

```
/*Name - Himanshu
Branch - E&TC (A1)
Roll No. - 1124
Bubble Sorting*/
```

```
#include <iostream>
using namespace std;
int main() {
    int a[10], n, i, j, temp;
    cout << "Enter number of elements: ";
    cin >> n;
    cout << "Enter elements:\n";
    for(i = 0; i < n; i++)
        cin >> a[i];
    for(i = 0; i < n-1; i++) {
        for(j = 0; j < n-i-1; j++) {
            if(a[j] > a[j+1]) {
                temp = a[j];
                a[j] = a[j+1];
                a[j+1] = temp;
            }
        }
    }
    cout << "Sorted array:\n";
    for(i = 0; i < n; i++)
        cout << a[i] << " ";
    return 0;
}
```

### Output

```
Enter number of elements: 8
Enter elements:
3

4
5
6
7
7
2
5
Sorted array:
2 3 4 5 5 6 7 7

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

```
/*Name - Himanshu
Branch - E&TC (A1)
Roll No. - 1124
Binary Search*/
```

```
#include <iostream>
using namespace std;
int main() {
    int a[10], n, key;
    int low = 0, high, mid;
    cout << "Enter number of elements: ";
    cin >> n;
    cout << "Enter sorted elements:\n";
    for(int i = 0; i < n; i++)
        cin >> a[i];
    cout << "Enter element to search: ";
    cin >> key;
    high = n - 1;
    while(low <= high) {
        mid = (low + high) / 2;
        if(a[mid] == key) {
            cout << "Element found at position " << mid + 1;
            return 0;
        }
        else if(key > a[mid])
            low = mid + 1;
        else
            high = mid - 1;
    }
    cout << "Element not found";
    return 0;
}
```

## Output

```
Enter number of elements: 5
Enter sorted elements:
3
5
7
8
10
Enter element to search: 8
Element found at position 4

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

```
/*Name - Himanshu  
Branch - E&TC (A1)  
Roll No. - 1124  
Sum of array elements */
```

```
#include <iostream>  
using namespace std;  
int main() {  
    int a[10], n, sum = 0;  
    cout << "Enter number of elements: ";  
    cin >> n;  
    cout << "Enter elements:\n";  
    for(int i = 0; i < n; i++) {  
        cin >> a[i];  
        sum += a[i];  
    }  
    cout << "Sum of elements = " << sum;  
    return 0;  
}
```

## Output

```
Enter number of elements: 5
```

```
Enter elements:
```

```
4
```

```
3
```

```
8
```

```
76
```

```
90
```

```
Sum of elements = 181
```

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