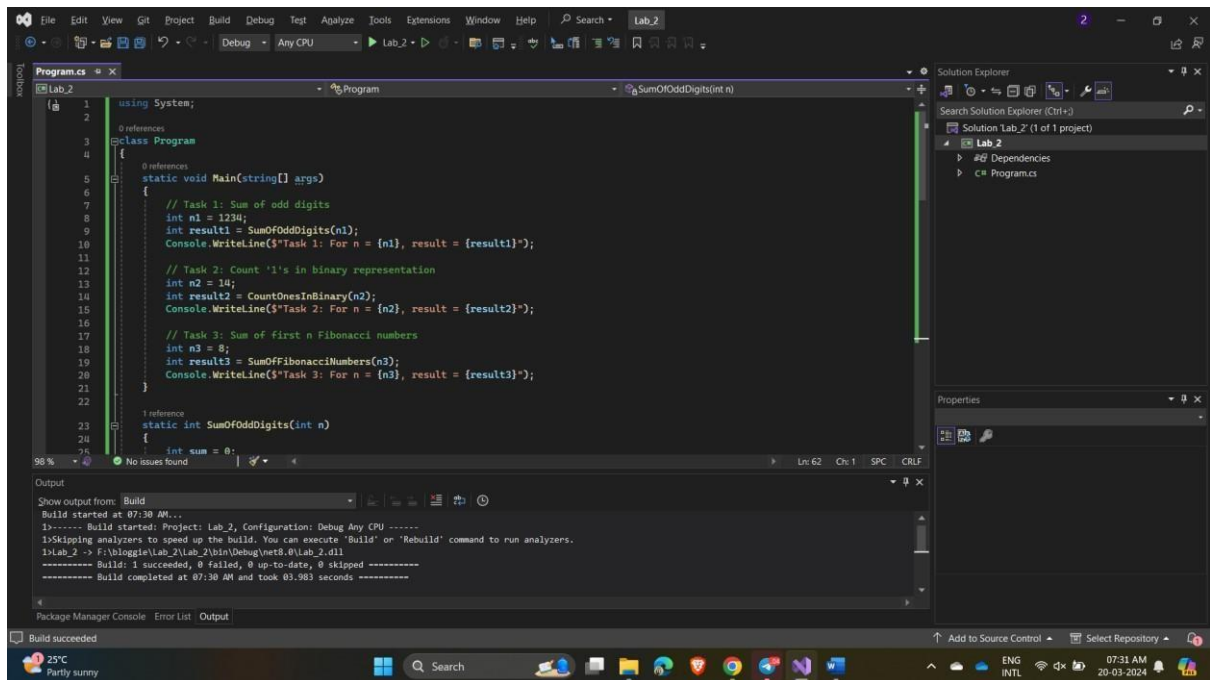


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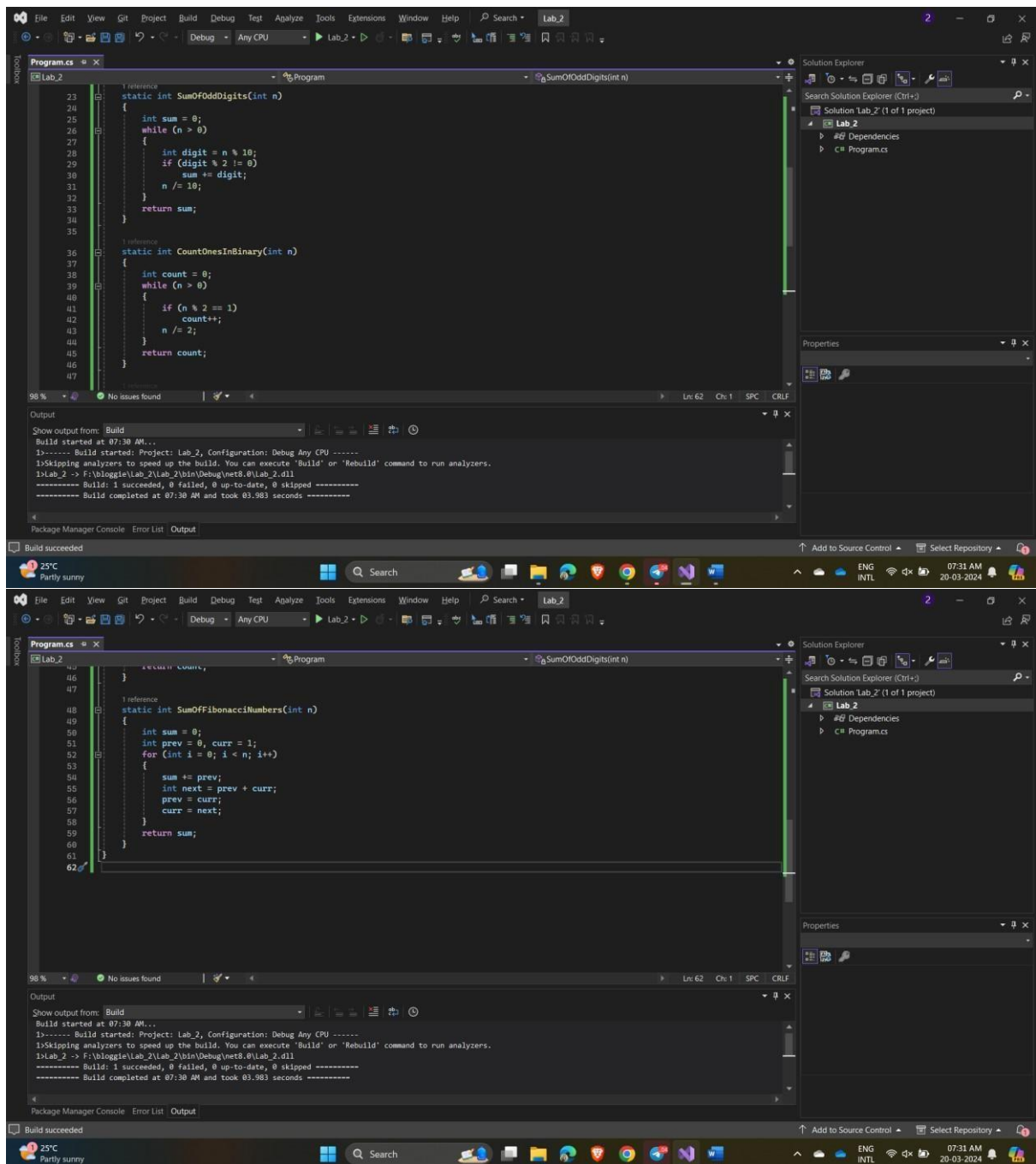
Lab12.1



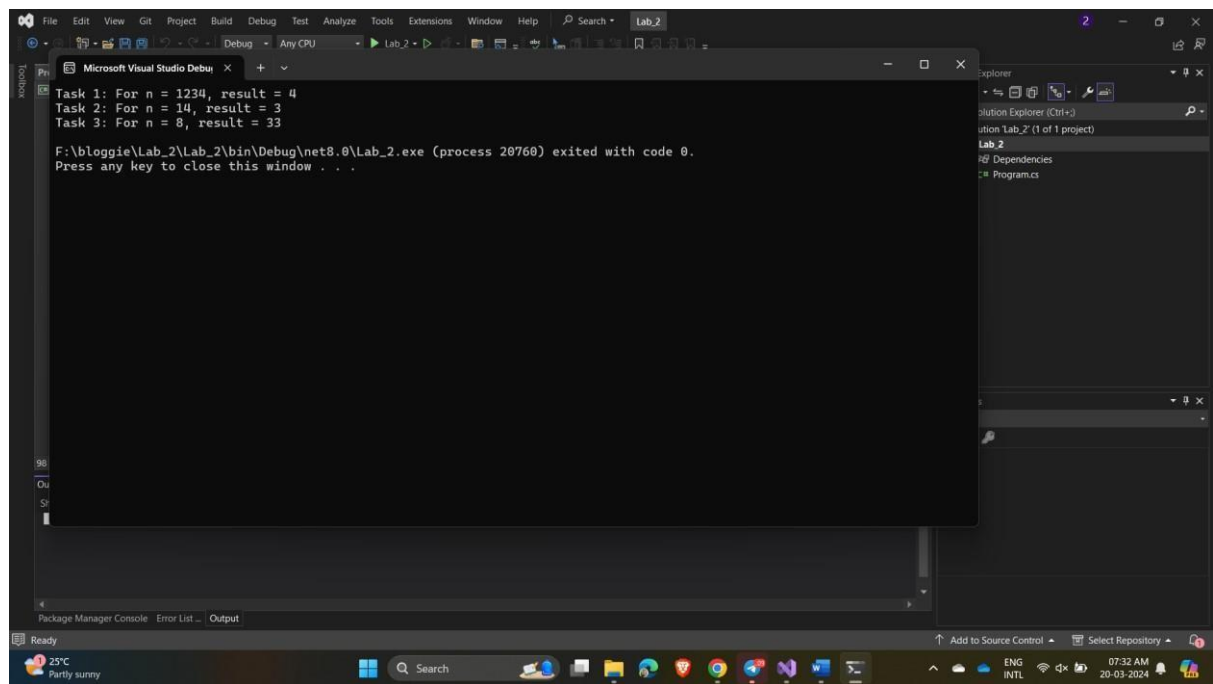
```
1 using System;
2
3 class Program
4 {
5     // 0 references
6     static void Main(string[] args)
7     {
8         // Task 1: Sum of odd digits
9         int n1 = 1234;
10        int result1 = SumOfOddDigits(n1);
11        Console.WriteLine($"Task 1: For n = {n1}, result = {result1}");
12
13        // Task 2: Count '1's in binary representation
14        int n2 = 14;
15        int result2 = CountOnesInBinary(n2);
16        Console.WriteLine($"Task 2: For n = {n2}, result = {result2}");
17
18        // Task 3: Sum of first n Fibonacci numbers
19        int n3 = 8;
20        int result3 = SumOfFibonacciNumbers(n3);
21        Console.WriteLine($"Task 3: For n = {n3}, result = {result3}");
22    }
23
24    // 1 reference
25    static int SumOfOddDigits(int n)
26    {
27        int sum = 0;
28        while (n > 0)
29        {
30            int digit = n % 10;
31            if (digit % 2 != 0)
32            {
33                sum += digit;
34            }
35            n /= 10;
36        }
37        return sum;
38    }
39
40    static int CountOnesInBinary(int n)
41    {
42        int count = 0;
43        while (n > 0)
44        {
45            count += n & 1;
46            n = n >> 1;
47        }
48        return count;
49    }
50
51    static int SumOfFibonacciNumbers(int n)
52    {
53        int sum = 0;
54        int a = 0, b = 1;
55        for (int i = 0; i < n; i++)
56        {
57            sum += a;
58            int next = a + b;
59            a = b;
60            b = next;
61        }
62        return sum;
63    }
64 }
```

Output

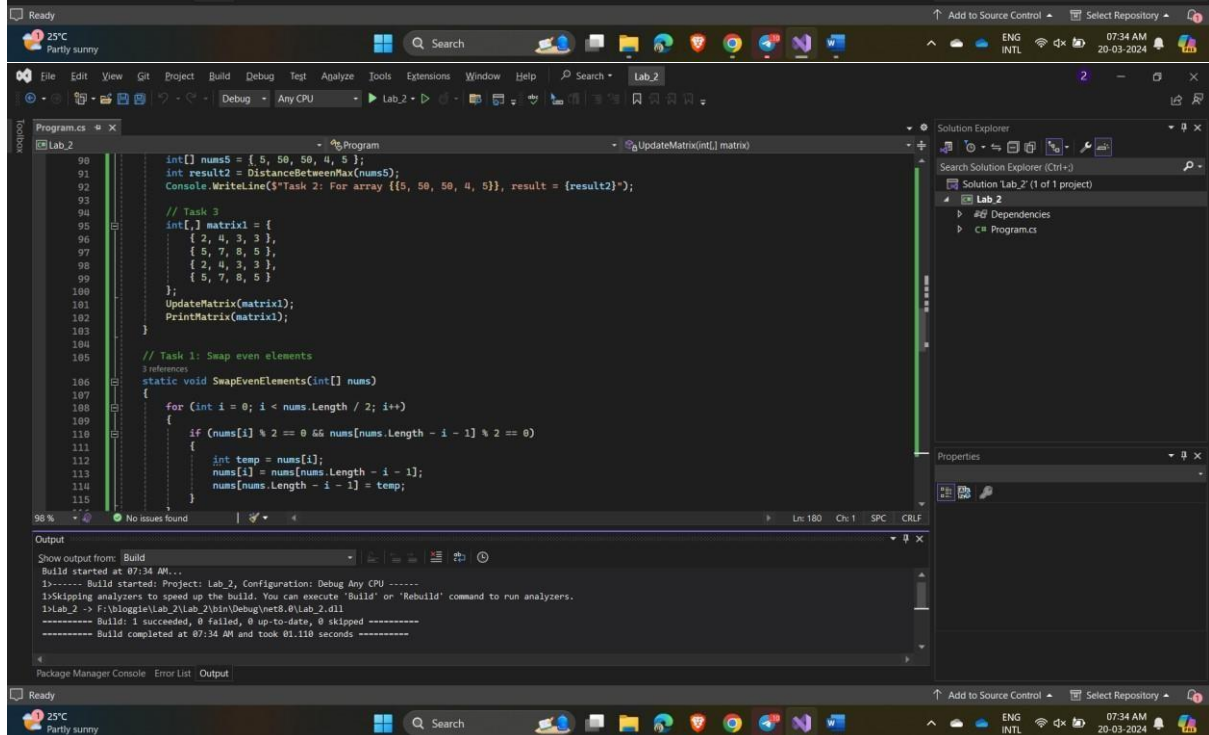
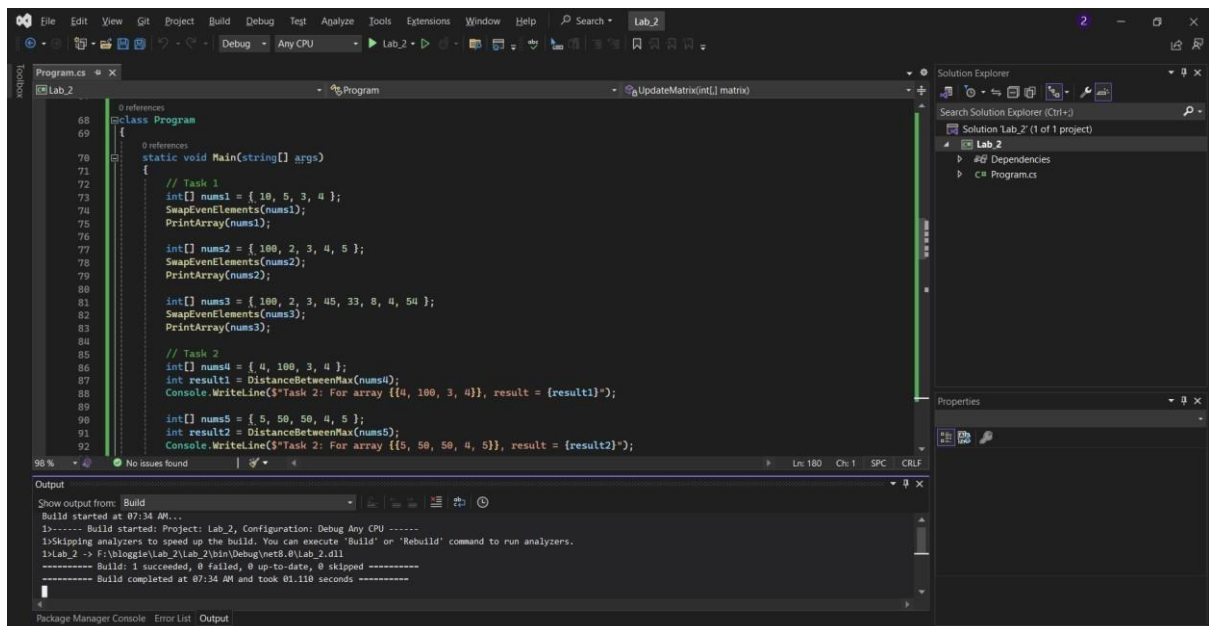
```
Build started at 07:30 AM...
1>----- Build started: Project: Lab_2, Configuration: Debug Any CPU -----
1>Skipping analyzers to speed up the build. You can execute 'Build' or 'Rebuild' command to run analyzers.
1>Lab_2 -> F:\blogger\Lab_2\bin\Debug\net8.0\Lab_2.dll
----- Build: 1 succeeded, 0 failed, 0 up-to-date, 0 skipped -----
----- Build completed at 07:30 AM and took 03.983 seconds -----
```

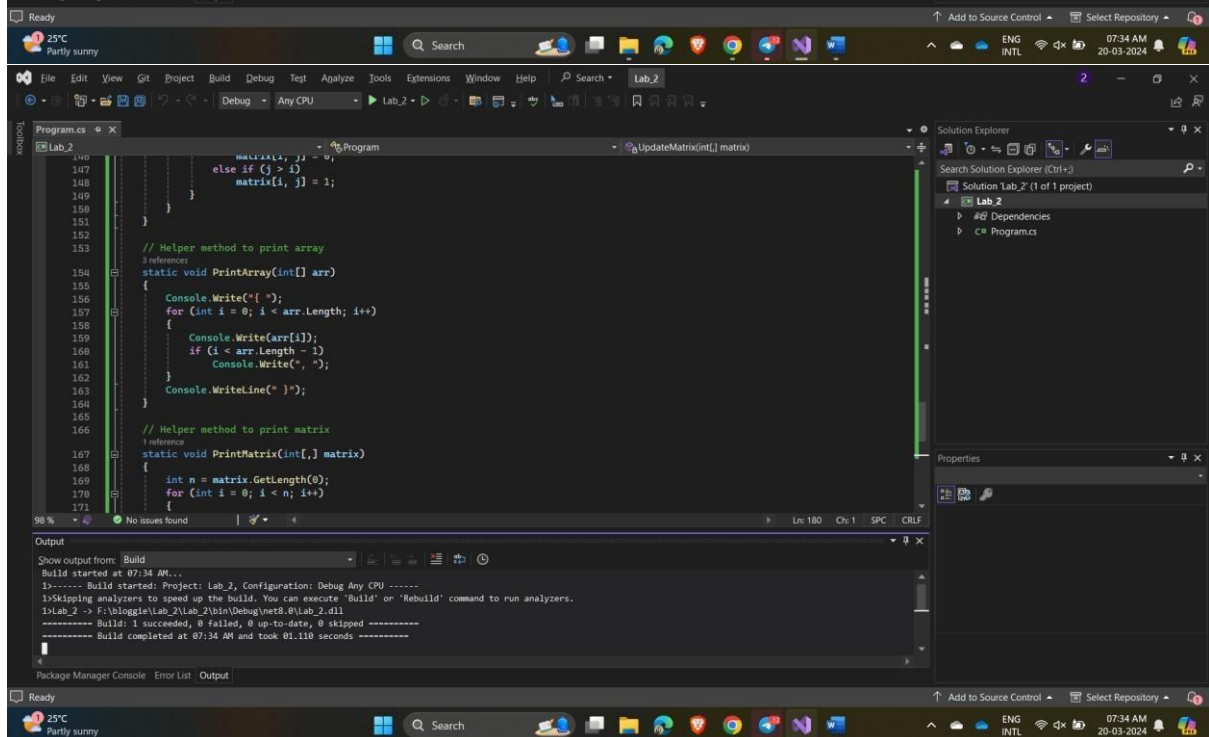
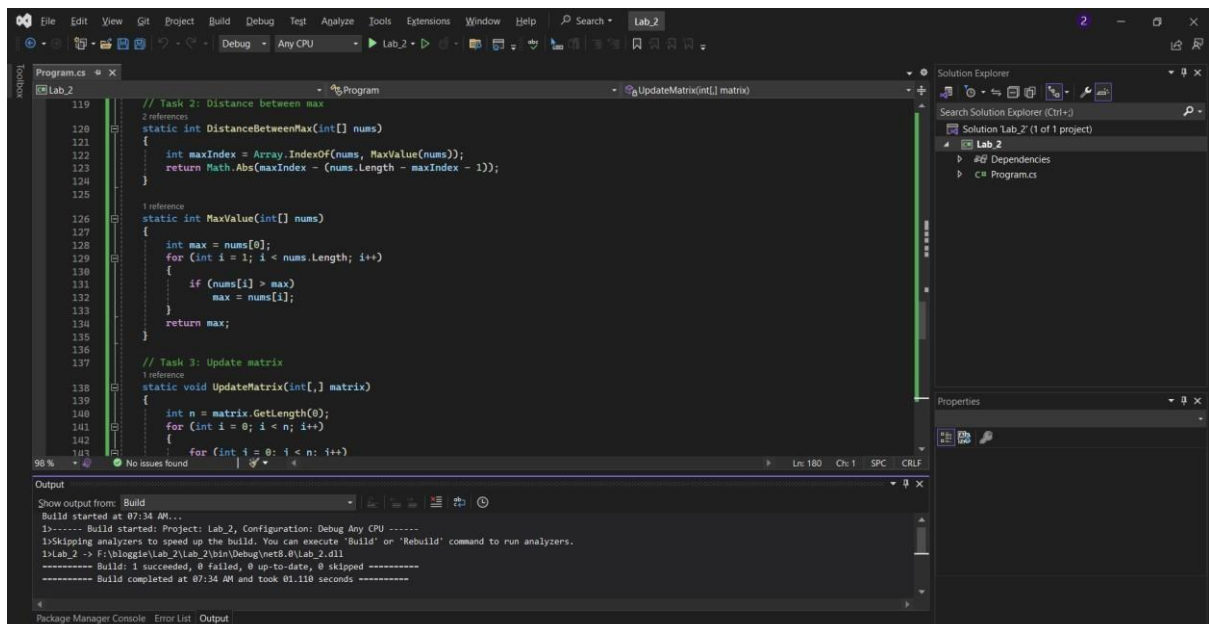


OUTPUT:

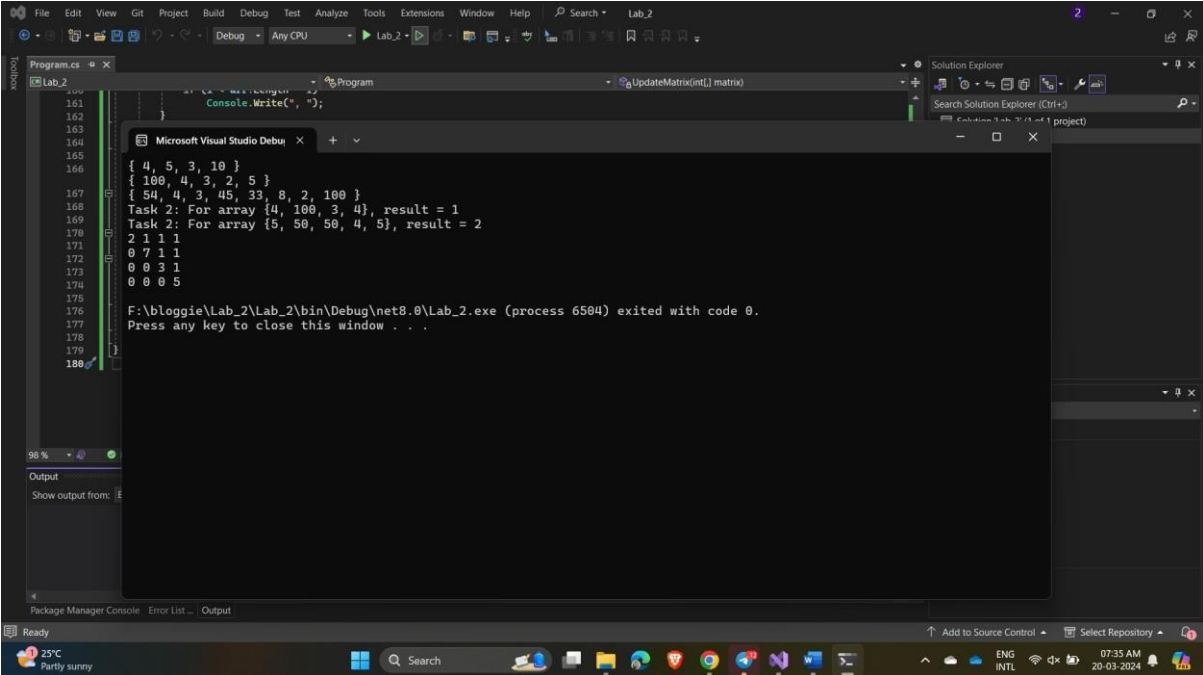


LAB 12.2



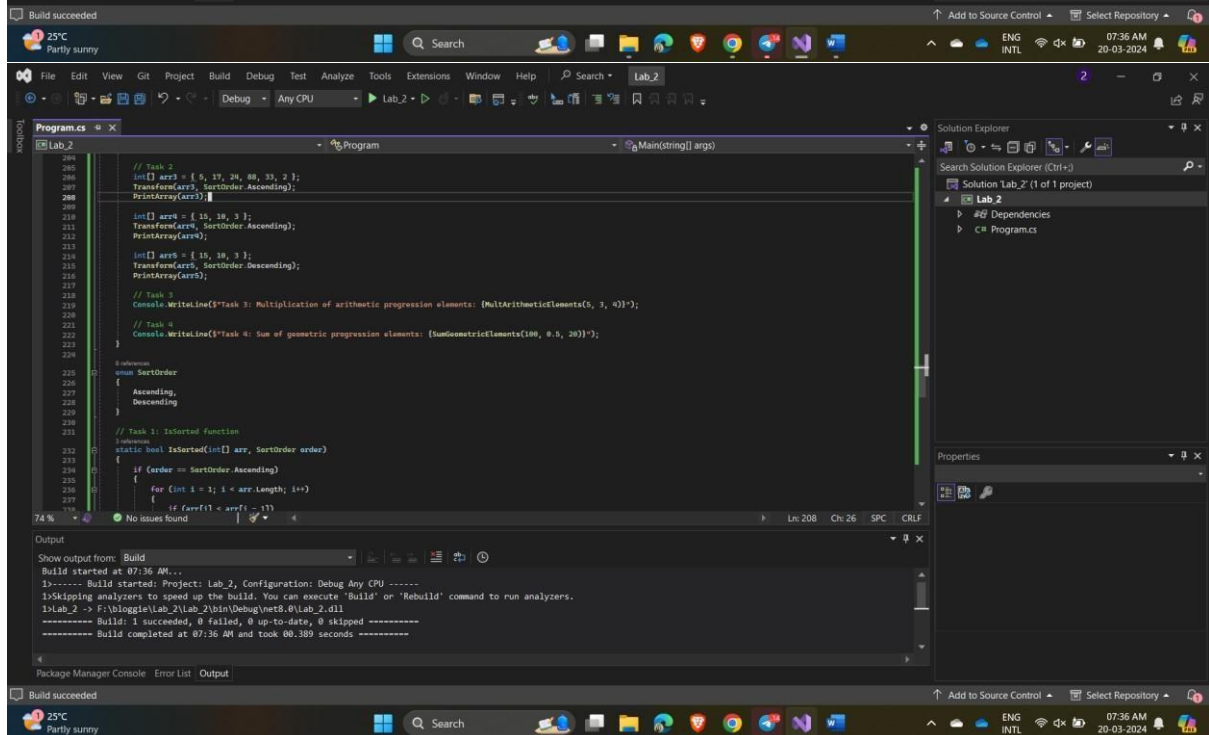
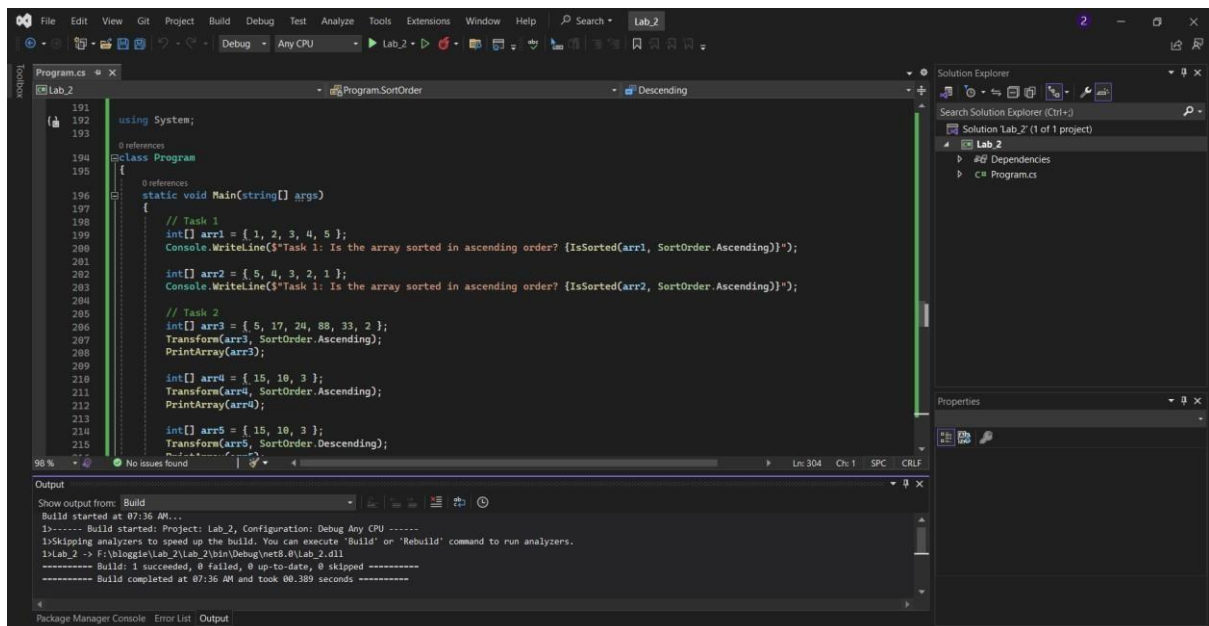


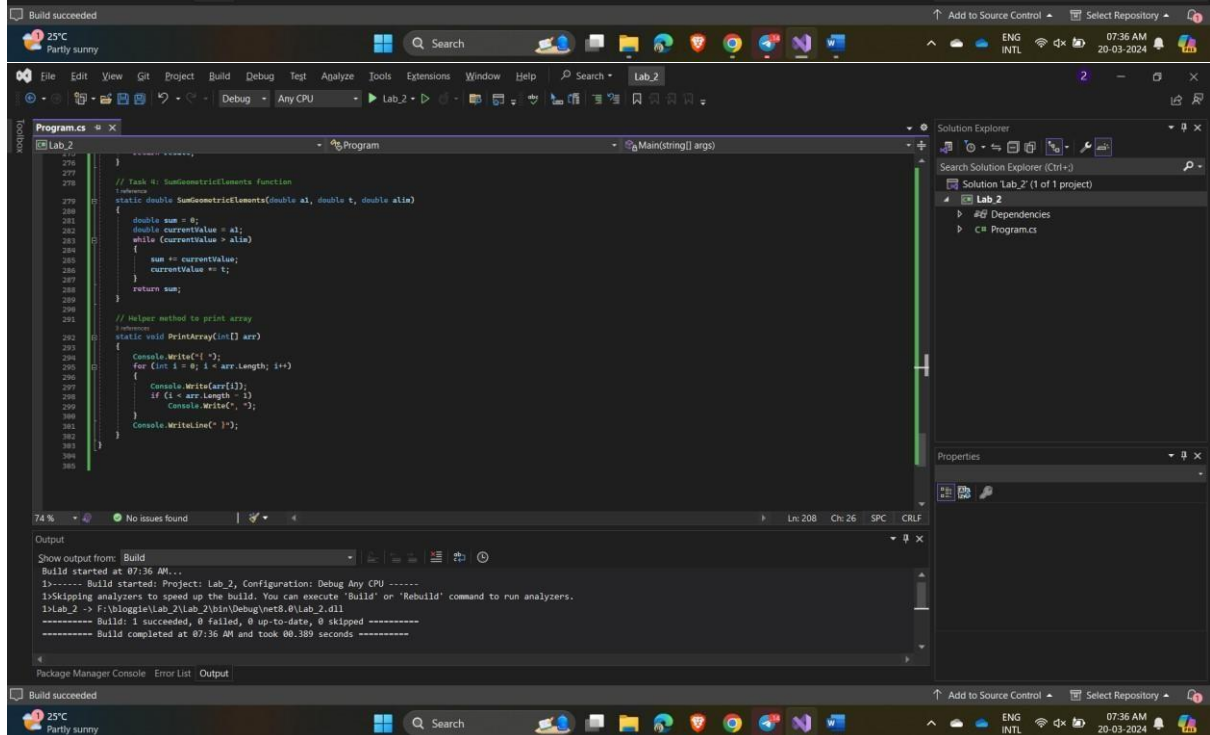
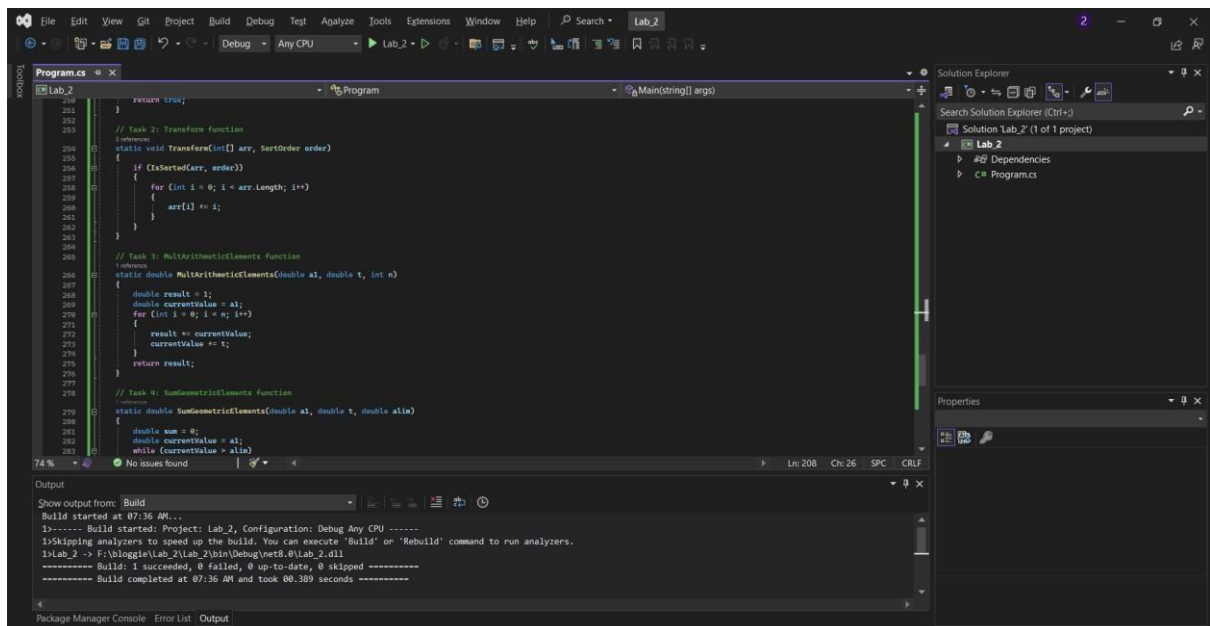
OUTPUT:



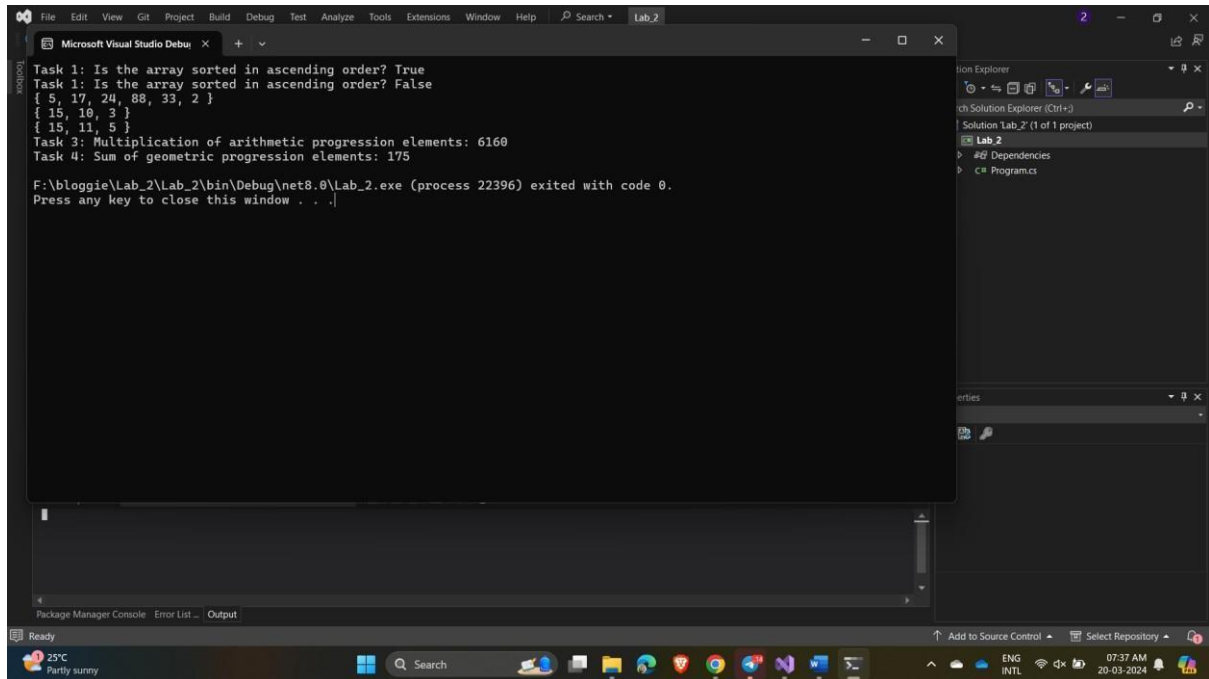
```
160
161
162 Console.WriteLine("");
163
164
165
166 { 4, 5, 3, 10 }
167 { 100, 4, 3, 2, 5 }
168 { 54, 4, 3, 45, 33, 8, 2, 100 }
169 Task 2: For array {4, 100, 3, 4}, result = 1
170 Task 2: For array {5, 50, 50, 4, 5}, result = 2
171 2 1 1 1
172 0 7 1 1
173 0 0 3 1
174 0 0 0 5
175
176 F:\bloggie\Lab_2\Lab_2\bin\Debug\net8.0\Lab_2.exe (process 6504) exited with code 0.
177 Press any key to close this window . . .
178
179
180
```

LAB – 12.3





OUTPUT:



The screenshot shows the Microsoft Visual Studio IDE with the 'Lab_2' project open. The 'Output' window is active, displaying the following text:

```
Task 1: Is the array sorted in ascending order? True
Task 1: Is the array sorted in ascending order? False
{ 5, 17, 24, 88, 33, 2 }
{ 15, 10, 3 }
{ 15, 11, 5 }
Task 3: Multiplication of arithmetic progression elements: 6160
Task 4: Sum of geometric progression elements: 175
F:\bloggie\Lab_2\Lab_2\bin\Debug\net8.0\Lab_2.exe (process 22396) exited with code 0.
Press any key to close this window . . .
```

The right sidebar shows the 'Solution Explorer' with the project structure:

- Solution 'Lab_2' (1 of 1 project)
 - Lab_2
 - Dependencies
 - c# Program.cs

The bottom status bar shows the system tray with the date and time: 07:37 AM, 20-03-2024.