**INVENTORY MANAGEMENT SYSTEM**

Data structures and algorithms are crucial for managing inventory efficiently, allowing businesses to enhance their inventory operations and make informed decisions. They help in storing data effectively, retrieving it quickly, tracking inventory, and scaling operations. By analyzing inventory data, they can offer insights into sales trends, product demand, and supply chain improvements.

**Time Complexity:**

When using a HashMap for inventory management:

* **Add Product**: This method inserts a product into the HashMap. The average time complexity is O(1) because HashMaps allow for constant-time insertions.
* **Update Product**: This method updates a product if it exists. The average time complexity is O(1) for the same reason.
* **Delete Product**: This method removes a product from the HashMap. The average time complexity is O(1) since deletions are also constant-time operations in HashMaps.