Завдання 1

private static void FirstTask()

{

using (StreamReader file = new StreamReader("for1task.txt", Encoding.UTF8))

{

string text = file.ReadToEnd();

int count = text.Count(p => p == '(' || p == ')');

Console.WriteLine($"There is {count} brackets");

Regex regex = new Regex(@"\(.\*?\)");

MatchCollection matches = regex.Matches(text);

foreach (var item in matches)

{

Console.WriteLine(item);

}

}

}

Завдання 2

private static void SecondTask()

{

using (StreamReader file = new StreamReader("for2task.txt", Encoding.UTF8))

{

Queue<Person> people = new Queue<Person>();

while (!file.EndOfStream)

{

var templist = file.ReadLine().Split(' ');

people.Enqueue(new Person

{

Name = templist[0],

Surname = templist[1],

FathersName = templist[2],

Age = int.Parse(templist[3]),

Weight = int.Parse(templist[4])

});

}

var youngPeopleAreFirst = (from b in people where b.Age < 30 select b).Concat(from c in people select c).Distinct();

foreach (var person in youngPeopleAreFirst)

{

Console.WriteLine(person.ToString());

}

Завдання 3

private static void ThirdTask()

{

using (StreamReader file = new StreamReader("for3task.txt", Encoding.UTF8))

{

List<Person> people = new List<Person>();

while (!file.EndOfStream)

{

string temp = file.ReadLine();

var templist = temp.Split(' ');

people.Add(new Person

{

Name = templist[0],

Surname = templist[1],

FathersName = templist[2],

Age = int.Parse(templist[3]),

Weight = int.Parse(templist[4])

});

}

var newListOfPeoples = from person in people orderby person.Age select person;

foreach (var person in newListOfPeoples)

{

Console.WriteLine(person.ToString());

}

}

}

Завдання 4

private static void FourthTask()

{

using (StreamReader file = new StreamReader("for4task.txt", Encoding.UTF8))

{

Stack<int> myInts = new Stack<int>();

while (!file.EndOfStream)

{

myInts.Push(int.Parse(file.ReadLine()));

}

using (StreamWriter newFile = new StreamWriter("outputfor4task.txt"))

{

foreach (var i in myInts)

{

Console.Write(i + " ");

newFile.Write(i + " ");

}

}

}

}

Завдання 5

private static void FifthTask()

{

Random rand = new Random();

List<int> myRandomInts = new List<int>();

for (int i = 0; i < 2190; i++)

{

myRandomInts.Add(rand.Next(500, 800));

}

myRandomInts.Sort();

foreach (var item in myRandomInts)

{

Console.WriteLine(item);

}

myRandomInts.Insert(8, 9);

int someRandInt = rand.Next(0, 9) + 500;

Console.WriteLine($"Here is our rand int: {someRandInt}");

if (myRandomInts.Contains(someRandInt))

Console.WriteLine($"Here is index in collection: {myRandomInts.IndexOf(someRandInt)}");

else

Console.WriteLine($"\nThere is no such number as {someRandInt} in collection!\n");

myRandomInts.RemoveAt(rand.Next(0, myRandomInts.Count - 1));

myRandomInts.Clear();

}