Assignment Code for Programming in C

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💼 Subject: Programming in C

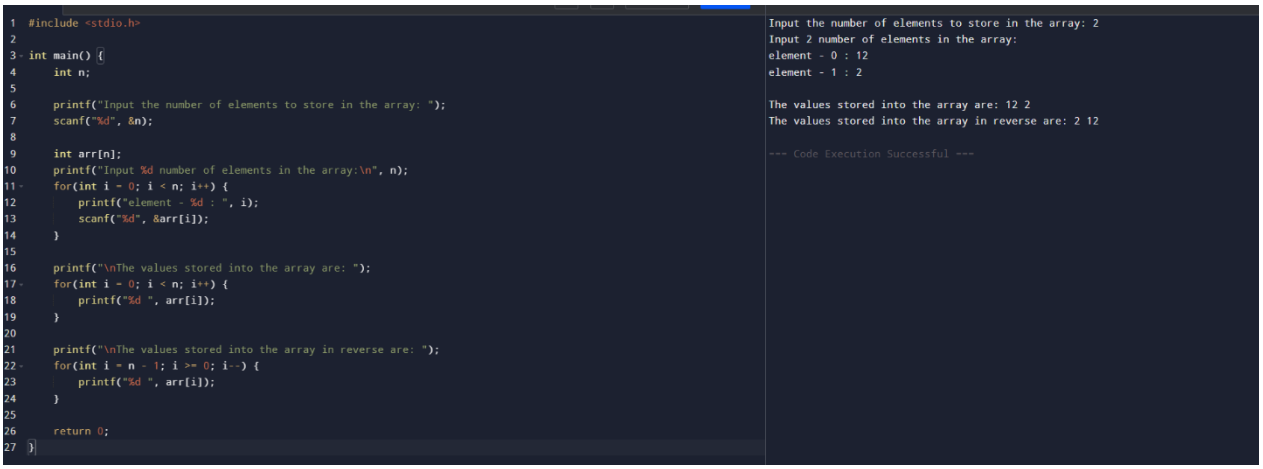
🏫 Department: CSE-62

📅 Submission Date: 31-07-2025

Index for C Programming Assignment

1. Reverse the Order of Elements in an Array

Code:



```c
#include <stdio.h>

int main() {
    int n;

    printf("Input the number of elements to store in the array: ");
    scanf("%d", &n);

    int arr[n];
    printf("Input %d number of elements in the array:\n", n);
    for(int i = 0; i < n; i++) {
        printf("element - %d : ", i);
        scanf("%d", &arr[i]);
    }

    printf("\nThe values stored into the array are: ");
    for(int i = 0; i < n; i++) {
        printf("%d ", arr[i]);
    }

    printf("\nThe values stored into the array in reverse are: ");
    for(int i = n - 1; i >= 0; i--) {
        printf("%d ", arr[i]);
    }

    return 0;
}
```

```
Input the number of elements to store in the array: 2
Input 2 number of elements in the array:
element - 0 : 12
element - 1 : 2

The values stored into the array are: 12 2
The values stored into the array in reverse are: 2 12

=== Code Execution Successful ===
```

2. Sum of All Elements of an Array

Code:

main.c — Share — Run — Output

```c
#include <stdio.h>

int main() {
    int n, sum = 0;

    printf("Input the number of elements to be stored in the array: ");
    scanf("%d", &n);

    int arr[n];
    printf("Input %d elements in the array:\n", n);
    for(int i = 0; i < n; i++) {
        printf("element - %d : ", i);
        scanf("%d", &arr[i]);
        sum += arr[i];
    }

    printf("Sum of all elements stored in the array is: %d\n", sum);
    return 0;
}
```

```
Input the number of elements to be stored in the array: 2
Input 2 elements in the array:
element - 0 : 8
element - 1 : 9
Sum of all elements stored in the array is: 17


=== Code Execution Successful ===
```

3. Count Total Number of Duplicate Elements in an Array

Code:

main.c

```c
#include <stdio.h>

int main() {
    int n, count = 0;

    printf("Input the number of elements to be stored in the array: ");
    scanf("%d", &n);

    int arr[n];
    printf("Input %d elements in the array:\n", n);
    for(int i = 0; i < n; i++) {
        printf("element - %d : ", i);
        scanf("%d", &arr[i]);
    }

    for(int i = 0; i < n; i++) {
        for(int j = i + 1; j < n; j++) {
            if(arr[i] == arr[j]) {
                count++;
                break;
            }
        }
    }

    printf("Total number of duplicate elements found in the array is: %d\n", count);
    return 0;
}
```

Output

```
Input the number of elements to be stored in the array: 4
Input 4 elements in the array:
element - 0 : 2
element - 1 : 3
element - 2 : 4
element - 3 : 2
Total number of duplicate elements found in the array is: 1


--- Code Execution Successful ---
```

4. Print All Unique Elements in an Array

Code:

```c
#include <stdio.h>

int main() {
    int n;
    printf("Input the number of elements to be stored in the array: ");
    scanf("%d", &n);
    int arr[n];
    printf("Input %d elements in the array:\n", n);
    for(int i = 0; i < n; i++) {
        printf("element - %d : ", i);
        scanf("%d", &arr[i]);
    }
    printf("The unique elements found in the array are: ");
    for(int i = 0; i < n; i++) {
        int is_unique = 1;
        for(int j = 0; j < n; j++) {
            if(i != j && arr[i] == arr[j]) {
                is_unique = 0;
                break;
            }
        }
        if(is_unique) {
            printf("%d ", arr[i]);
        }
    }
    return 0;
}
```

```
Input the number of elements to be stored in the array: 4
Input 4 elements in the array:
element - 0 : 3
element - 1 : 4
element - 2 : 5
element - 3 : 6
The unique elements found in the array are: 3 4 5 6

=== Code Execution Successful ===
```

5. Find the Maximum and Minimum Elements in an Array

Code:

main.c

```c
#include <stdio.h>

int main() {
    int n;
    printf("Input the number of elements to be stored in the array: ");
    scanf("%d", &n);
    int arr[n];
    printf("Input %d elements in the array:\n", n);
    for(int i = 0; i < n; i++) {
        printf("element - %d : ", i);
        scanf("%d", &arr[i]);
    }
    int max = arr[0], min = arr[0];
    for(int i = 1; i < n; i++) {
        if(arr[i] > max) {
            max = arr[i];
        }
        if(arr[i] < min) {
            min = arr[i];
        }
    }
    printf("The maximum element is: %d\n", max);
    printf("The minimum element is: %d\n", min);
    return 0;
}
```

Output

```
Input the number of elements to be stored in the array: 4
Input 4 elements in the array:
element - 0 : 5
element - 1 : 6
element - 2 : 3
element - 3 : 2
The maximum element is: 6
The minimum element is: 2


--- Code Execution Successful ---7
```

6. Separate Odd and Even Integers into Separate Arrays

Code:

main.c

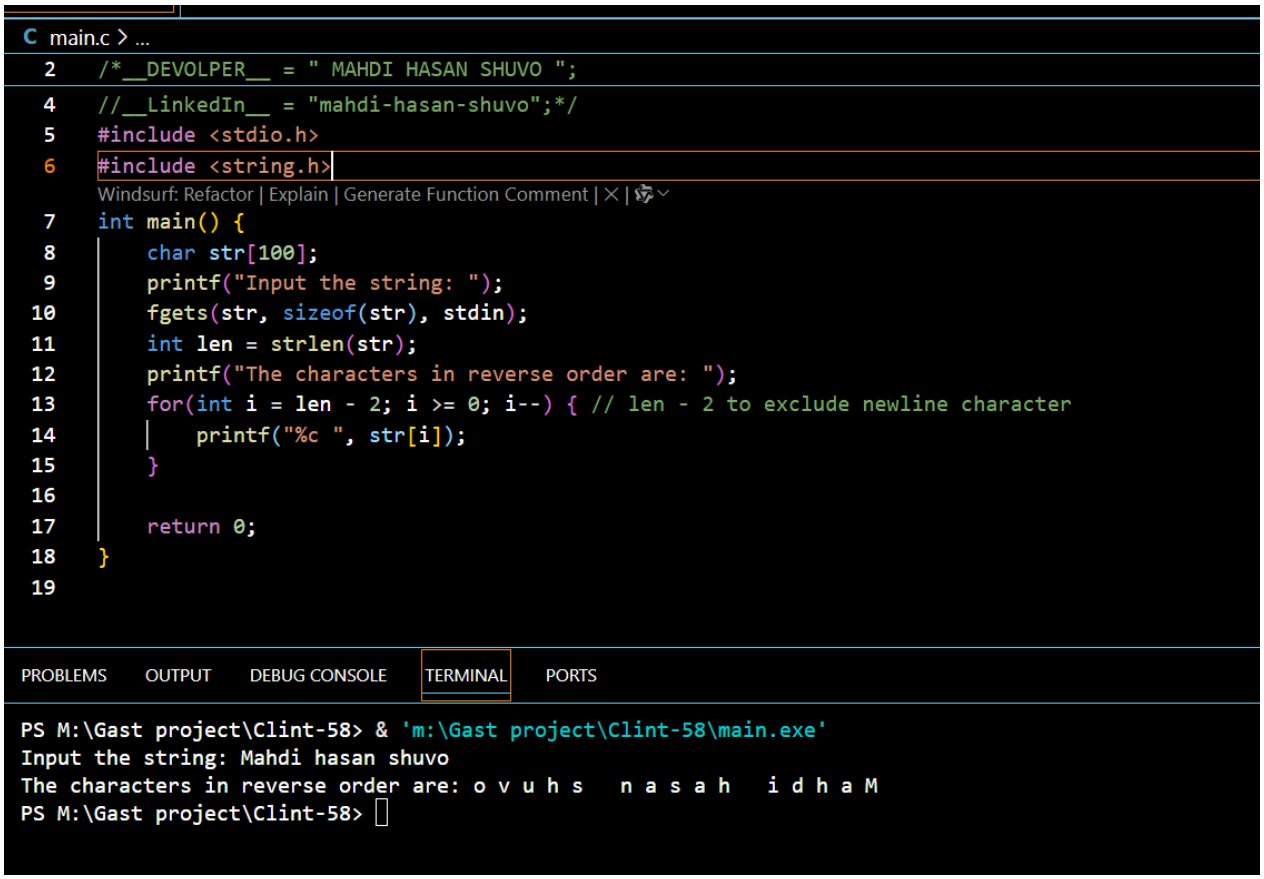
```c
#include <stdio.h>

int main() {
    int n;
    printf("Input the number of elements to be stored in the array: ");
    scanf("%d", &n);
    int arr[n], even[n], odd[n], even_count = 0, odd_count = 0;
    printf("Input %d elements in the array:\n", n);
    for(int i = 0; i < n; i++) {
        printf("element - %d : ", i);
        scanf("%d", &arr[i]);
    }
    for(int i = 0; i < n; i++) {
        if(arr[i] % 2 == 0) {
            even[even_count++] = arr[i];
        } else {
            odd[odd_count++] = arr[i];
        }
    }
    printf("The Even elements are: ");
    for(int i = 0; i < even_count; i++) {
        printf("%d ", even[i]);
    }
    printf("\nThe Odd elements are: ");
    for(int i = 0; i < odd_count; i++) {
        printf("%d ", odd[i]);
    }
    return 0;
}
```

Output

```
Input the number of elements to be stored in the array: 4
Input 4 elements in the array:
element - 0 : 3
element - 1 : 5
element - 2 : 6
element - 3 : 7
The Even elements are: 6
The Odd elements are: 3 5 7

=== Code Execution Successful ===
```

7. Print Individual Characters of a String in Reverse Order

Code:



8. Count the Total Number of Words in a String

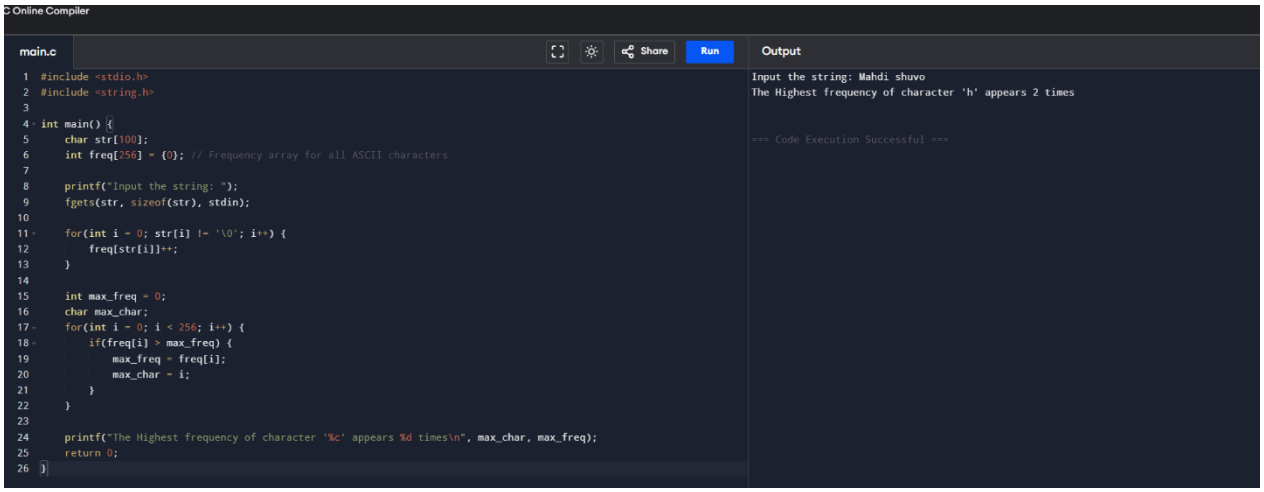
Code:

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

Windsurf: Refactor | Explain | Generate Function Comment |
int main() {
    char str[100];
    printf("Input the string: ");
    fgets(str, sizeof(str), stdin);
    int count = 1; // For the first word
    for(int i = 0; str[i] != '\0'; i++) {
        if(str[i] == ' ' || str[i] == '\n') {
            count++;
        }
    }
    printf("Total number of words in the string: %d\n", count);
    return 0;
}
```

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS

PS M:\Gast project\Clint-58> & 'm:\Gast project\Clint-58\main.exe'
Input the string: MahdI hasan Shuvo
Total number of words in the string: 4
PS M:\Gast project\Clint-58>
```

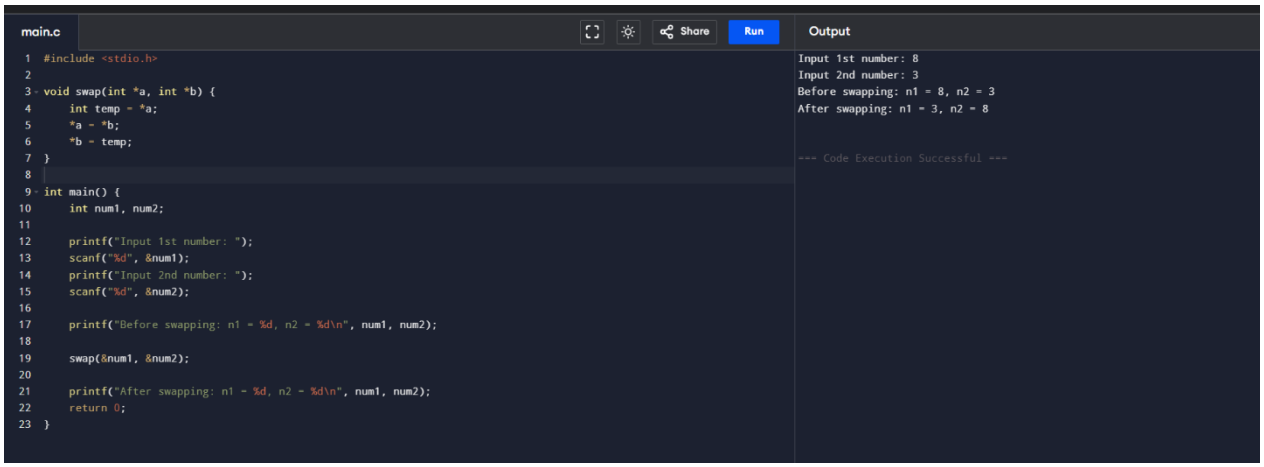
9. Find the Maximum Number of Characters in a String (Frequency)

Code:



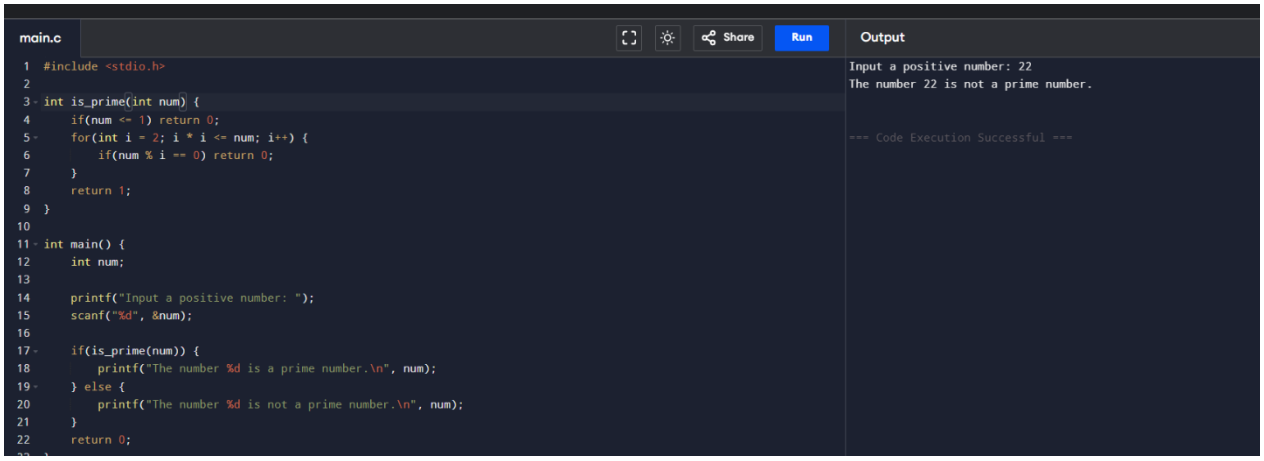
10. Swap Two Numbers Using a Function

Code:



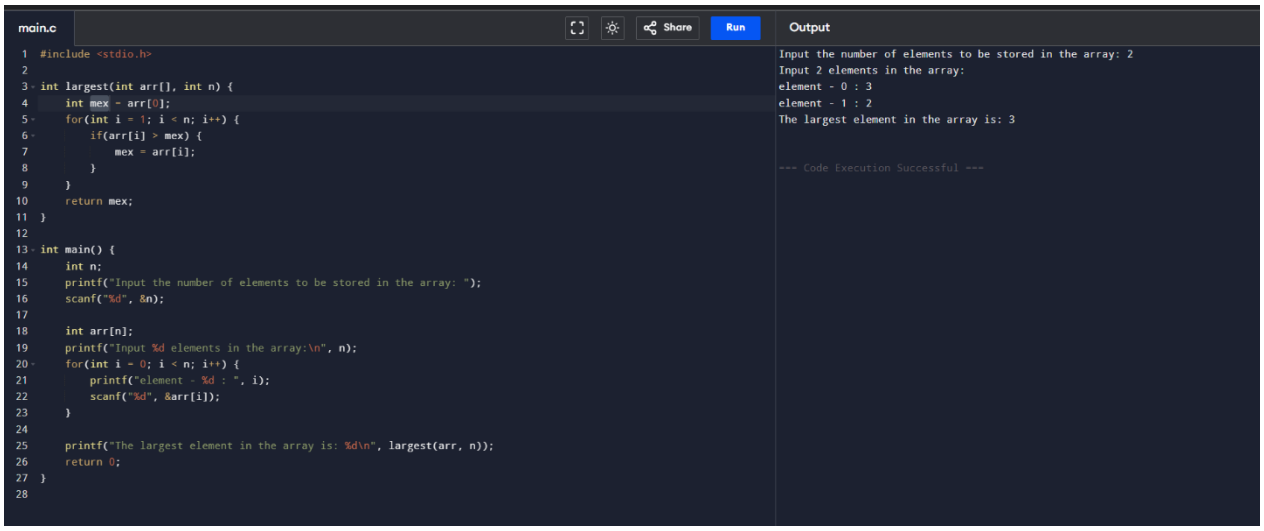
11. Check Whether a Number is Prime or Not Using a Function

Code:



12. Find the Largest Element of an Array Using a Function

Code:


main.c
Share
Run
Output
#include <stdio.h>
int largest(int arr[], int n) {
int mex = arr[0];
for(int i = 1; i < n; i++) {
if(arr[i] > mex) {
mex = arr[i];
}
}
return mex;
}
int main() {
int n;
printf("Input the number of elements to be stored in the array: ");
scanf("%d", &n);
int arr[n];
printf("Input %d elements in the array:\n", n);
for(int i = 0; i < n; i++) {
printf("element - %d : ", i);
scanf("%d", &arr[i]);
}
printf("The largest element in the array is: %d\n", largest(arr, n));
return 0;
}
Input the number of elements to be stored in the array: 2
Input 2 elements in the array:
element - 0 : 3
element - 1 : 2
The largest element in the array is: 3
=== Code Execution Successful ===