Computer systems and Programming

Instructor
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LAB Manual 7
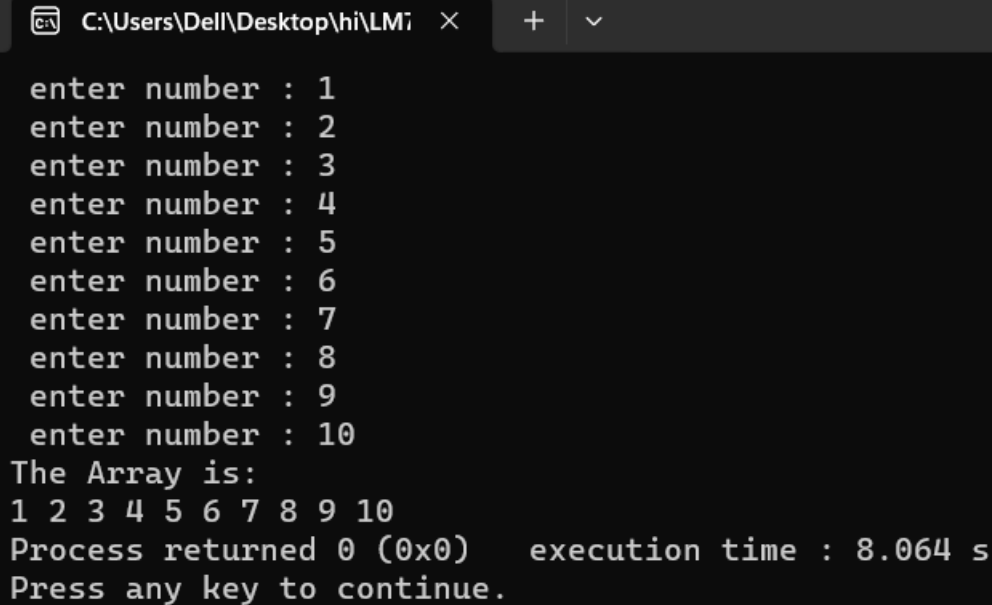
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ME-15-C
465231

```cpp
//Question) Take 10 integers input from user and store them in an array and print them on screen.

#include <iostream>

using namespace std;

int main()
{
    int y=0,z=0;
    int array [9]={ };
    while (y<10)
    {
        cout<<" enter number : " ;
        cin>>array[y];
        y++;
    }
    cout<<"The Array is: "<<endl;
    while(z<10){
        cout<< array [z] <<" " ;
        z++;
    }
    return 0;
}
```

```
C:\Users\Dell\Desktop\hi\LM7    ×    +    ⌄

 enter number : 1
 enter number : 2
 enter number : 3
 enter number : 4
 enter number : 5
 enter number : 6
 enter number : 7
 enter number : 8
 enter number : 9
 enter number : 10
The Array is:
1 2 3 4 5 6 7 8 9 10
Process returned 0 (0x0)    execution time : 8.064 s
Press any key to continue.
```

```cpp
//Question) 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 x = 0, product = 1, sum = 0;
    int num[5];
    while (x < 5) {
        cout << "Insert number: " << endl;
        cin >> num[x];
        x++;
    }

    for (int r = 0; r < 5; r++) {
        product = product * num[r];
    }
    cout << "Product of all integers in array=" << product << endl;

    for (int z = 0; z < 5; z++) {
        sum = sum + num[z];
    }
    cout << "Sum of all integers in array=" << sum << endl;

    return 0;
}
```

```
C:\Users\Dell\Desktop\hi\LM7    ×    +    ∨

Insert number:
1
Insert number:
2
Insert number:
3
Insert number:
4
Insert number:
5
Product of all integers in array=120
Sum of all integers in array=15

Process returned 0 (0x0)   execution time : 4.224 s
Press any key to continue.
```

```cpp
//Question) Print a diamond pattern using single array.
#include <iostream>
using namespace std;

int main() {
    const int size = 5;

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

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

    return 0;
}
```