using System;

namespace Lab\_3

{

public partial class Lab\_3

{

interface MyGenericInterface<T>

{

void Push\_Back(T item);

void Delete(uint index);

void View();

}

public class MySet<T> : MyGenericInterface<T> //where T : class

{

public static MySet<T> operator \*(MySet<T> first, MySet<T> second)

{

//if ((first.GetType()).IsEquivalentTo(second.GetType()))

// throw new Exception("Нельзя выполнить выделения подмножества с параметрами разного типа");

MySet<T> temp = new MySet<T>();

for (int i = 0; i < first.items.Length; i++)

{

for (int j = 0; j < second.items.Length; j++)

{

//if (first.items[i] == second.items[j])

if (!first.items[i].Equals(second.items[j]))

{

temp.Push\_Back(first.items[i]);

break;

}

}

}

return temp;

}

public static bool operator >(MySet<T> first, MySet<T> second)

{

//if ((first.GetType()).IsEquivalentTo(second.GetType()))

// throw new Exception("Нельзя выполнить проверку на подмножества с параметрами разного типа");

bool check = false;

for (int i = 0; i < first.items.Length; i++)

{

for (int j = 0; j < second.items.Length; j++)

{

if (first.items[i].Equals(second.items[j]))

{

check = true;

break;

}

}

if (!check) return false;

check = false;

}

return true;

}

public static bool operator <(MySet<T> first, MySet<T> second)

{

//if ((first.GetType()).IsEquivalentTo(second.GetType()))

// throw new Exception("Нельзя выполнить проверку на подмножества с параметрами разного типа");

if (second > first) return true;

return false;

}

public void Push\_Back(T a)

{

//!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!

if (a == null) throw new TestNullObject("Передан обьект с null ссылкой!");

T[] buf = new T[items.Length + 1];

items.CopyTo(buf, 0);

buf[items.Length] = a;

items = buf;

}

public void Delete(uint index)

{

//!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!

if (items.Length == 0) throw new NullCollectionException("ProgramGuide пуст!");

// исключение - индекс не в диапазоне [0 - items.Length]!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!

if (index < 0 || index > items.Length - 1) throw new WrongIndexException("Неверный индекс элемента");

T[] buf = new T[items.Length - 1];

for (int i = 0, j = 0; i < items.Length; i++, j++)

{

if (i == index)

{

--j;

continue;

}

buf[j] = items[i];

}

items = buf;

}

public void View()

{

//!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!

if (items.Length == 0) throw new NullCollectionException("ProgramGuide пуст!");

for (int i = 0; i < items.Length; i++)

{

Console.WriteLine(items[i].ToString());

}

}

////////////////////////////////////////////////////////////////////////

//public MySet(T[] example){}

//для добавления

public T[] items = Array.Empty<T>();

}

static void Main()

{

try

{

MySet<int> a = new MySet<int>();

a.Push\_Back(1);

a.Push\_Back(2);

a.Push\_Back(3);

a.Push\_Back(40);

MySet<int> b = new MySet<int>();

b.Push\_Back(1);

b.Push\_Back(2);

b.Push\_Back(3);

b.Push\_Back(40);

b.Push\_Back(50);

MySet<int>[] temp = new MySet<int>[2];

for (int i = 0; i < temp.Length; i++)

{

temp[i] = new MySet<int>();

}

temp[0].Push\_Back(1);

/////////////////////////////////////////////////////

Console.WriteLine(a > b);

Console.WriteLine(a < b);

MySet<int> c = a \* b;

/////////////////////////////////////////////////////

///

//b.Delete(10);

//MySet<Lab\_6performance.Program.News> d = new MySet<Lab\_6performance.Program.News>();

MySet<Lab\_6performance.Program.News> d = new MySet<Lab\_6performance.Program.News>();

d.Push\_Back(new Program.News(10));

d.Push\_Back(new Program.News(11));

d.Push\_Back(new Program.News(12));

MySet<Lab\_6performance.Program.News> e = new MySet<Lab\_6performance.Program.News>();

e.Push\_Back(new Program.News(10));

e.Push\_Back(new Program.News(11));

e.Push\_Back(new Program.News(12));

e.Push\_Back(new Program.News(13));

Console.WriteLine(d > e);

Console.WriteLine(d < e);

MySet<Lab\_6performance.Program.News> c2 = d \* e;

////////////////////////////Работа с файлами///////////////////////////////

///

}

catch (Exception exeption)

{

Console.WriteLine(exeption);

}

finally

{

Console.WriteLine("Вызвался finally!!!");

}

Console.ReadKey();

}

}

}