NUST

NATIONAL UNIVERSITY
OF SCIENCES & TECHNOLOGY

FUNDAMENTALS OF PROGRAMMING

LAB MANUAL-7

LAB TASKS

ME-15C

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

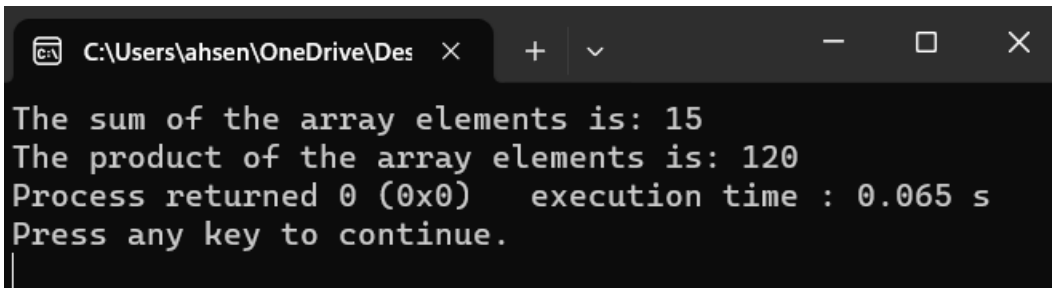
```
#include <iostream>
using namespace std;

int main()
{
   int arr[10];
   cout << "Enter 10 integers: ";
   for (int i = 0; i < 10; i++)
   {
      cin >> arr[i];
   }
   cout << "The array elements are: ";
   for (int i = 0; i < 10; i++)
   {
      cout << arr[i] << " ";
   }
   return 0;
}
```

```
Enter 10 integers: 5
4
6
8
7
9
2
1
3
6
The array elements are: 5 4 6 8 7 9 2 1 3 6
Process returned 0 (0x0)   execution time : 8.400 s
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 += arr[i];
      product *= arr[i];
   }
   cout << "The sum of the array elements is: " << sum<<endl;
   cout << "The product of the array elements is: " << product;
   return 0;
}
```



2. Print diamond pattern using a single array.

```
#include <iostream>
int main() {
   int n = 5;

   for (int i = 0; i < n; i++) {
      for (int j = 0; j < n - i - 1; j++) {
         std::cout << " ";
      }
      for (int j = 0; j < 2 * i + 1; j++) {
         std::cout << "*";
      }
      std::cout << std::endl;
   }

   for (int i = n - 2; i >= 0; i--) {
      for (int j = 0; j < n - i - 1; j++) {
         std::cout << " ";
      }
      for (int j = 0; j < 2 * i + 1; j++) {
         std::cout << "*";
      }
      std::cout << std::endl;
   }
return 0;
}
```