

"Перегрузка конструкторов, функций, операторов и операций".

Текст программы:

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;

namespace lab_zero
{
    class UserInfo
    {
        public string FirstName, LastName, City;
        public byte Age, Number;

        // Используем ключевое слово this для
        // создания "цепочки" конструкторов

        public UserInfo(UserInfo obj):
            this(obj.FirstName, obj.LastName, obj.Age, obj.City, obj.Number)
        {}

        public UserInfo(string FirstName)
        {
            this.FirstName = FirstName;

            Console.WriteLine("Constr FirstName: ");
        }

        public UserInfo(string FirstName, string LastName)
        {
            this.FirstName = FirstName;
            this.LastName = LastName;

            Console.WriteLine("Constr FirstName + LastName: ");
        }

        public UserInfo(string FirstName, string LastName, byte Age)
        {
            this.FirstName = FirstName;
            this.LastName = LastName;
            this.Age = Age;

            Console.WriteLine("Constr FirstName + LastName + Age: ");
        }

        public UserInfo(string FirstName, string LastName, byte Age, string City)
        {
            this.FirstName = FirstName;
            this.LastName = LastName;
            this.Age = Age;
            this.City = City;

            Console.WriteLine("Constr FirstName + LastName + Age + City: ");
        }
    }
}
```

```

        public UserInfo(string FirstName, string LastName, byte Age, string City, byte
Number)
        {
            this.FirstName = FirstName;
            this.LastName = LastName;
            this.Age = Age;
            this.City = City;
            this.Number = Number;

            Console.WriteLine("Constr FirstName + LastName + Age + City + Number: ");
        }
    }

    class Program
    {
        static void Main(string[] args)
        {
            UserInfo a = new UserInfo("Alexander");
            Console.WriteLine("{0}", a.FirstName);

            UserInfo b = new UserInfo("Alexander", "Ivanov");
            Console.WriteLine("{0}, {1}", b.FirstName, b.LastName);

            UserInfo c = new UserInfo("Alexander", "Ivanov", 18);
            Console.WriteLine("{0}, {1}, {2}", c.FirstName, c.LastName, c.Age);

            UserInfo d = new UserInfo("Alexander", "Ivanov", 18, "Tula");
            Console.WriteLine("{0}, {1}, {2}, {3}", d.FirstName, d.LastName, d.Age,
d.City);

            UserInfo e = new UserInfo("Alexander", "Ivanov", 18, "Tula", 5);
            Console.WriteLine("{0}, {1}, {2}, {3}, {4}", e.FirstName, e.LastName,
e.Age, e.City, e.Number);

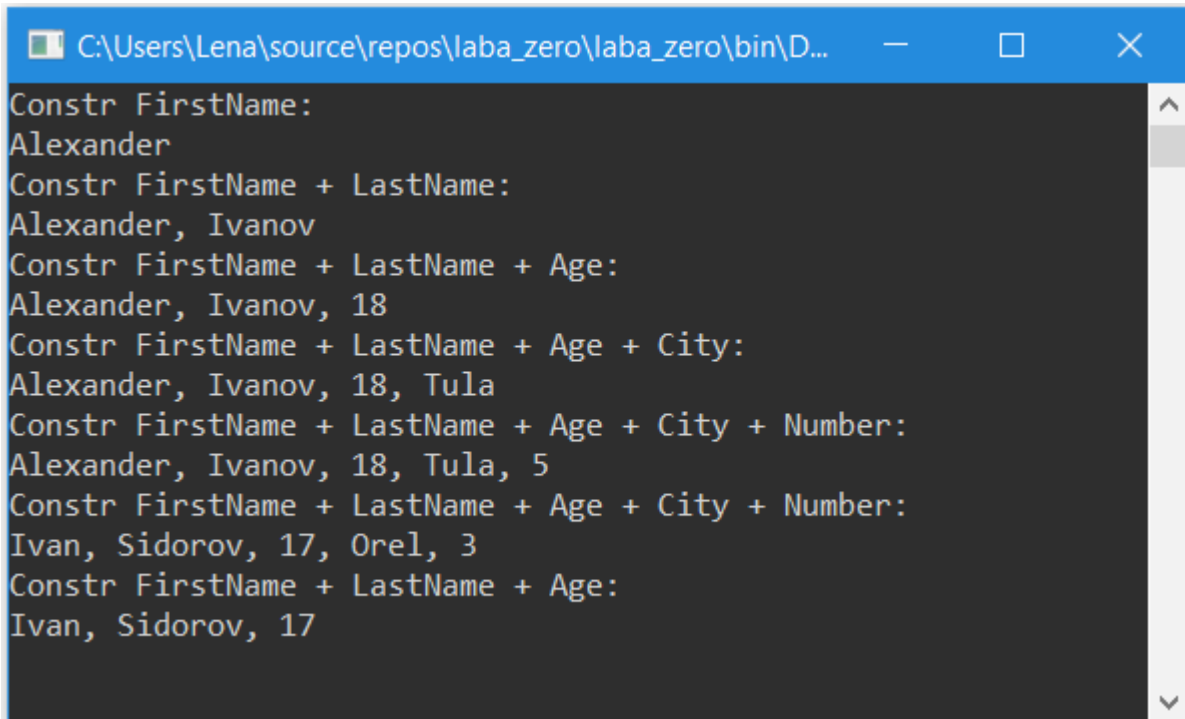
            UserInfo f = new UserInfo("Ivan", "Sidorov", 17, "Orel", 3);
            Console.WriteLine("{0}, {1}, {2}, {3}, {4}", f.FirstName, f.LastName,
f.Age, f.City, f.Number);

            UserInfo h = new UserInfo("Ivan", "Sidorov", 17);
            Console.WriteLine("{0}, {1}, {2}", h.FirstName, h.LastName, h.Age);

            Console.ReadLine();
        }
    }
}

```

Результат работы программы:



```
C:\Users\Lena\source\repos\laba_zero\laba_zero\bin\D...
Constr FirstName:
Alexander
Constr FirstName + LastName:
Alexander, Ivanov
Constr FirstName + LastName + Age:
Alexander, Ivanov, 18
Constr FirstName + LastName + Age + City:
Alexander, Ivanov, 18, Tula
Constr FirstName + LastName + Age + City + Number:
Alexander, Ivanov, 18, Tula, 5
Constr FirstName + LastName + Age + City + Number:
Ivan, Sidorov, 17, Orel, 3
Constr FirstName + LastName + Age:
Ivan, Sidorov, 17
```

Вывод: перегрузка конструкторов, функций, операторов и операций позволяет определить структурный полиморфизм, когда с данным именем существуют несколько функций с разным поведением; а также с различным списком аргументов, который определит, какая функция будет вызываться.