**Analysis**

**Compare Time Complexity**

**Linear Search**  
• Best Case: O(1) (element found at start)  
• Average Case: O(n)  
• Worst Case: O(n)

**Binary Search**  
• Best Case: O(1) (element is at middle)  
• Average Case: O(log n)  
• Worst Case: O(log n)

**When to Use Each Algorithm**

**Use Linear Search When:**  
• The data is unsorted  
• The dataset is small or moderate  
• You want simple, fast-to-code logic

**Use Binary Search When**:  
• The data is sorted  
• The dataset is large  
• You need faster performance