

**Q1. Implement a program for array operations: insertion, deletion, and traversal.**

```
1. #include <iostream>
2. using namespace std;
3. int main(){
4.     int num1,position;
5.     int size = 10;
6.     int arr[size]={1,2,3,4,5};
7.     cout<<"Enter the number";
8.     cin>> num1;
9.     cout<<"Enter the position";
10.    cin>> position;
11.    if(position<0 || position>size){
12.        cout<<"invalid position";
13.    }
14.    else{
15.        for(int i=size;i>position;i--){
16.            arr[i] = arr[i-1];
17.        }
18.        arr[position]=num1;
19.
20.    for(int i=0;i<size;i++){
21.
22.        cout<<"New array is : "<< arr[i]<<endl;
23.    }
24. }
25. cout<< "Ridhi Sood \n";
26. cout<<"102305055";
```

```
C:\Users\IOT Lab 2\Desktop\IOT Lab 2\Code\27. }  
Enter the number 10  
Enter the position 3  
New array is :1  
New array is :2  
New array is :3  
New array is :10  
New array is :4  
New array is :5  
Ridhi Sood  
102305055  
-----  
Process exited after 7.918 seconds with return value 0  
Press any key to continue . . . |
```

27. }

```
1. #include<iostream>  
2. using namespace std;  
3. int main(){  
4.     int size =5;  
5.     int elementTodelete;  
6.     int arr[size]={1,2,3,4,5};  
7.     cout<<"Enter the element to be deleted : \n";  
8.     cin>>elementTodelete;  
9.     int found =0;  
10.    for(int i =0;i<size;i++){  
11.        if(arr[i]==elementTodelete){  
12.            for(int j =i;j<size-1;j++){  
13.                arr[j]=arr[j+1];  
14.            }  
15.            found =1;  
16.            size--;  
17.        }  
18.    }  
19.    cout<<"After the deletion : \n ";  
20.    for(int i =0;i<size;i++){  
21.        cout<<arr[i]<<endl;  
22.    }  
23.    cout<<"Ridhi Sood \n";  
24.    cout<<"102305055";  
25. }
```

main.cpp

Output

Enter the element to be deleted :

3

After the deletion :

1

2

4

5

Ridhi Sood

102305055

=== Code Execution Successful ===

```
#include<iostream>
```

```
using namespace std;
```

```
int main(){
```

```
    int arr[5]={9,8,7,6,5};
```

```
    for(int i=0;i<5;i++){
```

```
        cout<<"Index " << i << " value is " << arr[i]<<endl;
```

```
    }
```

```
    cout<<"Ridhi Sood \n";
```

```
    cout<<"102305055";
```

```
}
```

main.cpp

Output

Index 0 value is 9

Index 1 value is 8

Index 2 value is 7

Index 3 value is 6

Index 4 value is 5

Ridhi Sood

102305055

=== Code Execution Successful ===

**Q2. Write a program to reverse a string using arrays.**

```
1. #include<iostream>
2. #include<cstring>
3. using namespace std;
4. int main(){
5.     char string[100],reverse[100];
6.     int length;
7.     cout<<"Enter the string \n";
8.     cin>>string;
9.     length = strlen(string);
10.    for(int i=0;i<length;i++){
11.        reverse[i]=string[length-i-1];
12.    }
13.    reverse[length] ='\0';
14.    cout<<"Reversed String : \n";
15.    for(int i =0;i<length;i++){
16.        cout<<reverse[i] ;
17.    }
18.    cout<<"\n Ridhi Sood \n";
19.    cout<<"102305055 \n";
20. }
```

### Output

```
Enter the string
RIDHI
Reversed String :
IHDIR
  Ridhi Sood
102305055
```

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

**Q3. Write a program to merge two sorted arrays.**

```
1. #include<iostream>
2. using namespace std;
3. int main(){
4.     const int size =5;
5.     int arr1[size]={1,2,3,4,5};
6.     int arr2[size]={6,7,8,9,10};
7.     int arr3[2*size];
8.     for(int i =0 ; i<size;i++){
9.         arr3[i]=arr1[i];
10.        arr3[i+size]=arr2[i];
11.    }
12.    cout<<"After the Merge \n";
13.    for(int i =0 ; i<2*size;i++){
14.        cout<<arr3[i];
15.    }
16.    cout<<" \n Ridhi Sood \n";
17.    cout<<"102305055 \n";
18. }
```

## Output

After the Merge

12345678910

Ridhi Sood

102305055

=== Code Execution Successful ===