



National University of Science and
technology
(NUST)

CS-114 - Fundamental of Programing

Lab Manual # 07

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Task 1:

```
#include <iostream>

using namespace std;

int main(){

    int a[10];

    for(int i=0;i<10;i++){

        cout<<"Enter no."<<i+1<<" of the array:";

        cin>>a[i];

    }

    for(int j=0;j<10;j++){

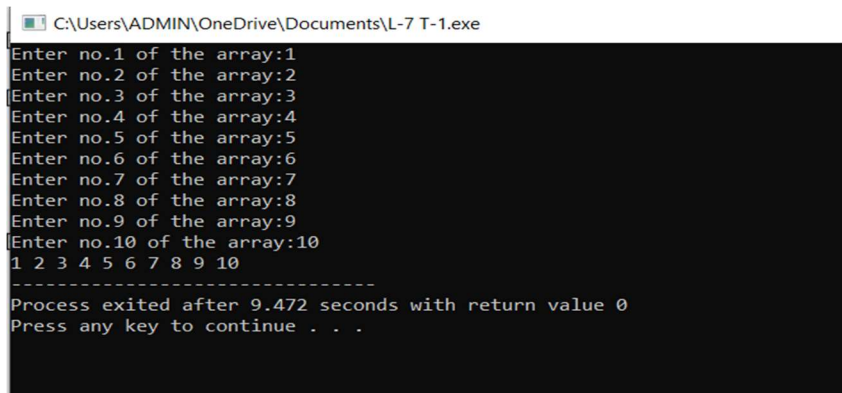
        cout<<a[j]<<" ";

    }

    return 0;

}
```

Result:



```
C:\Users\ADMIN\OneDrive\Documents\L-7 T-1.exe
Enter no.1 of the array:1
Enter no.2 of the array:2
Enter no.3 of the array:3
Enter no.4 of the array:4
Enter no.5 of the array:5
Enter no.6 of the array:6
Enter no.7 of the array:7
Enter no.8 of the array:8
Enter no.9 of the array:9
Enter no.10 of the array:10
1 2 3 4 5 6 7 8 9 10
-----
Process exited after 9.472 seconds with return value 0
Press any key to continue . . .
```

Task2:

```
#include <iostream>

using namespace std;

int main(){

    int a[5],sum=0,product=1;

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

        cout<<"Enter No."<<i+1<<" of the array:";

        cin>>a[i];

        sum=sum+a[i];

        product=product*a[i];

    }

    cout<<"Sum of elements of array is ="<<sum<<endl;

    cout<<"Product of elements of array is ="<<product<<endl;

    return 0;

}
```

Result:

 C:\Users\ADMIN\OneDrive\Documents\L-7 T-2.exe

```
Enter No.1 of the array:1
Enter No.2 of the array:2
Enter No.3 of the array:3
Enter No.4 of the array:4
Enter No.5 of the array:5
Sum of elements of array is =15
Product of elements of array is = 120

-----
Process exited after 8.145 seconds with return value 0
Press any key to continue . . .
```

Task 3:

```
#include <iostream>

using namespace std;

int main() {

    int n;

    cout << "Enter the size of the diamond: ";

    cin >> n;

    if (n % 2 == 0) {

        cout << "Please enter an odd number for the size of the diamond." << endl;

    }

    int spaces = n / 2;

    for (int i = 0; i < n / 2 + 1; ++i) {

        for (int j = 0; j < spaces; ++j) {

            cout << " ";

        }

        for (int k = 0; k < 2 * i + 1; ++k) {

            cout << "*";

        }

        cout << endl;

        --spaces;

    }

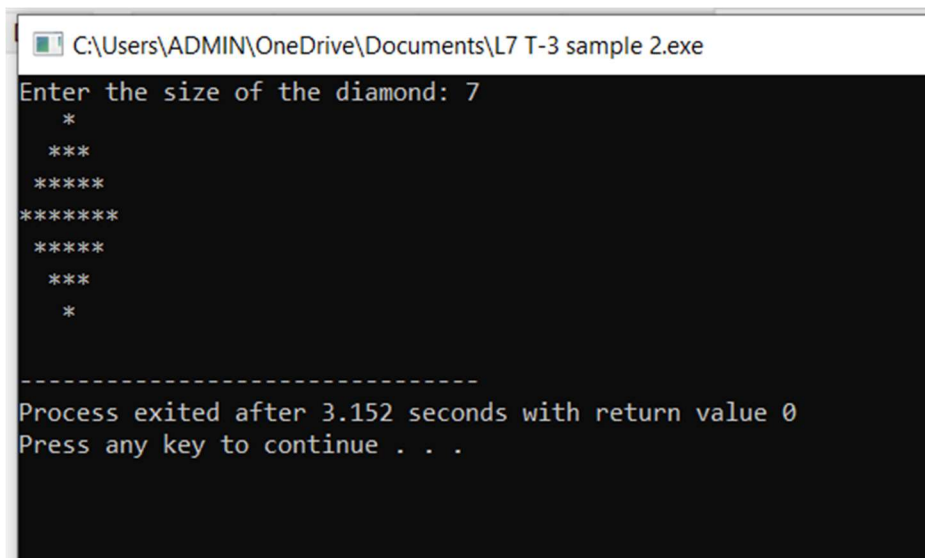
    spaces = 1;

    for (int i = n / 2 - 1; i >= 0; --i) {

        for (int j = 0; j < spaces; ++j) {
```

```
        cout << " ";  
    }  
    for (int k = 0; k < 2 * i + 1; ++k) {  
        cout << "*";  
    }  
    cout << endl;  
    ++spaces;  
}  
  
return 0;  
}
```

Result:



The screenshot shows a Windows command prompt window with the title bar "C:\Users\ADMIN\OneDrive\Documents\L7 T-3 sample 2.exe". The prompt displays the text "Enter the size of the diamond: 7". Below this, a diamond shape is printed using asterisks. The diamond has 7 rows: the first row has 1 asterisk, the second has 3, the third has 5, the fourth has 7, the fifth has 5, the sixth has 3, and the seventh has 1. After the diamond, a dashed line is printed. The prompt then shows "Process exited after 3.152 seconds with return value 0" and "Press any key to continue . . .".

```
C:\Users\ADMIN\OneDrive\Documents\L7 T-3 sample 2.exe  
Enter the size of the diamond: 7  
*  
***  
*****  
*****  
*****  
***  
*  
  
-----  
Process exited after 3.152 seconds with return value 0  
Press any key to continue . . .
```