# Mubeen Ahmad Lab Manual 7 Tasks

## Q1:

```cpp
Untitled2.cpp
1    #include <iostream>
2    using namespace std;
3
4    int main(){
5        const int size=10;
6        int arr[size];
7        cout<<"Enter 10 integers, pressing Enter after each:\n";
8        for(int a=0;a<size; ++a){
9            cout<<"Enter integer "<<a+1<<": ";
10           cin>>arr[a];
11       }
12       cout<<"You entered the following integers:\n";
13       for(int a=0;a<size; ++a){
14           cout<<arr[a]<<" ";
15       }
16       return 0;
17   }
```

```
C:\Users\masgh\Documents\Project1.exe
Enter 10 integers, pressing Enter after each:
Enter integer 1: 83
Enter integer 2: 35
Enter integer 3: 76
Enter integer 4: 25
Enter integer 5: 86
Enter integer 6: 12
Enter integer 7: 67
Enter integer 8: 08
Enter integer 9: 45
Enter integer 10: 3456
You entered the following integers:
83 35 76 25 86 12 67 8 45 3456
-------------------------------
Process exited after 20.99 seconds with return value 0
Press any key to continue . . .
```

## Q2:

```cpp
Untitled2.cpp
1    #include <iostream>
2    using namespace std;
3
4    int main(){
5        const int count=5;
6        int arr[count];
7
8        cout<<"Enter 5 integers, pressing enter after each:\n";
9        for (int b=0;b<count; ++b){
10           cout<<"Enter integer "<<b+1<<": ";
11           cin>>arr[b];
12       }
13
14       int sum=0;
15       int product=1;
16
17       for (int b=0;b<count; ++b){
18           sum+=arr[b];
19           product*=arr[b];
20       }
21       cout<<"Sum of the elements of array is: "<<sum<<endl;
22       cout<<"Product of all the elements of array is: "<<product<<endl;
23
24       return 0;
25   }
```

```
C:\Users\masgh\Documents\Project1.exe
Enter 5 integers, pressing enter after each:
Enter integer 1: 46
Enter integer 2: 78
Enter integer 3: 29
Enter integer 4: 46
Enter integer 5: 82
Sum of the elements of array is: 281
Product of all the elements of array is: 392484144
-------------------------------
Process exited after 13.47 seconds with return value 0
Press any key to continue . . .
```

Q3:

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

int main(){
    int a;
    cout<<"Enter the size of the diamond: ";
    cin>>a;

    if (a%2==0) {
        cout<<"Please enter an odd number for symmetry.";
        cin>>a;
    }

    int mid=a/2;

    for (int i=0;i<a; ++i) {
        for (int j=0;j<a; ++j) {
            if (abs(mid - i) + abs(mid - j) <= mid) {
                cout << "* ";
            } else {
                cout << "  ";
            }
        }
        cout << endl;
    }

    return 0;
}
```

```
C:\Users\masgh\Documents\Project1.exe
Enter the size of the diamond: 4
Please enter an odd number for symmetry.5
      *
    * * *
  * * * * *
    * * *
      *

--------------------------------
Process exited after 2.829 seconds with return value 0
Press any key to continue . . .
```