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Software Technology DOT-NET

Report for the Laboratory work #2

Theme: Collections of objects in C#. Formatted output

1. Theory block

#1: To input integer from console you need to use int.Parse(Console.ReadLine()) to get input data and transform it to the int type.

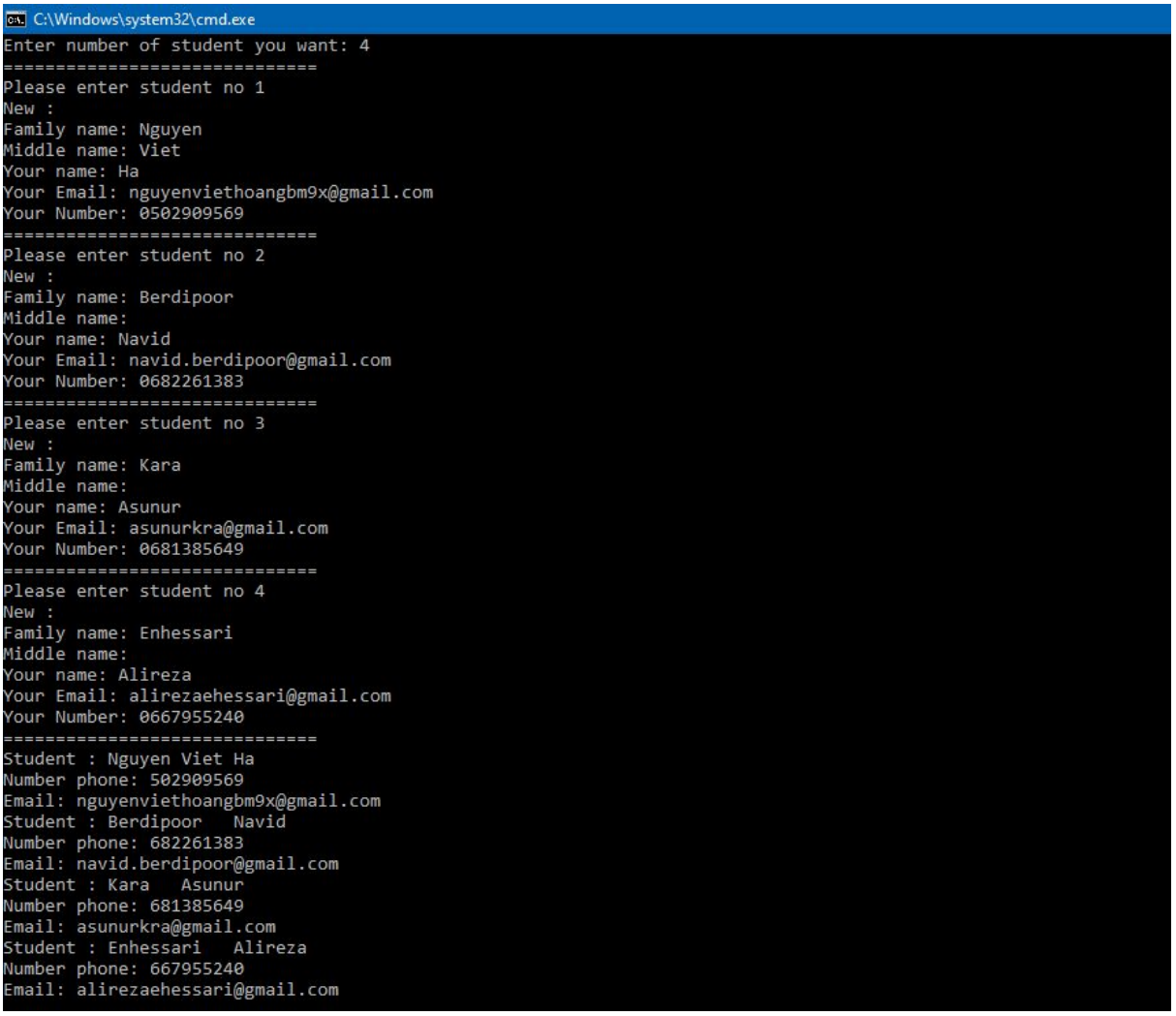
#2: To create a list of objects you need to add using System.Collection.Generic; at the top of you .cs file and use new List<TYPE>() class and replace TYPE with you type name.

#3: To use for loop you need to put for keyword and then in round brackets put 3 expressions:

1. Create new counter variable and assign its initial value (usualy 0)
2. Add condition when loop should stop (ex. i < array.Length)
3. Update value of counter (usualy increment, ex. i++)

#4: To use foreach loop you need to put foreach keyword and then in round brackets create loop variable put in keywoard and put the the collecion name.

2. Program block with screenshots



Picture 1 – Screenshot of work of Program

3. Conclusion

That is program make:

Lab01:

```
using System;
using System.Collections.Generic;
using System.Data;
using System.Linq;
using System.Security.Cryptography.X509Certificates;
using System.Text;
using System.Threading.Tasks;


namespace LapOfTask01
```

```
{
    public class Student
    {
        public string NameGroup { get; set; }
        public string FamilyName { get; set; }
        public string MiddleName { get; set; }
        public string Name { get; set; }
        public string YourEmail { get; set; }
        public int PhoneNumber { get; set; }
    }
    class Program
    {

        static void Main(string[] args)
        {
            Student student = new Student();

            //Enter the group name.
            Console.Write("Write your group: ");
            student.NameGroup = Console.ReadLine();
            Console.Write("That is your group? " + "===> ");
            Console.ForegroundColor = ConsoleColor.Cyan;
            Console.Write(student.NameGroup);
            Console.ForegroundColor = ConsoleColor.Gray;
            Console.Write(" <===\n");

            //Enter the full name.
            //1# Family name:
            Console.Write("Write family name: ");
            student.FamilyName = Console.ReadLine();
            Console.Write("That is your family name? " + "===> ");
            Console.ForegroundColor = ConsoleColor.Cyan;
```

```
            Console.Write(student.FamilyName);
            Console.ForegroundColor = ConsoleColor.Gray;
            Console.Write(" <===\n");
            //2# Middle name:
            Console.Write("Write middle name: ");
            student.MiddleName = Console.ReadLine();
            Console.Write("That is your MiddleName? " + "===> ");
            Console.ForegroundColor = ConsoleColor.Cyan;
            Console.Write(student.MiddleName);
            Console.ForegroundColor = ConsoleColor.Gray;
            Console.Write(" <===\n");
            //3# Your name:
            Console.Write("Write your name: ");
            student.Name = Console.ReadLine();
            Console.Write("That is your name? " + "===> ");
            Console.ForegroundColor = ConsoleColor.Cyan;
            Console.Write(student.Name);
            Console.ForegroundColor = ConsoleColor.Gray;
            Console.Write(" <===\n");
            //Show full name.
            Console.Write("This is full your name? " + "===> ");
            Console.ForegroundColor = ConsoleColor.Blue;
                        Console.Write(student.FamilyName  +  "  "  +  student.MiddleName+  "  "  +
student.Name);
            Console.ForegroundColor = ConsoleColor.Gray;
            Console.Write(" <===\n");

            //Enter your number phone.
            Console.Write("Write yor number phone: ");
               if (int.TryParse(Console.ReadLine(), out int number))
               {
                  student.PhoneNumber = number;
               Console.Write("This your number? " + "===> ");
```

```
    Console.ForegroundColor = ConsoleColor.Cyan;
    Console.Write(number);
    Console.ForegroundColor = ConsoleColor.Gray;
    Console.Write(" <===\n");
    }
    else
    {
        Console.WriteLine("Sorry it's not number !\n");
    }

//Enter the email
Console.Write("write your Email: ");
student.YourEmail = Console.ReadLine();
Console.Write("That your email? " + "===> ");
Console.ForegroundColor = ConsoleColor.Red;
Console.Write(student.YourEmail);
Console.ForegroundColor = ConsoleColor.Gray;
Console.Write(" <===\n\n");

//Show all projective.
Console.ForegroundColor = ConsoleColor.White;
Console.WriteLine("+=+=+=+=+=+=+=+=+=+=+=+=+=+=+=+=+=");

Console.Write("That all your projective:\n" + "Full name: ");
Console.ForegroundColor = ConsoleColor.Blue;
Console.Write($"{student.FamilyName}  { student.MiddleName}  { student.Name}\n");
Console.ForegroundColor = ConsoleColor.White;
Console.Write("Group: ");
Console.ForegroundColor = ConsoleColor.Cyan;
Console.Write($"{student.NameGroup}\n");
Console.ForegroundColor = ConsoleColor.White;
Console.Write("Your number: ");
```

```
            Console.ForegroundColor = ConsoleColor.Cyan;
            Console.Write($"{student.PhoneNumber}\n");
            Console.ForegroundColor = ConsoleColor.White;
            Console.Write("Email: ");
            Console.ForegroundColor = ConsoleColor.Red;
            Console.Write($"{student.YourEmail}\n");
            Console.ForegroundColor = ConsoleColor.White;

            Console.WriteLine("+=+=+=+=+=+=+=+=+=+=+=+=+=+=+=+=+=+=+=+=+=+=\n");

            Console.ReadKey();
        }
    }
}
```

Lab02:

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

namespace LabOfTask02
{
    class Program
    {
        static void Main(string[] args)
        {
            //#1 That is list of student.
            var students = new List<Student>();
            Console.Write("Enter number of student you want: ");
```

```
var count = int.Parse(Console.ReadLine());
Console.WriteLine("==============================");

//#2 I will write info about student here.
for (int i = 0; i < count; i++)
{
    Console.WriteLine("Please enter student no {0}", i + 1);
    var student = new Student();
    Console.WriteLine("New : ");
    //1. Write family name.
    Console.Write("Family name: ");
    student.FamilyName = Console.ReadLine();
    //2. Write middle name.
    Console.Write("Middle name: ");
    student.MiddleName = Console.ReadLine();
    //3. Write name.
    Console.Write("Your name: ");
    student.Name = Console.ReadLine();
    //4. Write email here.
    Console.Write("Your Email: ");
    student.YourEmail = Console.ReadLine();
    //5. Write number phone.
    Console.Write("Your Number: ");
    student.PhoneNumber = int.Parse(Console.ReadLine());

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

    //6. We add student here.
    students.Add(student);
}
//#3 We will search student here.
foreach(var student in students)
```

```
        {
                Console.WriteLine($"Student : {student.FamilyName} {student.MiddleName}
{student.Name}\n" +
            $"Number phone: {student.PhoneNumber} \nEmail: {student.YourEmail}");
        }


        Console.ReadKey();
      }
   }
}
```