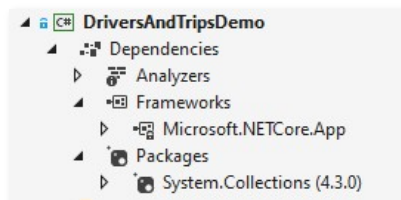


SafeAuto Demo

Contents

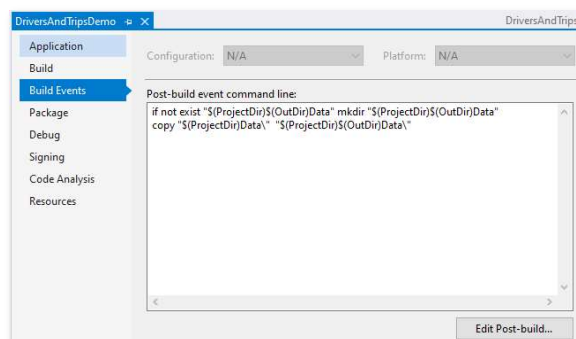
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The demo application is a console application build with Visual Studio 2019, with .NET 5.0 as Target Framework and System.Collections 4.3.0 package.



Data

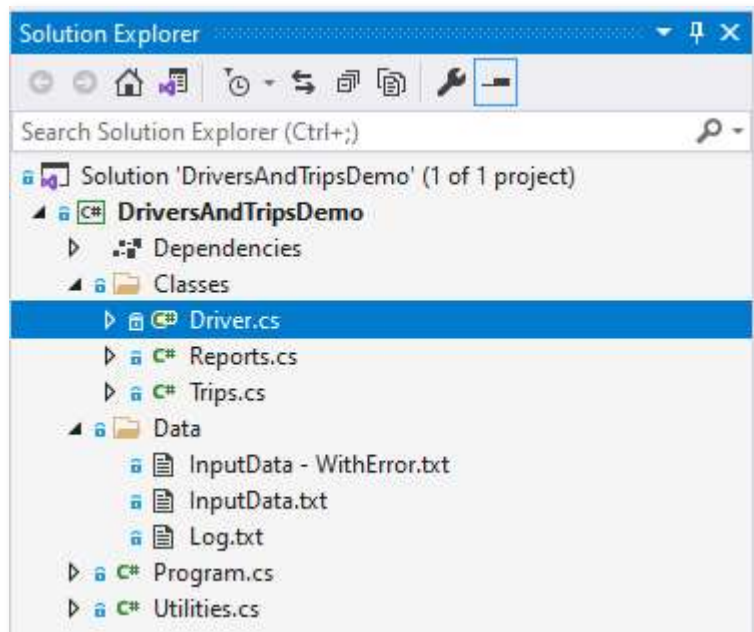
The data to be processed by the application is contained in a file named InputData.txt, contained in the Data folder, all the text files locate in this folder are distributed to the application root by a post-build event, so there is no need to create it the file or a directory to test it



This is the data used for unit tests:

```
Driver Dan Driver Alex Driver Bob Driver Fredy
Trip Dan 07:15 07:45 17.3
Trip Dan 06:12 06:32 21.8
Trip Dan 08:30 09:00 40.00
Trip Bob 06:12 06:32 21.8
Trip Bob 08:00 09:00 70.8
Trip Alex 12:01 13:16 42.0
Trip Alex 13:00 13:15 10.0
Trip Fredy 11:00 12:00 60.0
Trip Fredy 13:00 14:00 120.0
```

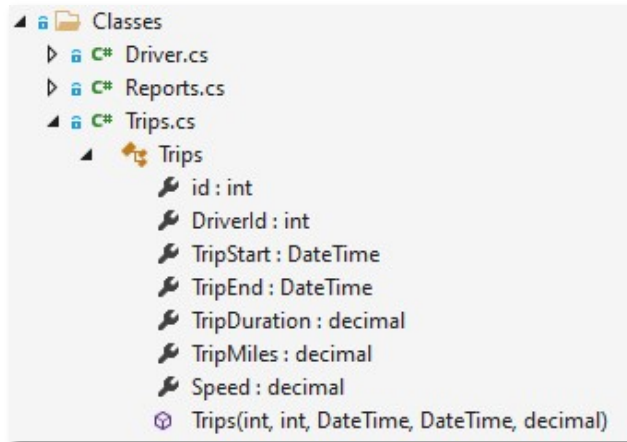
Application Files



The **Driver class** is used to hold the driver's id and name. A collection of drivers is created by the Utility class.



The **Trips class** holds all the basic information for the trips and properties for calculations needed in the report.



The **Reports class** is used to format and output the required data and summaries.



The **Utilities class** is a multipurpose helper class:

GetData: read the text file and call the data parsers.

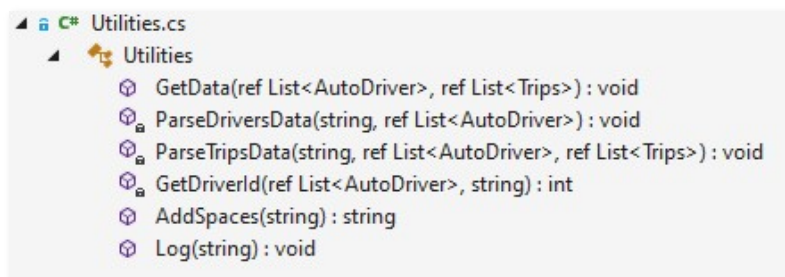
ParseDriverData: parsed the fetched text data and parses it into the Driver class and creates a collection of driver objects.

ParseTripsData: parsed the fetched text data and parses it into the Trips class and creates a collection of trips objects.

GetDriverID: gets the id of the corresponding driver to link the trip to that driver when creating the collection of trips.

AddSpaces: used to format the report content so that columns appear evenly distributed

The **Log class:** to log errors



Report

This and example of the output:

```
C:\TEMP\DemoForSafeAuto-main\DriversAndTripsDemo\bin\Relea...

SafeAuto - Drivers Trips Report
=====

Driver: Dan
=====
Trip      Start    End      Duration  Miles   Speed
=====
1         07:0     08:0     60        71.8   72mph
2         06:12    06:32    20        21.8   65mph
3         07:15    07:45    30        17.3   35mph
=====
Total Miles           : 110.9
Total Driving Time in Minutes: 110
Average Speed        : 60mph

Driver: Alex
=====
Trip      Start    End      Duration  Miles   Speed
=====
1         13:0     14:16    76        70.0   55mph
2         12:1     13:16    75        42.0   34mph
=====
Total Miles           : 112.0
Total Driving Time in Minutes: 151
Average Speed        : 45mph

Driver: Bob
=====
Trip      Start    End      Duration  Miles   Speed
=====
1         08:0     09:32    92        80.5   52mph
2         06:12    06:32    20        21.8   65mph
=====
Total Miles           : 102.3
Total Driving Time in Minutes: 112
Average Speed        : 55mph
```

Source Code

<https://github.com/FredyCorea/DemoForSafeAuto>

DemoForSafeAuto-main.zip

Executable path

