**Importance of Data Structures and Algorithms in Handling Large Inventories**

Data structures and algorithms are essential in handling large inventories because:

***Efficient Storage and Retrieval***: They allow for efficient storage and retrieval of items, ensuring quick access to products based on their attributes.

***Scalability***: Proper data structures ensure the system can scale and handle a growing number of products without significant performance degradation.

***Optimal Resource Usage***: Efficient algorithms make the best use of memory and processing power, reducing costs and improving system performance.

**Suitable Data Structures for Inventory Management**

***ArrayList***: Good for maintaining an ordered list of products. It allows for efficient indexing but can be slow for add/delete operations if the list is large.

***HashMap***: Ideal for quick lookups, insertions, and deletions based on keys (e.g., productId). It provides average-case constant time complexity for these operations.

***TreeMap***: Maintains a sorted order of keys, useful if you need to perform range queries or order-specific retrieval.