

Assignment - 1

Implement the following programs using User-Defined functions and pass the array as an argument:

1. Find the number of occurrences of a given integer NUM from a pre-defined array.

Source Code:

```
#include <stdio.h>

int count (int arr[], int NUM, int len) {
    int counter = 0;
    for (int i = 0; i < len; i++) {
        if (arr[i] == NUM)
            counter++;
    }
    return counter;
}

int main() {
    int arr[] = { 2, 3, 4, 5, 1, 2, 2, 3, 0, 5 };
    int NUM;
    printf ("Enter the no. NUM : ");
    scanf ("%d", &NUM);
    int len = size of (arr) / 4;
    printf ("No. of occurrences of %d = %d, NUM, count(arr, NUM, len);
    return 0;
}
```

Input	Output
① 2	No. of occurrences of 2 = 3
② 5	No. of occurrences of 5 = 2
③ 0	No. of occurrences of 0 = 1

Output Console :-

Enter the no. NUM : 5

No. of occurrences of 5 = 2

2. Reverse the array and store it in a new array REV

Source Code :

```
#include <stdio.h>
```

```
void reverse (int arr [], int len) {
```

```
    int REV[len];
```

```
    for (int i=0; i<len; i++)
```

```
    {
```

```
        REV[i] = arr[len-i-1];
```

```
    }
```

```
    printf ("Array after reversing is : \n");
```

```
    for (int j=0; j<len; j++) {
```

```
        printf ("%d ", REV[j]);
```

```
    }
```

```
}
```

```
int main () {
```

```
    int arr [] = {2, 3, 4, 5, 1, 2, 2, 3, 0, 5};
```

```
    int len = sizeof(arr) / sizeof(arr[0]);
```

```
    reverse (arr, len);
```

```
    return 0;
```

```
}
```

Input

N/A

Output

Array after reversing is :
5 0 3 2 2 1 5 4 3 2

Output Console :-

Array after reversing is

5 0 3 2 2 1 5 4 3 2

3. Find the largest from an array of integers

Source Code :

```
#include <stdio.h>
```

```
int largest (int arr [], int len ) {
```

```
    int max = arr[0];
```

```
    for (int i = 0 ; i < len ; i++) {
```

```
        if (arr[i] > max)
```

```
            max = arr[i];
```

```
    }
```

```
    return max;
```

```
}
```

```
int main () {
```

```
    int arr [] = { 2, 3, 4, 5, 1, 2, 2, 3, 0, 5 };
```

```
    int len = sizeof(arr) / sizeof(arr[0]);
```

```
    printf ("Largest number is %d", largest (arr, len));
```

```
    return 0;
```

```
}
```

Input	Output
NA	Largest number is 5

Output Window :-

Largest number is 5