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CS109, Computer Fundamentals and Programming
Lecture 28
Array: Searching

▶ 0:01 / 31:19



... Pooja Asopa

Searching

➤ Linear Search

➤ Binary Search

✓
- Searching
✓
- Sort
—

Alphabetical
—
✓ sort
—

searchs Name
— char
array
Marks int

list of students
101
— Roll no. int
—
—

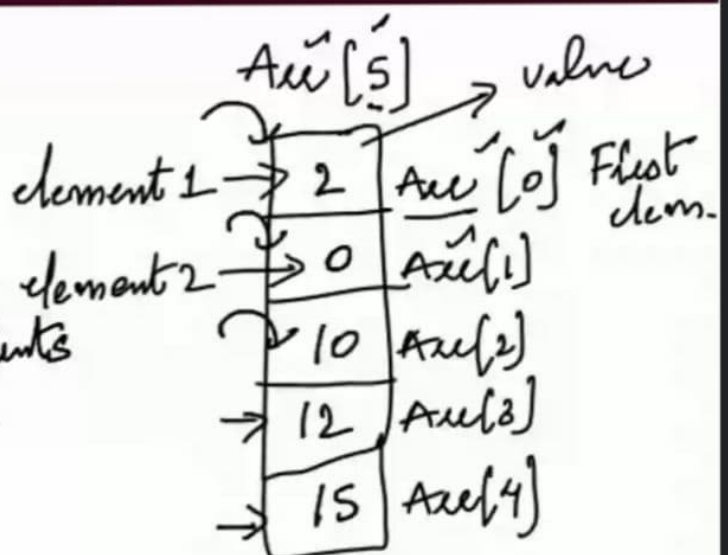
Searching

✓ ✓
➤ Linear Search

➤ Binary Search

sequence

✓ 100 students





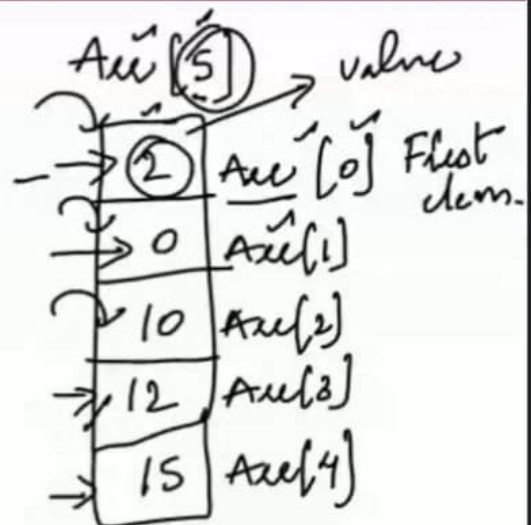
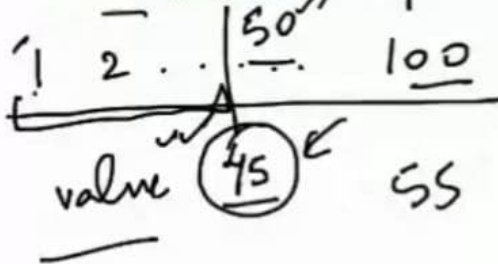
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Searching

➤ Linear Search

➤ Binary Search





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Linear Search

list → ① array → size ✓ index ✓
 search elem = 30 ② initialization ✓ compile time
 arr[0] == search elem ③ logic ✓ run time
 index → 0/1/2 ✓
 view →

10	2	5	30	25
----	---	---	----	----



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Linear Search

① array → size ✓ index ✓

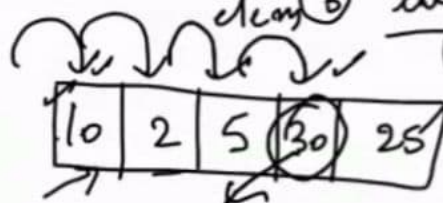
search elem = 30 ② initialization

arr[0] == search elem

arr[1] == search elem ✓

arr[2] == search elem

✓ arr[3] == search elem






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Linear Search



```

void main()
{
    // var declare int → arr[50];
    // enter the elements in an array 10, 20, 25, 35, 45, 50,
    // logic for loop conditions var
}

```

60

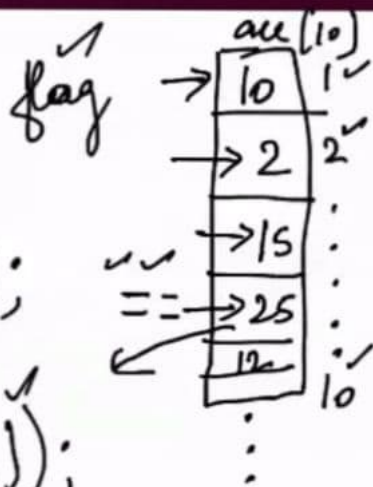


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Linear Search

```
# _____
void main()
{
    int i, elem, found = 0, arr[10];
    printf("enter the elements");
    for (i = 1; i <= 10; i++)
        scanf("%d", &arr[i]);
}
```



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Linear Search

```
printf("enter the search elem");  
scanf("%d", &elem);  
for (i = 1; i <= 10; i++)  
{  
    if (arr[i] == elem)  
    {  
        found = 1;  
        break;  
    }  
}
```

```
if (found == 1)  
    printf("the  
    element found");  
else  
    printf("the  
    element not  
    found");
```