**Exercise 2: E-commerce Platform Search Function**  
  
**What is Big O notation ?**   
 Big O notation helps us to analyse the efficiency of an algorithm in terms of time and space .  
  
**Case:**

**Best case :** Minimum time taken by the Algorithm   
 **Average Case :** Average or expected time taken by the Algorithm   
 **worst case :** Maximum Time Taken by the Algorithm   
  
**For Searching :**  
  
 **Linear Search :** Searching every element so Worst case is **O(n)**  
 **Binary Search :** half interval Search so Worst case is **O(log n)** but works only in sorted array   
  
   
**Time and Space Complexities Comparison :**

**Linear Search :** Time complexity – O(n) , Space Complexity -O(1)

**Binary Search:** Time complexity -O(log n) , Space Complexity – O(1)  
  
**Which is More Suitable ?**  
 Using of Binary search if the Product list is Large and sorted   
 Using of Linear Search If the Product list is small and unsorted