Binary Search

- Binary Search works only on sorted arrays.

- It divides the search range in half each time.

- Compare target with the middle element.

- If equal → found

- If less → search left half

- If greater → search right half

- Repeat this until found or range is empty.

TechZeen

Linear Search

vs

Binary Search

Works on:

- Linear Search → Any array
- Binary Search → Only sorted array

Time Complexity:

- Linear Search → O(n)
- Binary Search → O(log n)

Logic:

- Linear Search → Checks every element
- Binary Search → Divides array into halves

Speed:

- Linear Search → Slower for large arrays
- Binary Search → Much faster on sorted data.