Day-41 of the #101 days of coding challenge—

Problem:- Write a C++ program to update every array element by multiplication of the next and previous values of a given array of integers.

Code:-

```
#include<iostream>


using namespace std;


void replaceNextMulPrevious(int *arr, int n)
{
	int i,j;
	int *arrCopy;

	// coping all array elements to the another array
	for(i = 0; i<n; i++)
	{
		arrCopy[i] = arr[i];
	}
	for(i = 0; i<n; i++)
```

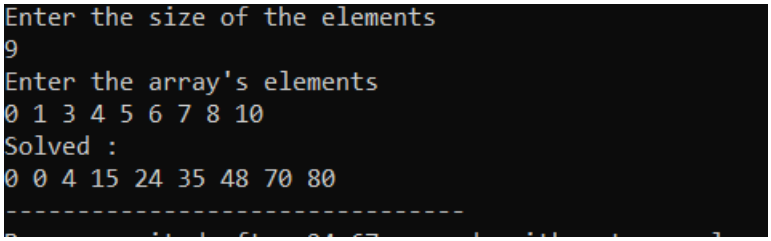
```
    {
        for(j = 0; j<n; j++)
        {
            if(j == 0)  // for initial elements there will br not any elements so elements itself multiply by next one
            {
                arr[j] = arrCopy[j] * arrCopy[j+1];
            }
            else if(j == n-1) // at the end itself multiply by previous one
            {
                arr[j] = arrCopy[j] * arrCopy[j-1];
            }
            else{ // multiply current element's previous and next and replace it to the current
                arr[j] = arrCopy[j-1] * arrCopy[j+1];
            }
        }
```

```
        }
}
int main()
{
   int n;
   cout<<"Enter the size of the elements"<<endl;
   cin>>n;

   int arr[n];
   cout<<"Enter the array's elements"<<endl;
   for(int i = 0; i<n; i++)
   {
       cin>>arr[i];
          }
          replaceNextMulPrevious(arr, n);
          cout<<"Solved :"<<endl;
          for(int i = 0; i<n; i++)
          {
```

```
        cout<<arr[i]<<" ";
          }
    return 0;
}
```

Output:-



Problem:- Write a C++ program to rearrange the elements of a given array of integers in a zig-zag pattern.
Note: The format zig-zag array in form a < b > c < d > e < f.

Code:-

```
#include<iostream>


using namespace std;


void swap(int *a, int *b)
{
    int temp;
```

```
    temp = *a;
    *a = *b;
    *b = temp;
}

void zigzagPatteren(int *arr, int n)
{
    int i, j;
    for(i = 0; i<n; i++)
    {
        for(j = 1; j<n-1; j+=2) // swap on each odd
number index
        {
          swap(&arr[j], &arr[j+1]);
            }
        }
    }
int main()
```

```
{

   int n,i;
   cout<<"Enter the size of the array"<<endl;
   cin>>n;

   int arr[n];
   cout<<"Enter the elements of the array"<<endl;
   for(i = 0; i<n; i++)
   {
       cin>>arr[i];
          }
          zigzagPatteren(arr, n);
          cout<<"Solved:"<<endl;
          for(i = 0; i<n; i++)
          {
              cout<<arr[i]<<" ";
          }
```

```
    return 0;
}
```

Output:-