using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

using System.Collections;

namespace Classwork12.\_10.\_23

{

class StudentCard

{

public int Number { get; set; }

public string Series { get; set; }

public override string ToString()

{

return $"Студентський квиток:{Series} - { Number}";

}

}

class Student : IComparable

{

public string FirstName { get; set; }

public string LastName { get; set; }

public DateTime BirthDate { get; set; }

public StudentCard StudentCard { get; set; }

public override string ToString()

{

string s = String.Format("Firstname:{0}", FirstName);

s += String.Format(", Lastname:{0}", LastName);

s += String.Format(", BirthDate:{0}-{1}-{2}", BirthDate.Day, BirthDate.Month, BirthDate.Year);

s += String.Format(", StudentCard: {0}-{1}", StudentCard.Series, StudentCard.Number);

return s;

}

public int CompareTo(object obj)

{

if(obj is Student)

{

//return BirthDate.CompareTo(((Student)obj).BirthDate);

return FirstName.CompareTo(((Student)obj).FirstName);

}

else

{

throw new NotImplementedException();

}

}

}

class Auditory

{

Student[] students =

{

new Student()

{

FirstName = "John",

LastName = "Johnson",

BirthDate = new DateTime(2000, 10, 22),

StudentCard = new StudentCard()

{

Number = 100,

Series = "ABCD"

}

},

new Student()

{

FirstName = "sss",

LastName = "ddddd",

BirthDate = new DateTime(2003, 11, 23),

StudentCard = new StudentCard()

{

Number = 100,

Series = "ABCD"

}

},

new Student()

{

FirstName = "John",

LastName = "Johnson",

BirthDate = new DateTime(2001, 11, 25),

StudentCard = new StudentCard()

{

Number = 100,

Series = "ABCD"

}

},

new Student()

{

FirstName = "LLLLLL",

LastName = "SSSSSS",

BirthDate = new DateTime(2011, 12, 9),

StudentCard = new StudentCard()

{

Number = 101,

Series = "ABCD"

}

}

};

public void Print()

{

foreach (Student student in students)

{

Console.WriteLine(student);

}

}

public void Sort1()

{

//сортвування за датой народження

Array.Sort(students);

}

public void Sort2()

{

//сортвування за спадний порядок Z->A

SortByNameDesc sortCryter = new SortByNameDesc();

Array.Sort(students, sortCryter);

}

public void Sort3 ()

{

//студентський квиток 1->10000

SortByNumberStudentCard krysort = new SortByNumberStudentCard();

Array.Sort (students,krysort);

}

}

class SortByNumberStudentCard : IComparer

{

public int Compare(object x, object y)

{

if ((x is Student) && (y is Student))

{

Student st1 = x as Student;

Student st2 = y as Student;

if (st1.StudentCard.Number < st2.StudentCard.Number)

return -1;

else if (st1.StudentCard.Number == st2.StudentCard.Number)

return 0;

else

return 1;

}

else

throw new NotImplementedException();

}

}

class SortByNameDesc :IComparer

{

public int Compare(object x, object y)

{

if(x is Student&&y is Student)

{

return -(x as Student).FirstName.CompareTo((y as Student).FirstName);

}

else

throw new NotImplementedException();

}

}

internal class Program

{

static void Main(string[] args)

{

/\*StudentCard st = new StudentCard();

st.Series = "Ab";

st.Number = 100;

Console.WriteLine(st);

Student student = new Student()

{

FirstName = "John",

LastName = "Johnson",

BirthDate = new DateTime(2000,10,22),

StudentCard = new StudentCard()

{

Number = 100,

Series="ABCD"

}

};

Console.WriteLine(student);\*/

Auditory auditory = new Auditory();

auditory.Print();

auditory.Sort1();

Console.WriteLine("-------------------------------");

auditory.Print();

Console.WriteLine("--------------------------------");

auditory.Sort2 ();

auditory.Print ();

Console.WriteLine("----------------------------------");

auditory.Sort3 ();

auditory.Print();

}

}

}