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

```cpp
#include <iostream>

using namespace std;

int main()
{int arr[10];
    for(int i=1;i<=10;i++){
    cout << "enter value" <<i<< endl;
    cin>>arr[i-1];

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

    return 0;
}
```

```
enter value1
1
enter value2
2
enter value3
3
enter value4
4
enter value5
5
enter value6
6
enter value7
7
enter value8
8
enter value9
9
enter value10
9
your array is
1
2
3
4
5
6
7
8
9
```

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

```cpp
#include <iostream>

using namespace std;

int main()
{int arr[5];
int sum=0;
    for(int i=1;i<=5;i++){
    cout << "enter value" <<i<< endl;
    cin>>arr[i-1];

    }
    for(int i=0;i<5;i++){
     sum+=arr[i];



    }
    cout<<"sum of array is :"<<sum<<endl;

    return 0;
}
```

```
enter value1
3
enter value2
4
enter value3
6
enter value4
7
enter value5
5
sum of array is :25

Process returned 0 (0x0)   execution time : 6.419 s
Press any key to continue.
```

3:Print diamond pattern using a single array.

```
int main() {
    string arr[5];
    int upper = 2;
    int lower = 2;

    for (int i = 0; i < 5; i++) {
        arr[i] = "* ";
    }

    for (int j = 0; j < 5; j++) {
        for (int i = 0; i < 5; i++) {
            if (i <= upper && i >= lower) {
                cout << arr[i];
            } else {
                cout << "  ";
            }
        }
        if (j < 2) {
            upper++;
            lower--;
        } else {
            upper--;
            lower++;
        }
        cout << endl;
    }
```

```
    *
  * * *
* * * * *
  * * *
    *

Process returned 0 (0x0)   execution time : 0.569 s
Press any key to continue.
```