**Analysis**

**Linear Search:**

* Time Complexity: O(n)
* No need to sort the data
* Best for small or unsorted datasets
* Slower as the number of products increases
* Easy to implement
* Works well with frequently changing data

**Binary Search:**

* Time Complexity: O(log n)
* Requires the array to be sorted
* Best for large, sorted datasets
* Much faster than linear search for big data
* Slightly complex due to sorting
* Ideal when data changes infrequently

**Conclusion:**

**Binary Search is better** when:

* + You have large data
  + The product list is sorted
  + You need faster search performance (O(log n))
* Linear Search is better when:
  + The product list is small or unsorted
  + Data changes frequently
  + You want simple implementation