

## VIT - Vellore

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### BCSE102P\_Structured and Object Oriented Programming Lab\_VL2024250502365

#### VIT V\_BCSE102P\_Lab 2\_COD\_Medium\_1D Array

Attempt : 1

Total Mark : 20

Marks Obtained : 20

#### Section 1 : Coding

##### 1. Problem Statement

Write a program to store n elements in an array and get a number to search. Your program should display whether the search number is present in the array or not.

##### **Answer**

```
// You are using GCC
#include<stdio.h>
```

```
int main()
{
    int n,i, search, found = 0;
    int arr[10];
```

```

scanf("%d",&n);
for (i = 0; i<n; i++){
    scanf("%d",&arr[i]);
}

scanf("%d",&search);

for (i = 0; i < n; i++){
    if(arr[i] == search){
        found = 1;
        break;
    }
}

if (found == 1){
    printf("The number %d is present in the array\n", search);
}
else {
    printf("The number %d is not present in the array\n", search);
}

return 0;
}

```

**Status :** Correct

**Marks :** 10/10

## 2. Problem Statement

Philip needs a program that reads 10 integers from the user and checks if all the integers are the same. If they are not the same, the program should sort the integers in ascending order and display the sorted array. If all integers are the same, it should simply indicate this.

Help Philip by writing a program to achieve this functionality.

### Answer

```

// You are using GCC
#include<stdio.h>
#include<stdlib.h>

```

```

int main(){
    int arr[10];
    int i, j, temp;
    int all_same = 1;

    for (i = 0; i < 10; i++){
        scanf("%d",&arr[i]);
    }
    for (i = 1; i < 10; i++){
        if (arr[i] != arr[i - 1]){
            all_same = 0;
            break;
        }
    }
    if (!all_same){
        for (i = 0; i < 9; i++){
            for (j = i+1; j < 10; j++){
                if(arr[i] > arr[j]){
                    temp = arr[i];
                    arr[i] = arr[j];
                    arr[j] = temp;
                }
            }
        }
    }

    printf("Arranged elements are: ");
    for (i = 0; i < 10; i++){
        printf("%d ",arr[i]);
    }
    printf("\n");
}
else{
    printf("All elements are the same");
}
return 0;
}

```

**Status :** Correct

**Marks :** 10/10