

# SEARCHING

- **Linear Search**:- Worst case :-  $O(n)$

Ques  $\Rightarrow$  Search in the array: Return the index if the item found otherwise -1.

```
 $\Rightarrow$  public class Main {  
    public static void main (String[], args)  
    {  
        int[] arr = {10, 20, 6, 4, 3, 9, 27, 34, 36};  
        int target = 6;  
        Sout (search(arr, target));  
    }  
    static void search (int[] arr, int target)  
    {  
        for (int i=0 ; i < arr.length ; i++)  
        {  
            if (arr[i] == target)  
            {  
                return i;  
            }  
            return -1;  
        }  
        return -1;  
    }  
}
```



Q → Search a character in the given name.  
Take user input and return boolean value.

```
import java.util.Scanner;  
→ public class Main  
{  
    public static void main (String[] args)
```

```
{  
    Scanner SC = new Scanner (System.in);  
    String name = SC.next();  
    char target = 'b';  
    sout (search (str, target));  
}
```

```
static boolean search (String str, String target)  
{  
    for (int i=0; i<str.length(); i++)  
    {  
        if (target == str.charAt(i))  
        {  
            return true;  
        }  
    }
```

→ Because it's not a string array.

→ we have to search in a given name instead of an array with string.

```
        return false;  
    }  
}
```

Q → Search the element in 2D Array.

```
import java.util.Arrays;  
public class Searchin2D  
{  
    public static void main (String[] args)
```



```

int[][] arr = {{2,4,6}, {8,10,12}, {14,16,18}, {20,22}};
int target = 22;
int[] ans = Search(arr, target);
Print (Arrays.toString(ans));
}

```

```

Static int[] Search (int[][] arr, int target)
{
    for (int i=0; i<= arr.length; i++)
    {
        for (int j=0; j<= arr[i].length; j++)
        {
            return new int[] {i, j};
        }
    }
    return new int[] {-1, -1};
}
}

```

Q → Print the number which is having even number of digits.

→ Code is in Tutorial 6 folder.

Q → Find the max wealth.

→ Code is in Tutorial 6 folder.