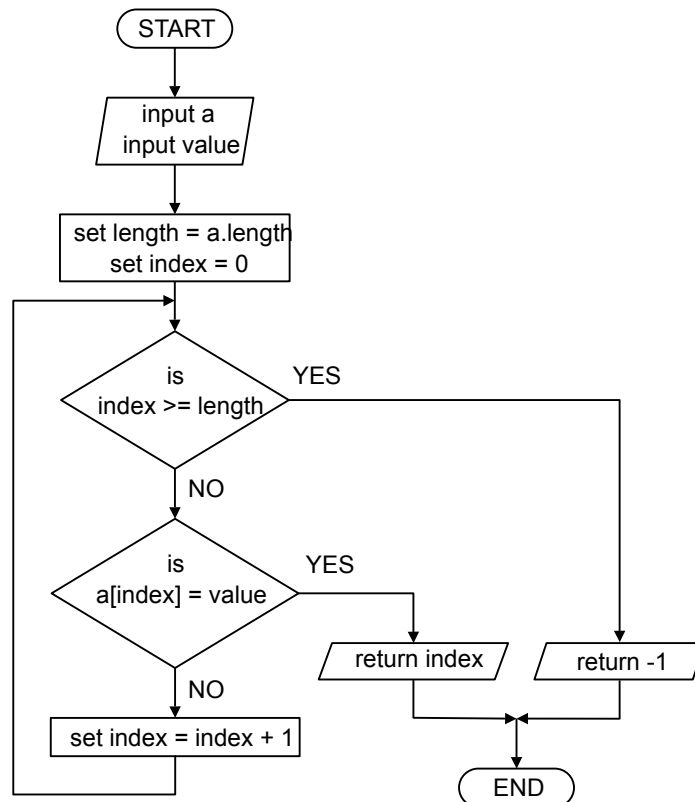


Worksheet: Linear Search for a Value

1a. Draw a **flowchart** that represents a **linear search** algorithm that will find a specific value in an array, then write the **pseudocode** for the flowchart as a **function** named `linearSearch`.

- **Inputs:** the array (call it `a`), and the value to search for (call it `value`).
- **Output:** the **index** in the array where the value is found; or a value of `-1` if the value is not found in the array.

Important: in pseudocode (as well as programming languages), if the flow of the program encounters a RETURN statement, the function will exit from that point and not continue to run any code after that line.

Subprocess: linearSearch

```

FUNCTION linearSearch( a, value )
BEGIN FUNCTION
  SET length TO LENGTH(a)
  SET index TO 0
  WHILE (index < length) DO
    IF (a[index] = value) THEN
      RETURN index
    END IF
    SET index TO index + 1
  END WHILE
  RETURN -1
END FUNCTION
  
```