

МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ
ЛЬВІВСЬКИЙ НАЦІОНАЛЬНИЙ УНІВЕРСИТЕТ ІМЕНІ ІВАНА
ФРАНКА

Факультет електроніки та комп'ютерних технологій

Звіт

про виконання лабораторної роботи №9

«ІО»

Виконала:

Студентка групи ФЕП-11

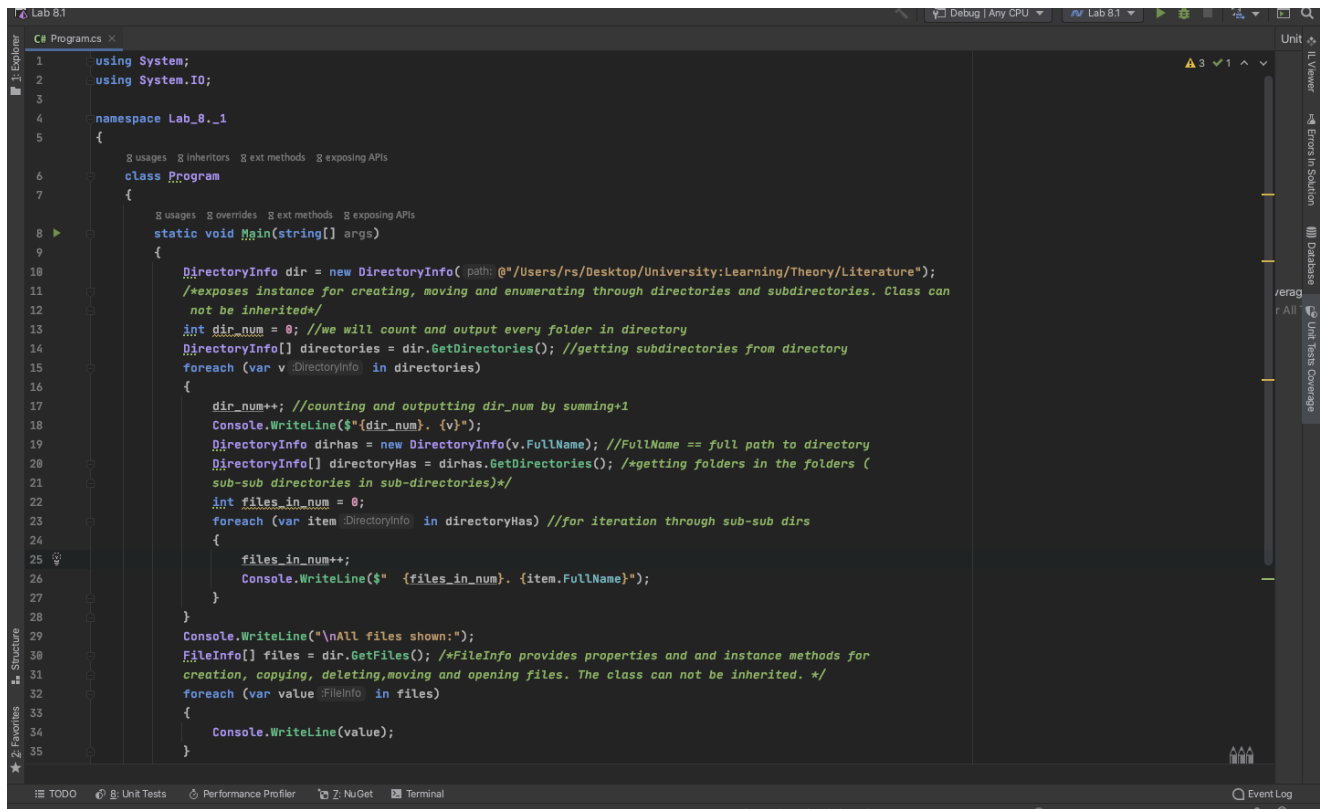
Софієва Аріна

Перевірив:

Щербак С. С.

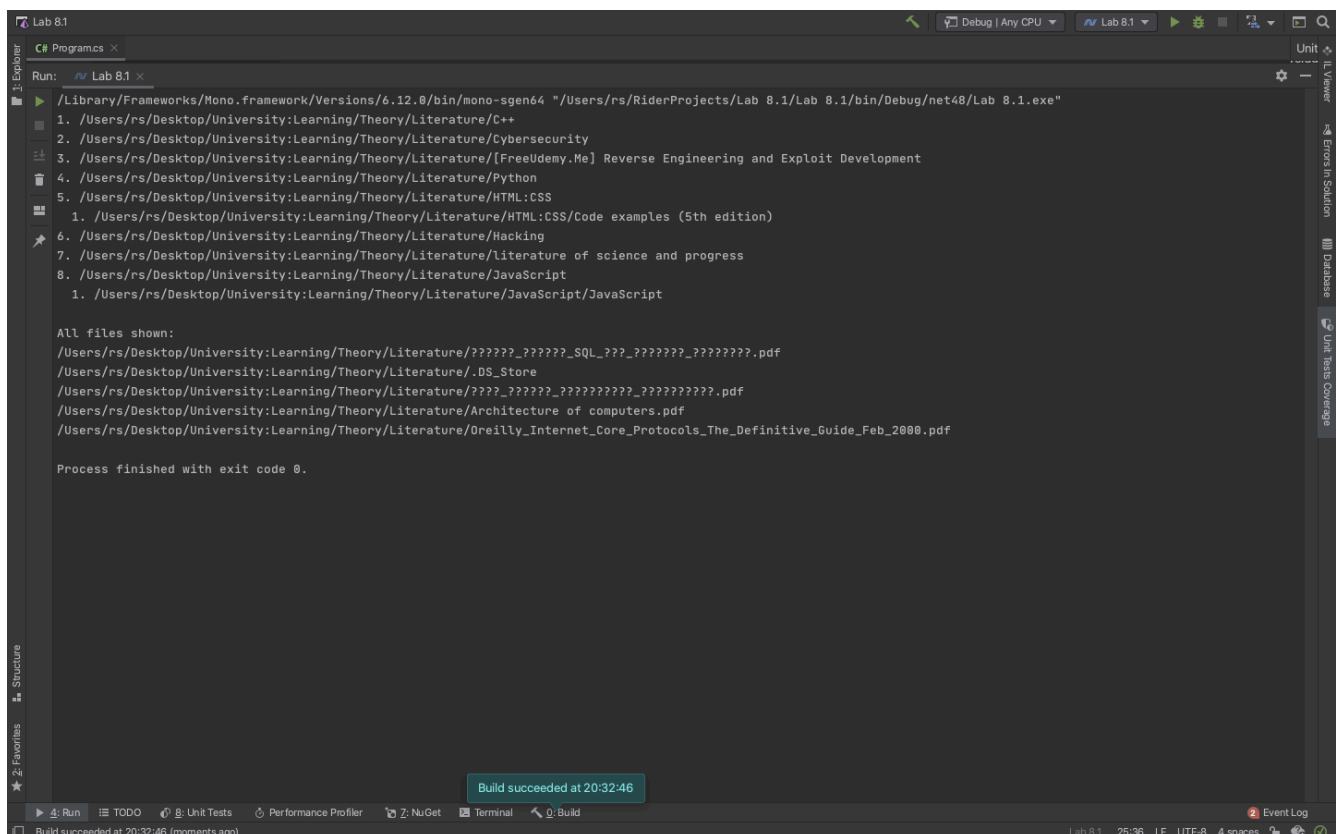
Львів 2020

1. Вивести на екран вміст заданого каталогу у вигляді списку файлів, піддиректорій з вмістом цих директорій .



```
1 using System;
2 using System.IO;
3
4 namespace Lab_8_1
5 {
6     // usages // inheritors // ext methods // exposing APIs
7
8     class Program
9     {
10        // usages // overrides // ext methods // exposing APIs
11        static void Main(string[] args)
12        {
13            DirectoryInfo dir = new DirectoryInfo(@"C:\Users\rs\Desktop\University:Learning/Theory/Literature");
14            /*exposes instance for creating, moving and enumerating through directories and subdirectories. Class can
15            not be inherited*/
16            int dir_num = 0; //we will count and output every folder in directory
17            DirectoryInfo[] directories = dir.GetDirectories(); //getting subdirectories from directory
18            foreach (var v :DirectoryInfo in directories)
19            {
20                dir_num++; //counting and outputting dir_num by summing+1
21                Console.WriteLine($"{dir_num}. {v}");
22                DirectoryInfo dirhas = new DirectoryInfo(v.FullName); //FullName == full path to directory
23                DirectoryInfo[] directoryHas = dirhas.GetDirectories(); /*getting folders in the folders (
24                sub-sub directories in sub-directories)*/
25                int files_in_num = 0;
26                foreach (var item :DirectoryInfo in directoryHas) //for iteration through sub-sub dirs
27                {
28                    files_in_num++;
29                    Console.WriteLine($"{dir_num} {files_in_num}. {item.FullName}");
30                }
31            }
32            Console.WriteLine("\nAll files shown:");
33            FileInfo[] files = dir.GetFiles(); /*FileInfo provides properties and and instance methods for
34            creation, copying, deleting,moving and opening files. The class can not be inherited. */
35            foreach (var value :FileInfo in files)
36            {
37                Console.WriteLine(value);
38            }
39        }
40    }
41}
```

8.1



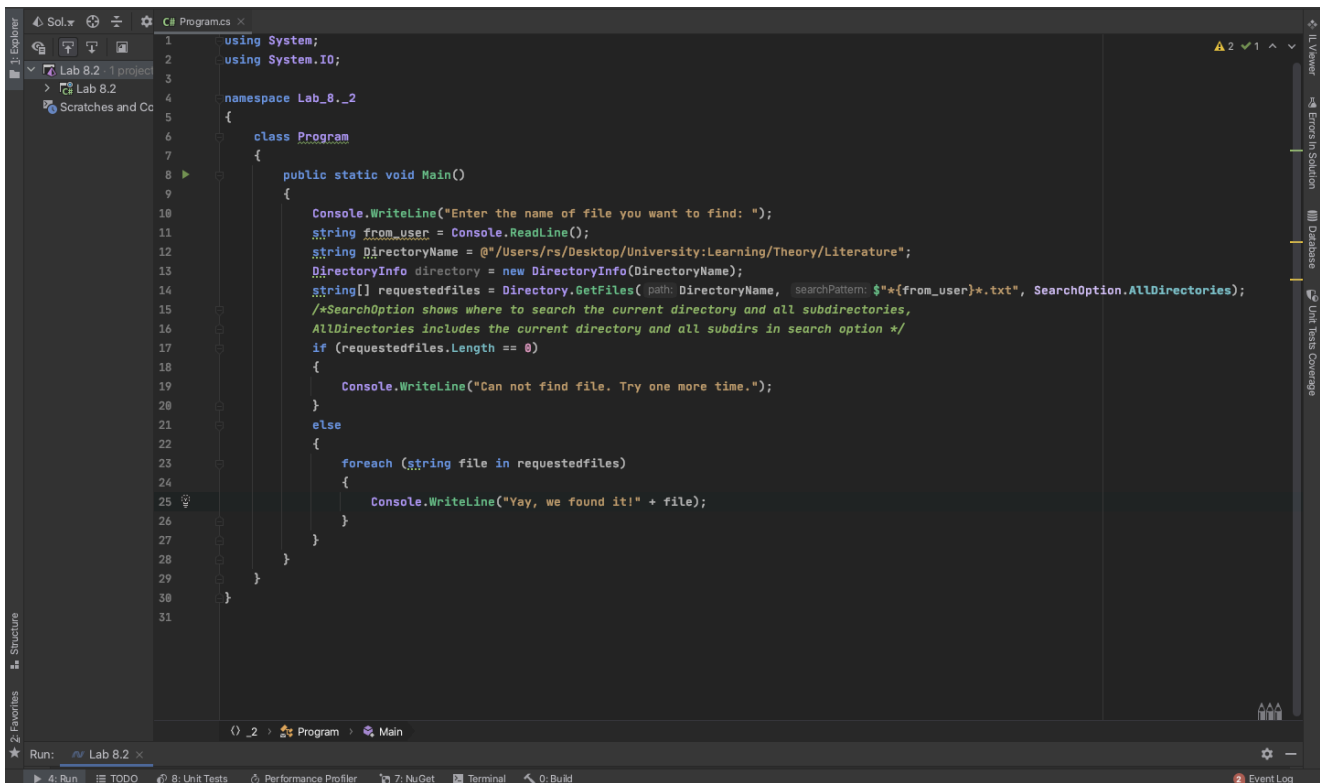
```
Run: Lab 8.1
/Library/Frameworks/Mono.framework/Versions/6.12.0/bin/mono-sgen64 "C:\Users\rs\RiderProjects\Lab 8.1\Lab 8.1\bin\Debug\net48\Lab 8.1.exe"
1. C:\Users\rs\Desktop\University:Learning/Theory/Literature/C++
2. C:\Users\rs\Desktop\University:Learning/Theory/Literature/Cybersecurity
3. C:\Users\rs\Desktop\University:Learning/Theory/Literature/[FreeUdemy.Me] Reverse Engineering and Exploit Development
4. C:\Users\rs\Desktop\University:Learning/Theory/Literature/Python
5. C:\Users\rs\Desktop\University:Learning/Theory/Literature/HTML:CSS
6. C:\Users\rs\Desktop\University:Learning/Theory/Literature/HTML:CSS/Code examples (5th edition)
7. C:\Users\rs\Desktop\University:Learning/Theory/Literature/Hacking
8. C:\Users\rs\Desktop\University:Learning/Theory/Literature/Literature of science and progress
9. C:\Users\rs\Desktop\University:Learning/Theory/Literature/JavaScript
10. C:\Users\rs\Desktop\University:Learning/Theory/Literature/JavaScript/JavaScript

All files shown:
C:\Users\rs\Desktop\University:Learning/Theory/Literature/?????_?????_SQL_???_?????_??????.pdf
C:\Users\rs\Desktop\University:Learning/Theory/Literature/.DS_Store
C:\Users\rs\Desktop\University:Learning/Theory/Literature/?????_?????_?????_?????_??????.pdf
C:\Users\rs\Desktop\University:Learning/Theory/Literature/Architecture of computers.pdf
C:\Users\rs\Desktop\University:Learning/Theory/Literature/Oreilly_Internet_Core_Protocols_The_Definitive_Guide_Feb_2008.pdf

Process finished with exit code 0.
```

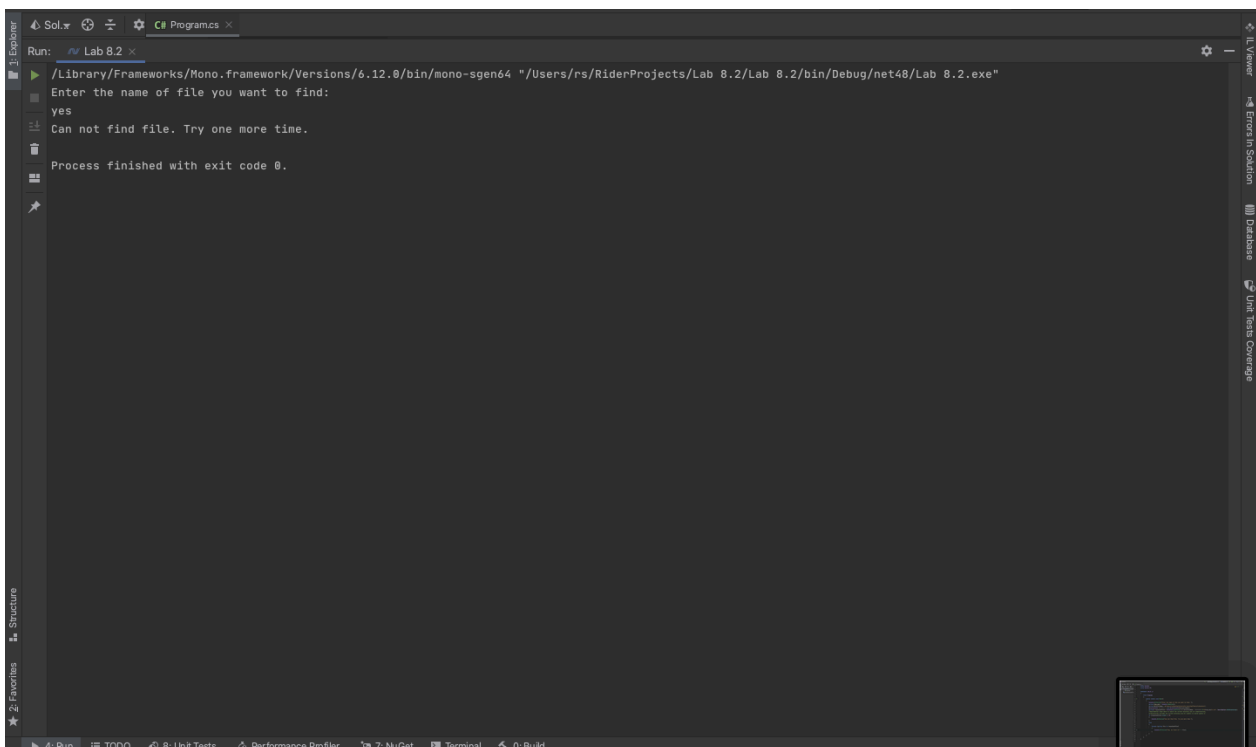
ВВЕДИТЕ ПОДПИСЬ.

2. Створіть додаток, який дозволяє знайти по частково-заданому імені файл з розширенням .txt



```
1 using System;
2 using System.IO;
3
4 namespace Lab_8._2
5 {
6     class Program
7     {
8     public static void Main()
9     {
10         Console.WriteLine("Enter the name of file you want to find: ");
11         string from_user = Console.ReadLine();
12         string DirectoryName = @"C:/Users/rs/Desktop/University/Learning/Theory/Literature";
13         DirectoryInfo directory = new DirectoryInfo(DirectoryName);
14         string[] requestedfiles = Directory.GetFiles(directory.FullName, from_user + ".txt", SearchOption.AllDirectories);
15         /*SearchOption shows where to search the current directory and all subdirectories,
16         AllDirectories includes the current directory and all subdirs in search option */
17         if (requestedfiles.Length == 0)
18         {
19             Console.WriteLine("Can not find file. Try one more time.");
20         }
21         else
22         {
23             foreach (string file in requestedfiles)
24             {
25                 Console.WriteLine("Yay, we found it!" + file);
26             }
27         }
28     }
29 }
30 }
```

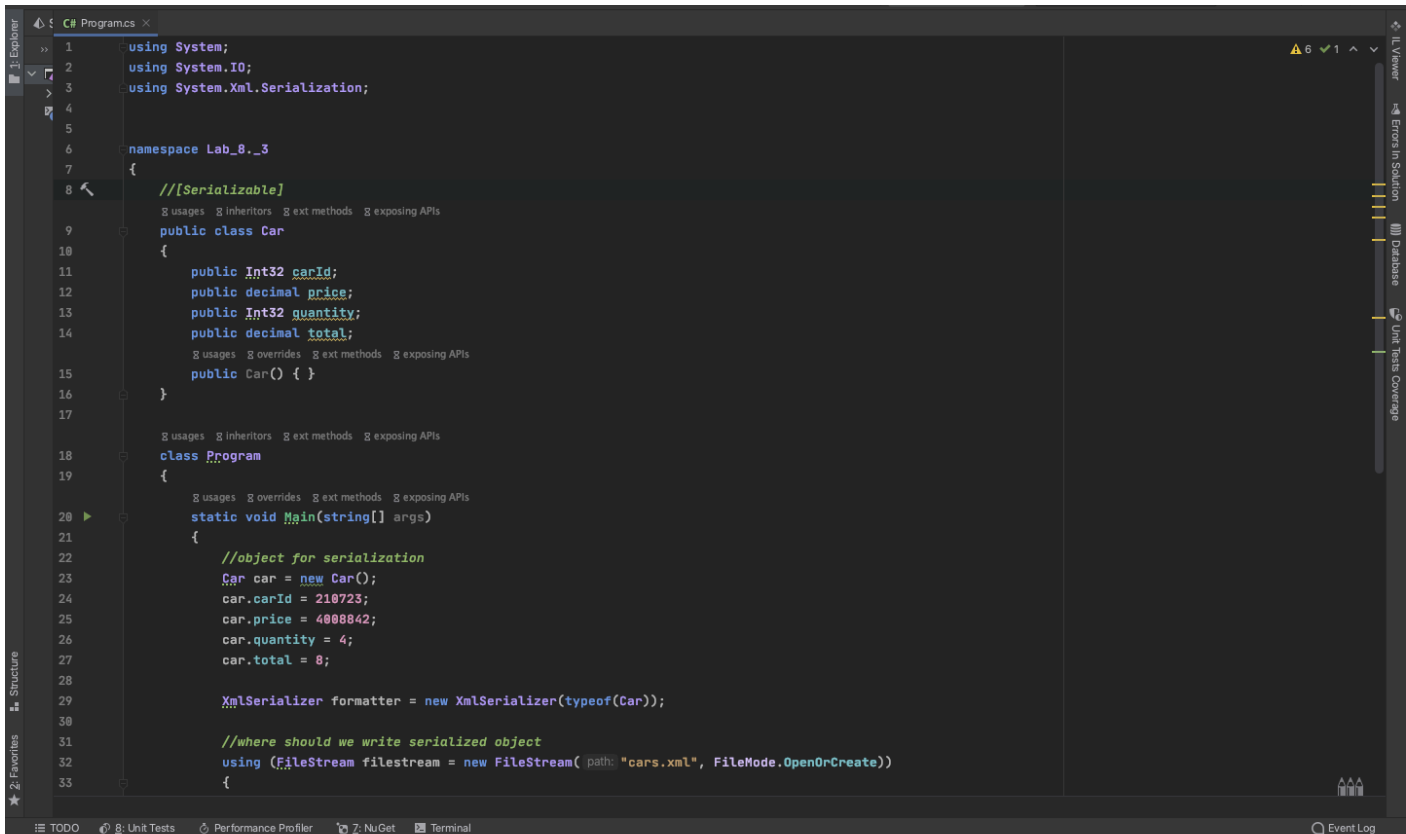
8.2



```
Run: Lab 8.2 x
/Library/Frameworks/Mono.framework/Versions/6.12.0/bin/mono-sgen64 "/Users/rs/RiderProjects/Lab 8.2/Lab 8.2/bin/Debug/net48/Lab 8.2.exe"
Enter the name of file you want to find:
yes
Can not find file. Try one more time.
Process finished with exit code 0.
```

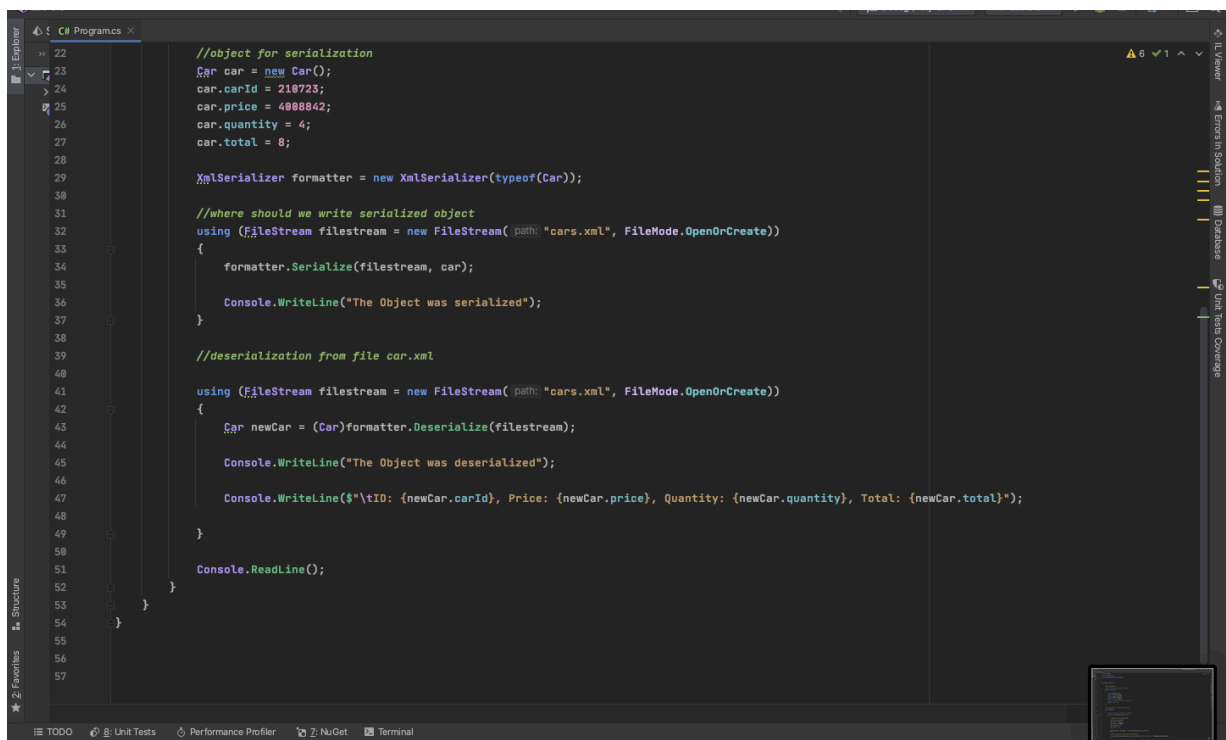
ВВЕДИТЕ ПОДПИСЬ.

3. Сериалізувати та десериалізувати колекцію екземплярів класу Car (Binary/XML).



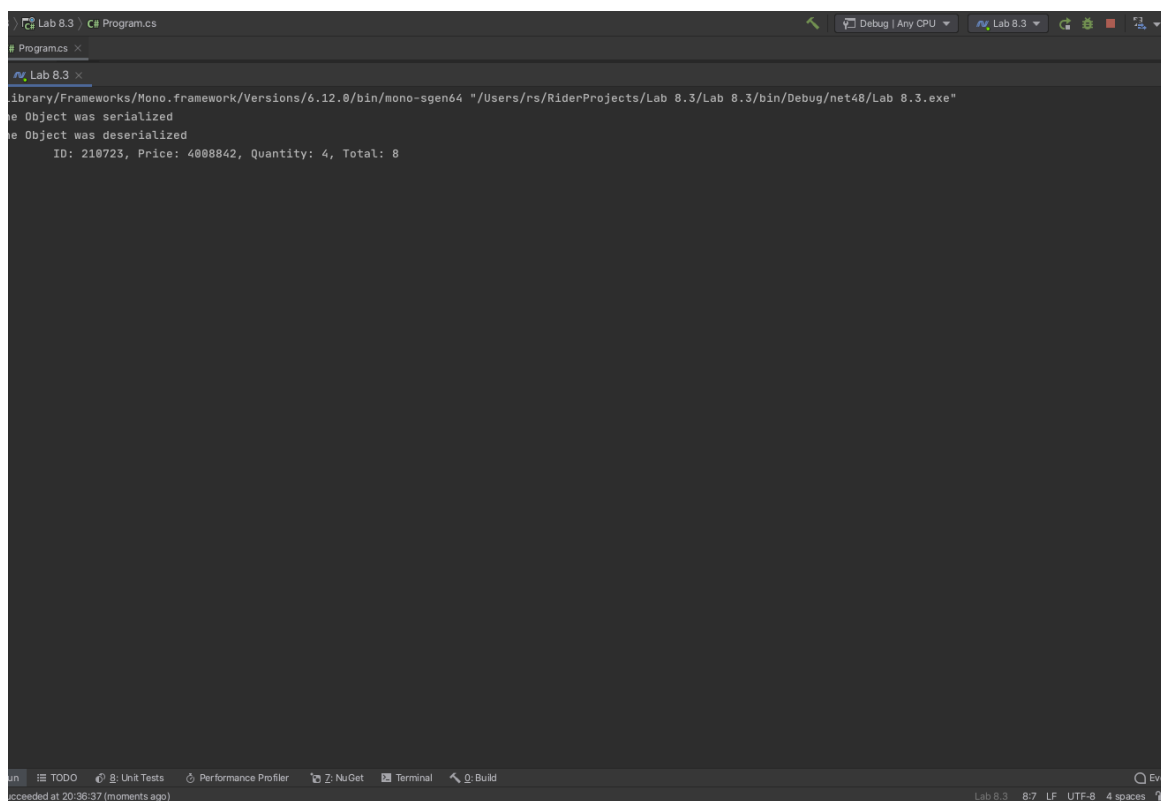
```
1 using System;
2 using System.IO;
3 using System.Xml.Serialization;
4
5
6 namespace Lab_8_3
7 {
8     ///[Serializable]
9     public class Car
10     {
11         public Int32 carId;
12         public decimal price;
13         public Int32 quantity;
14         public decimal total;
15         public Car() { }
16     }
17
18     class Program
19     {
20         static void Main(string[] args)
21         {
22             //object for serialization
23             Car car = new Car();
24             car.carId = 210723;
25             car.price = 4000042;
26             car.quantity = 4;
27             car.total = 8;
28
29             XmlSerializer formatter = new XmlSerializer(typeof(Car));
30
31             //where should we write serialized object
32             using (FileStream filestream = new FileStream( path: "cars.xml", FileMode.OpenOrCreate))
33             {
```

8.3



```
//object for serialization
22
23 Car car = new Car();
24 car.carId = 210723;
25 car.price = 4008842;
26 car.quantity = 4;
27 car.total = 8;
28
29
30
31
32 //where should we write serialized object
33 using (FileStream filestream = new FileStream( path: "cars.xml", FileMode.OpenOrCreate))
34 {
35     formatter.Serialize(filestream, car);
36
37     Console.WriteLine("The Object was serialized");
38 }
39
40 //deserialization from file car.xml
41
42 using (FileStream filestream = new FileStream( path: "cars.xml", FileMode.OpenOrCreate))
43 {
44     Car newCar = (Car)formatter.Deserialize(filestream);
45
46     Console.WriteLine("The Object was deserialized");
47
48     Console.WriteLine($"ID: {newCar.carId}, Price: {newCar.price}, Quantity: {newCar.quantity}, Total: {newCar.total}");
49 }
50
51 Console.ReadLine();
52 }
53
54 }
55
56
57
```

ВВЕДИТЕ ПОДПИСЬ.



```
Lab 8.3 / C# Program.cs
Programics x
Lab 8.3 x
Library/Frameworks/Mono.framework/Versions/6.12.0/bin/mono-sgen64 "/Users/rs/RiderProjects/Lab 8.3/Lab 8.3/bin/Debug/net48/Lab 8.3.exe"
The Object was serialized
The Object was deserialized
ID: 210723, Price: 4008842, Quantity: 4, Total: 8
```

ВВЕДИТЕ ПОДПИСЬ.

