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SEC-B.

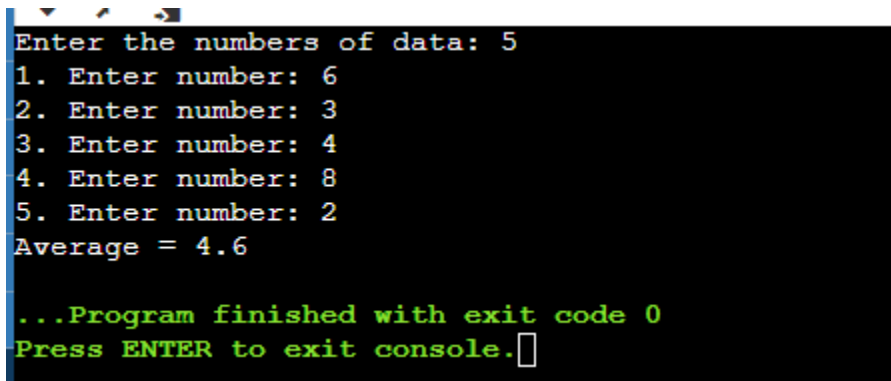
COURSE:FOP

Task 1:

```
#include <iostream>  
using namespace std;
```

```
int main() {  
    int x, i;  
    float num[100], sum = 0.0, average;  
  
    cout << "Enter the numbers of data: ";  
    cin >> n;  
  
    while (x > 100 || x <= 0) {  
        cout << "Error! number should be in range of (1 to 100)."  
<< endl;  
        cout << "Enter the number again: ";  
        cin >> x;  
    }  
  
    for (i = 0; i < x; ++i) {  
        cout << i + 1 << ". Enter number: ";  
        cin >> num[i];  
        sum += num[i];  
    }  
}
```

```
average = sum / x;  
cout << "Average = " << average;  
  
return 0;  
}
```

A screenshot of a console window showing the execution of a C++ program. The program prompts the user to enter the number of data points (5), then asks for 5 numbers (6, 3, 4, 8, 2). It calculates the average (4.6) and displays it. The console text is as follows:

```
Enter the numbers of data: 5  
1. Enter number: 6  
2. Enter number: 3  
3. Enter number: 4  
4. Enter number: 8  
5. Enter number: 2  
Average = 4.6  
  
...Program finished with exit code 0  
Press ENTER to exit console.
```

TASK 3

```
#include<iostream>  
using namespace std;  
int main()  
{  
    int arr[5];  
    cout<<"Enter 5 integers:"<<endl;  
    for(int i=0;i<5;i++)  
    {  
        cin>>arr[i];  
    }  
    for(int i=0;i<4;i++)  
    {  
        int min=i;
```

```

        for(int j=i+1;j<5;j++)
        {
            if(arr[j]<arr[min])
            {
                min=j;
            }
        }
        int temp=arr[i];
        arr[i]=arr[min];
        arr[min]=temp;
    }
    cout<<"Sorted array:"<<endl;
    for(int i=0;i<5;i++)
    {
        cout<<arr[i]<<" ";
    }
    return 0;
}

```

The screenshot shows a console window titled "input" with a dark background. The program's output is as follows:

```

Enter 5 integers:
2
3
4
5
9
Sorted array:
2 3 4 5 9

...Program finished with exit code 0
Press ENTER to exit console.

```

A blue vertical bar is visible on the left side of the console window, and a white cursor is positioned at the end of the "Press ENTER to exit console." line.

TASK 2

```
#include <iostream>
```

```
using namespace std;
```

```
void bubbleSort(int arr[], int n) {  
    for (int i = 0; i < n - 1; i++) {  
        for (int j = 0; j < n - i - 1; j++) {  
            if (arr[j] > arr[j + 1]) {  
                swap(arr[j], arr[j + 1]);  
            }  
        }  
    }  
}
```

```
int main() {  
    int arr[5];  
    cout << "Enter 5 integers: ";  
    for (int i = 0; i < 5; i++) {  
        cin >> arr[i];  
    }  
    bubbleSort(arr, 5);  
    cout << "Sorted array: ";  
    for (int i = 0; i < 5; i++) {  
        cout << arr[i] << " ";  
    }  
    cout << endl;  
    return 0;  
}
```

Enter 5 integers: 4

5

6

1

2

Sorted array: 1 2 4 5 6

...Program finished with exit code 0

Press ENTER to exit console.

