

Programming 3

UCN – Computer Science - C#

Java to C#

Try converting Java programs to C# programs

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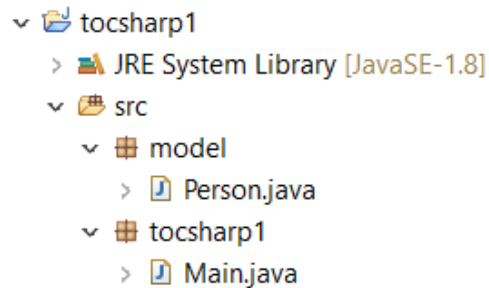
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Java to C# - 1

Convert java project to similar C# project

Java project

Structure in Eclipse



Code

Person

```
package model;

public class Person {
    private String name;
    private int yearOfBirth;

    public Person (String name, int yearOfBirth) {
        this.name=name;
        this.yearOfBirth = yearOfBirth;
    }

    @Override
    public String toString() {
        String personStr = name + " born " + yearOfBirth;
        return personStr;
    }
}
```

Main

```
package tocsharp1;

import model.*;

public class Main {

    public static void main(String[] args) {

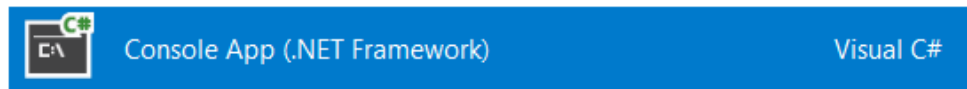
        Person p1 = new Person("Hans Hansen", 1990);
        System.out.println(p1);

    }
}
```

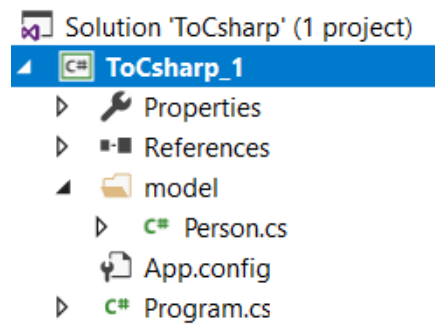
C# project

Structure in C#

Create a console project



And construct this structure:



Code

Copy in the Java code to Person and Program and correct the errors.

Goal

Code compiles and output is the same.

If you get stuck you may consult *Hints - Exercise_JavaToScharp* (Canvas - Session 01. Introduction to C#)

Java to C# - 2 (challenge exercise)

Make a running C# program from a Java code snippet.

Java project

Code

```
package db;

public class Employee implements PersonIF {
    private static String nameString = "Your Name Here";
    private List<String> favouriteWords = new ArrayList<String>();

    public Employee(string e) {
        nameString = e;
    }

    public String getEmployeeName(){
        return nameString;
    }

    public void setEmployeeName(String e){
        nameString = e;
    }

    public void AddFavouriteWord(string newWord){
        favouriteWords.add(newWord);
    }

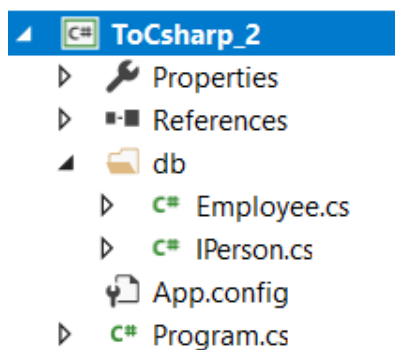
    public void PrintAllWords(){
        for(int i =0;i<favouriteWords.size();i++){
            System.out.println(favouriteWords.get(i));
        }
    }
}
```

C# project

Structure in C#

Create a console project.

Suggested structure:



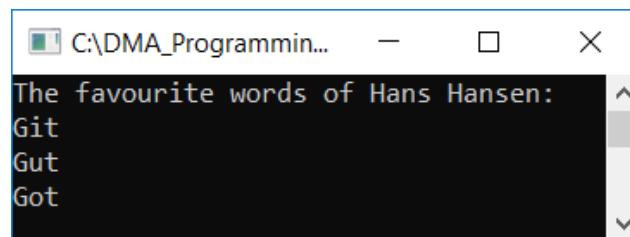
Code

Besides the Employee class please create the interface and a usable Main method. The Main method could look like this:

```
private static void Main() {  
  
    Employee em1 = new Employee("Hans Hansen");  
    em1.AddFavouriteWord("Git");  
    em1.AddFavouriteWord("Gut");  
    em1.AddFavouriteWord("Got");  
  
    Console.WriteLine("The favourite words of " + em1.EmployeeName + ":");  
    em1.PrintAllWords();  
    Console.ReadLine();  
}
```

Goal

Code compiles and output with the above Main method should be:

A screenshot of a Windows console window. The title bar shows the file path 'C:\DMA_Programmin...'. The console output is as follows:
The favourite words of Hans Hansen:
Git
Gut
Got
The text is displayed in a monospaced font on a black background with white text. There are up and down arrow icons on the right side of the console window.

If you get stuck you may consult *Hints - Exercise_JavaToSharp* (Canvas - Session 01. Introduction to C#)