

## **Software Technology DOT-NET**

Report for the Laboratory work #2

Theme: Collections of objects in C#. Formatted output

### **1. Theory block**

#1: To input integers 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 your `.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 (usually 0)
2. Add condition when loop should stop (ex. `i < array.Length`)
3. Update value of counter (usual increment, ex. `i++`)

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

### **2. Program block with screenshots**

```
C:\Windows\system32\cmd.exe
Enter number of student you want: 4
=====
Please enter student no 1
New :
Family name: Nguyen
Middle name: Viet
Your name: Ha
Your Email: nguyenviethoangbm9x@gmail.com
Your Number: 0502909569
=====
Please enter student no 2
New :
Family name: Berdipoor
Middle name:
Your name: Navid
Your Email: navid.berdipoor@gmail.com
Your Number: 0682261383
=====
Please enter student no 3
New :
Family name: Kara
Middle name:
Your name: Asunur
Your Email: asunurkra@gmail.com
Your Number: 0681385649
=====
Please enter student no 4
New :
Family name: Enhessari
Middle name:
Your name: Alireza
Your Email: alirezaehessari@gmail.com
Your Number: 0667955240
=====
Student : Nguyen Viet Ha
Number phone: 502909569
Email: nguyenviethoangbm9x@gmail.com
Student : Berdipoor Navid
Number phone: 682261383
Email: navid.berdipoor@gmail.com
Student : Kara Asunur
Number phone: 681385649
Email: asunurkra@gmail.com
Student : Enhessari Alireza
Number phone: 667955240
Email: alirezaehessari@gmail.com
```

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();
}
}
}

```