In an Inventory Management System, a large product database must be maintained, and the software program must handle this database and retrieve relevant data. To maximize the efficiency of database operations by software such as **SEARCH, INSERT, DELETE,** **and UPDATE**, we must ensure the application of the best-suited data structure possible.

Here, some of the available **Data Structures** for the operation are

| **NAME OF DS** | **PROS** | **CONS** |
| --- | --- | --- |
| List/Array Linear Pattern | Easy to iterate and maintain order | Slower search operation O(n) |
| List/Array Binary Pattern | Easy to iterate and maintain. Faster Searching operation O(logn) | Needs a sorted array for finding an element. Thus not possible to maintain the needed ordering. |
| HashMap | Fastest Search O(1), Add, Update and Delete | Auto orders based on the used Hashing algorithm. Thus not possible to maintain the needed ordering. |
| TreeMap | O(logn) with ordering. | Slightly slower than HashMap. |

So, we choose the HashMap data structure to implement this problem.

