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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.

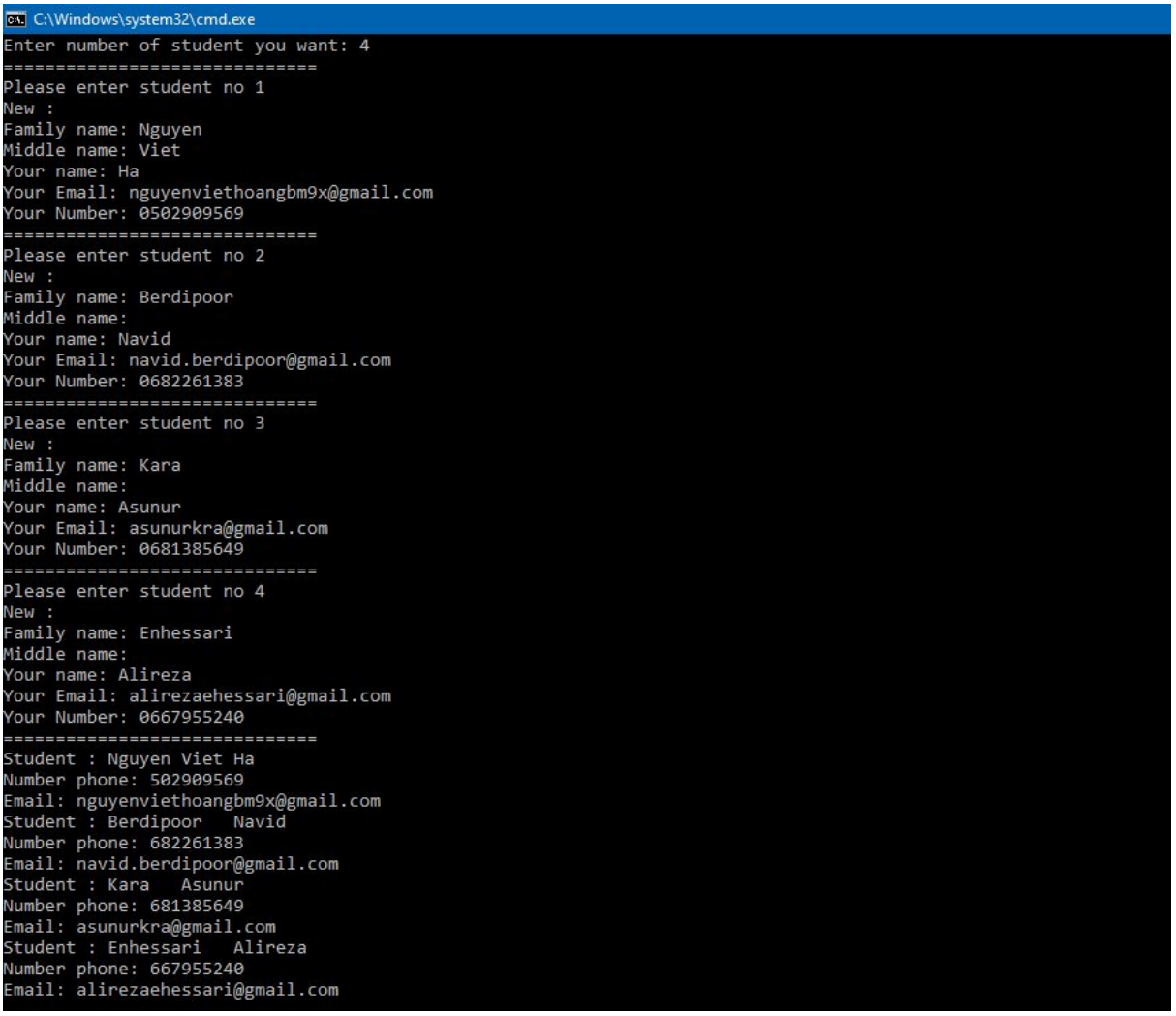
#2: To create a list of objects you need to add using System.Collection.Generic; at the top of you .cs file and use new List<TYPE>() class and replace TYPE with you type name.

#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
```

```
{
    class Program
    {
      static void Main(string[] args) […]
    }
    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; }

        public override string ToString()
        {
            return "Full Name: " + $"{FamilyName} {MiddleName} {Name}"
                + " Number Phone: " + PhoneNumber + " Email: " + YourEmail ;
        }
    }
}
```

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 a list of students.
        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 students 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 a family name.
            Console.Write("Family name: ");
            student.FamilyName = Console.ReadLine();
            //2. Write a 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: ");
            if(int.TryParse(Console.ReadLine(), out int number1))
            {
                student.PhoneNumber = number1;
```

```
            }
            else
            {
                Console.WriteLine("This is not numbers!!!! I will leave your phone number blank");
                student.PhoneNumber = 0;
            }

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

            //6. We add students here.
            students.Add(student);
        }
        //#3 We will search for students here.
        foreach(var student in students)
        {
            Console.WriteLine(student);
            Console.WriteLine("------------------------------");
        }
        Console.ReadKey();
    }
  }
}
```