER AFTER SORTING?

HOW MANY COMPARISONS  
AND HOW MANY ELEMENT  
SWAPS ARE NEEDED?

DO THE ALGORITHMS WORK  
BETTER WITH NEARLY SORTED  
LISTS?

IS THE SORT ADAPTIVE?

DOES IT BREAK EARLY WHEN THE LIST  
IS SORTED?