

1. Writing a program in Java implementing the linear search algorithm

```
public class LinearSearch {  
  
    public static int linearSearch(int[] array, int target) {  
        for (int i = 0; i < array.length; i++) {  
            if (array[i] == target) {  
                return i; // Return the index where the target is found  
            }  
        }  
        return -1; // Return -1 if the target is not found  
    }  
  
    public static void main(String[] args) {  
        int[] array = { 3, 9, 2, 7, 5, 1 };  
        int target = 7;  
        int index = linearSearch(array, target);  
  
        if (index != -1) {  
            System.out.println("Target found at index: " + index);  
        } else {  
            System.out.println("Target not found");  
        }  
    }  
}
```

OUTPUT:

Target found at index: 3