



Fundamental of Programing

Lab Manual # 07

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1. Take 10 integer inputs from user and store them in an array and print them on screen

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

int main()
{
    int arr[10];

    for (int i = 0; i < 10; i++) {
        cout << "Enter integer " << i + 1 << " = ";
        cin >> arr[i];
    }

    cout << endl;
    cout << "The numbers you entered are:" << endl;

    for (int i = 0; i < 10; i++) {
        cout << arr[i] << " ";
    }

    return 0;
}
```



```
D:\ME-15\for lab\Lab manual 7\Q1.exe
Enter integer 1 = 2
Enter integer 2 = 3
Enter integer 3 = 4
Enter integer 4 = 5
Enter integer 5 = 6
Enter integer 6 = 7
Enter integer 7 = 8
Enter integer 8 = 9
Enter integer 9 = 1
Enter integer 10 = 0

The numbers you entered are:
2 3 4 5 6 7 8 9 1 0
-----
Process exited after 11.41 seconds with return value 0
Press any key to continue . . .
```

2 Write a program to find the sum and product of all elements of an array with 5 integer elements.

```
#include<iostream>
```

```
using namespace std;
```

```
int main()
```

```
{
```

```
int arr[5] = { 1, 2, 3, 4, 5};
```

```
int sum =0 , product=1;
```

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

```
sum = sum+ arr[i];
```

```
product = product*arr[i];
```

```
}
```

```
cout<< "sum = "<< sum <<endl << "product = "<<product;
```

```
return 0;
```

```
}
```



```
D:\ME-15\for lab\Lab manual 7\Q2.exe
sum = 20
product = 600
-----
Process exited after 0.1039 seconds with return value 0
Press any key to continue . . .
```

3. Print diamond pattern using a single array

```
#include <iostream>
using namespace std;
int main()
{
    char arr[5];
    int r = 5 / 2;
    int r1 = r;
    int r2 = r;

    for (int i = 0; i <= 2; i++)
    {
        for (int j = 0; j < 5; j++)
        {
            if (j >= r1 && j <= r2)
            {
                arr[j] = '*';
            }
            else
            {
                arr[j] = ' ';
            }
        }
        for (int k = 0; k < 5; k++)
```



```
{  
cout << arr[k];  
}  
r1 -= 1;  
r2 += 1;  
cout << endl;  
}  
r1 += 2;  
r2 -= 2;  
for (int e = 0; e <= 1; e++)  
{  
for (int j = 0; j < 5; j++)  
{  
if (j >= r1 && j <= r2)  
{  
arr[j] = '*';  
}  
else  
{  
arr[j] = ' ';  
}  
}  
for (int k = 0; k < 5; k++)  
{  
cout << arr[k];  
}  
r1 += 1;  
r2 -= 1;  
cout << endl;  
}  
return 0;  
}
```



```
D:\ME-15\for lab\Lab manual 7\Q3.exe
*
***
*****
***
*

-----
Process exited after 0.1449 seconds with return value 0
Press any key to continue . . .
```