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Software Technology DOT-NET

Report for the Laboratory work #3

Theme: Processing collections of objects. Working with files

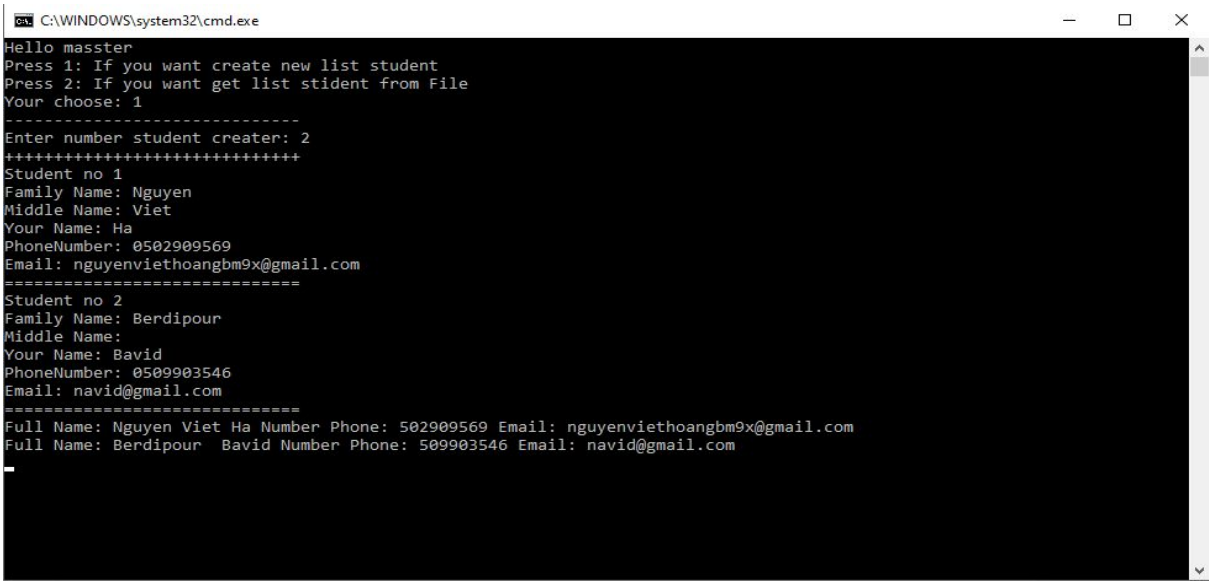
1. Theory block

To work with File Systems in C# (with files, directories etc) you need to add **using System.IO;**. Then you need to use these common functions:

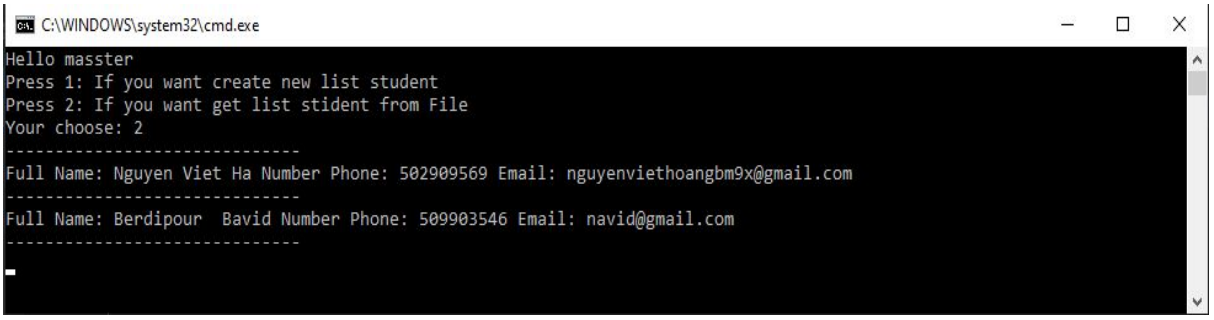
1. **System.IO.File.WriteAllLines(fileName, linesOfData)** - creates a new file *fileName*, writes one or more strings to the file (string array) *linesOfData* and then closes the file.
2. **System.IO.File.ReadAllLines(fileName)** - opens a text file *fileName*, reads all lines of the file into a string array (returning value) and then closes the file.

Also there are a lot of other functions to work with files like **System.IO.File.WriteAllText(fileName, text)** (writes some string *text* to the file *fileName*), **System.IO.File.ReadAllText(fileName)** reads all lines of the file into the 1 long string.

2. Program block with screenshots



Picture 1 – Screenshot of work of Program when we choose (1)



Picture 2 – Screenshot of work of Program when we choose (2)

3. Conclusion

That is program make:

```
using LapOfTask01;
using System.Runtime.InteropServices.ComTypes;
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading;
using System.Threading.Tasks;

namespace LabOfTask03
{
    class Program
    {
        static void Main(string[] args)
        {
            Console.WriteLine("Hello master");
            Console.WriteLine("Press 1: If you want create new list student");
            Console.WriteLine("Press 2: If you want get list student from File");
```

```
Console.Write("Your choose: ");

var students = new List<Student>();
var command = Console.ReadLine();

Console.WriteLine("-----------------------------");
  //Choose 1 if you want to create new students.
if (command == "1")
{

    Console.Write("Enter number student creator: ");
    var count = int.Parse(Console.ReadLine());
    Console.WriteLine("++++++++++++++++++++++++++++++");

    for (int i = 0; i < count; i++)
    {
        Console.WriteLine("Student no {0}", i + 1);
        var student = new Student();
        Console.Write("Family Name: ");
        student.FamilyName = Console.ReadLine();
        Console.Write("Middle Name: ");
        student.MiddleName = Console.ReadLine();
        Console.Write("Your Name: ");
        student.Name = Console.ReadLine();
        Console.Write("PhoneNumber: ");
        student.PhoneNumber = int.Parse(Console.ReadLine());
        Console.Write("Email: ");
        student.YourEmail = Console.ReadLine();

        Console.WriteLine("==============================");

        students.Add(student);
    }
```

```
            string[] lines = new string[students.Count];
            for (int i = 0; i < students.Count; i++)
            {
                lines[i] = students[i].ToString();
            }

            System.IO.File.WriteAllLines("student.txt", lines);
        }
         //Choose 2 if you want to see list students.
        else if (command == "2")
        {

            var lines = System.IO.File.ReadAllLines(@"student.txt");
            foreach (var line in lines)
            {
                Console.WriteLine(line);
                Console.WriteLine("------------------------------");
            }
        }
        //
        foreach (var student in students)
        {
            Console.WriteLine(student);
        }
        Console.ReadKey();
    }
  }
}
```