



**NameSorter**

**Build Documentation**

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## **1      SYSTEM OVERVIEW**

### **1.1    SYSTEM GOAL**

- Console application should perform sorting operations on given set of names, first by last name, then by any given names the person may have. A name record must have at least 1 given name and may have up to 3 given names. Output should be printed on console as well as stored in the text file in the same directory.

### **1.2    SYSTEM CHARACTERISTICS AND QUALITY REQUIREMENTS**

- Solution should be robust enough to generate correct output (i.e. name sorting) for any input set of data
- It should be developed by adhering to SOLID principles, and should be easily understandable and maintainable
- It should provision the facility to perform unit-testing through automation

## 2 SYSTEM DESIGN

### 2.1 SOFTWARE DEVELOPMENT TOOLS

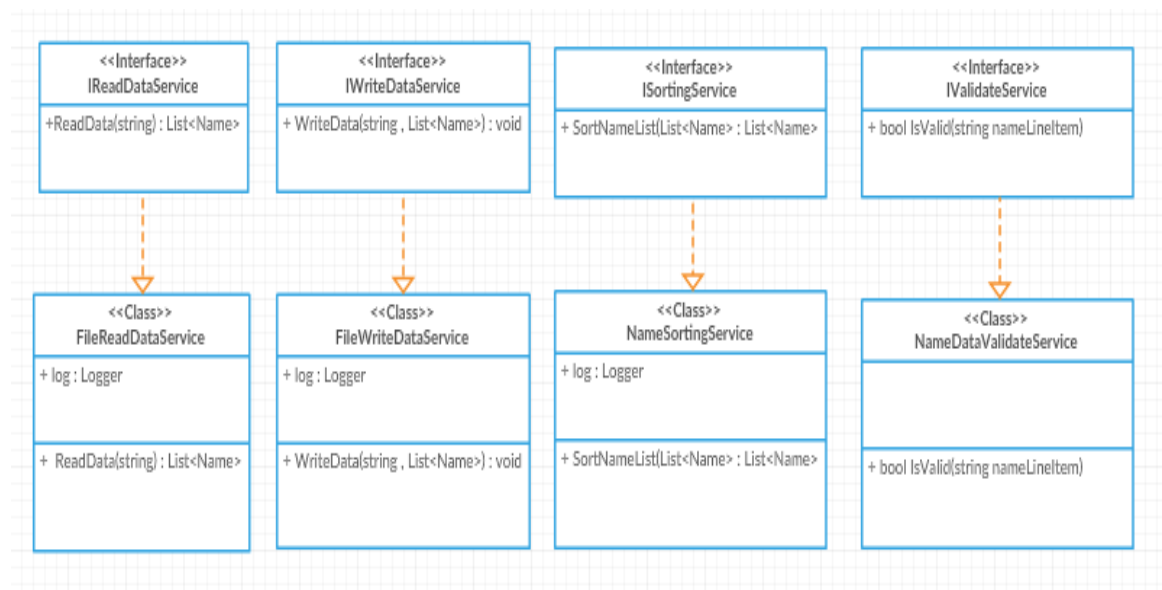
- Visual Studio 2017 – Development Tool (IDE)
- .NET Core 2.1 (C#)– Solution frame-work
- NuGet – Package Manager
- Git Bash – To manage Local Git Repo
- GitHub - Remote Git Repo
- Travis – Continuous Integration (CI)
- NLog – Logging frame-work
- XUnit – Unit-testing frame-work

### 2.2 COMPONENT OVERVIEW

#### 2.2.1 Interfaces & Services

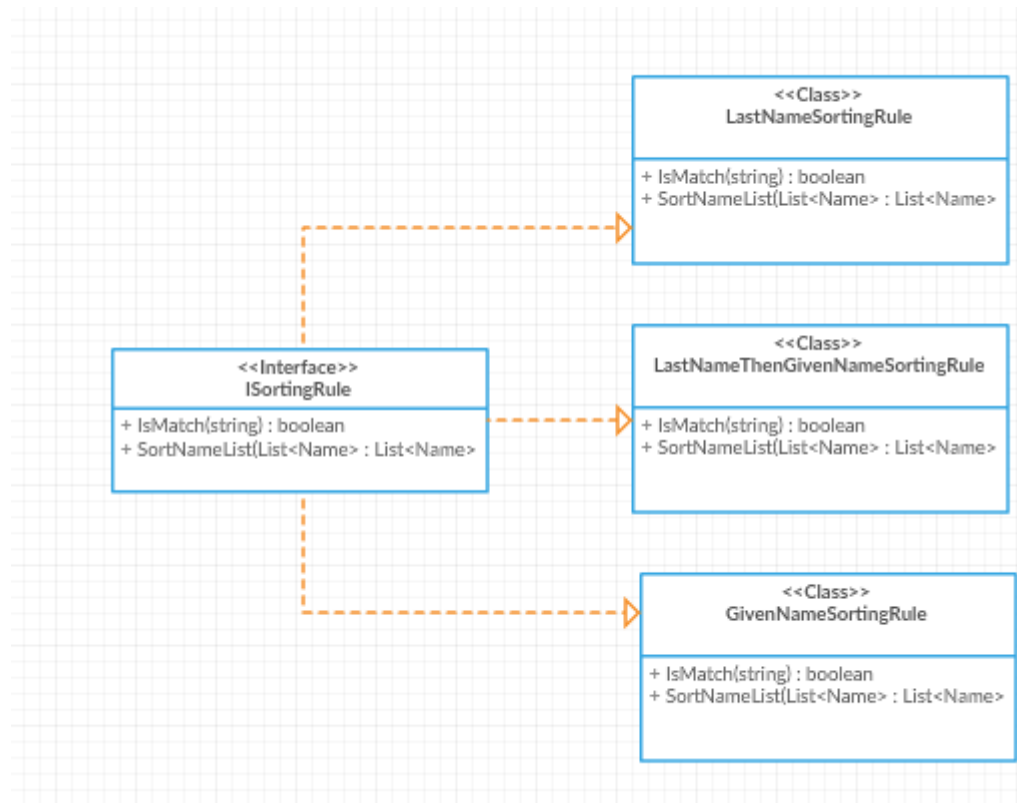
1. FileReadDataService – reads the names from the input file unsorted-names-list.txt
2. FileWriteDataService – writes the names into the mentioned output file after sorting
3. NameSortingService – Facilitates sorting on list of names as per the mentioned sorting rule. Configuration – SortingSwitch is used
4. NameDataValidateService – validates all the names from input file i.e.
  - i. A name record shouldn't container anything except letters and spaces
  - ii. A name record must have at least 1 given name and may have up to 3 given names

In case of validation fails then that name record is not considered for the sorting and the information is logged in the log file.



### 2.2.2 Rules

1. Sort the names using **Given** Name
2. Sort the names using **Last** Name
3. Sort the names using **Last** Name then **Given** Name(s)



### 2.2.3 Configuration

- a. **appsettings.json** – contains application related config data i.e.
  1. Output file location – where the result file with sorted names should be stored
  2. SortingSwitch - to decides by which rule NameSorter solution should run
- b. **nlog.config** – stores NLog confutation for the application, below Log files are generated in the base directory
  1. name-sorter-internal.log
  2. name-sorter.log

### 2.2.4 Models – Name class with two properties GivenName and LastName

```
class Name
{
    public string GivenName { get; set; }
    public string LastName { get; set; }
```

### 2.2.5 Program.cs – start point of the application

## 2.2.6 Test-Cases

- ▲ ✓ NameSorterTest (9)
  - ▲ ✓ DataValidationServiceUnitTests (5)
    - ✓ ValidateNameLineItemForExtraSpaces
    - ✓ ValidateNameLineItemForLessThanTwoWords
    - ✓ ValidateNameLineItemForLettersOnly
    - ✓ ValidateNameLineItemForMoreThanFourWords
    - ✓ ValidateNameLineItemForValidFormat
  - ▲ ✓ ModelUnitTests (1)
    - ✓ CreateNameObjectFromStringShouldReturn
  - ▶ ✓ SortingServiceByGivenNameUnitTest (1)
  - ▶ ✓ SortingServiceByLastNameThenGivenNameUnit... (1)
  - ▲ ✓ SortingServiceByLastNameUnitTest (1)
    - ✓ LastNameSortingRuleTest



## 2.3 BUILD & RELEASE

### 2.3.1 GitHub

<https://github.com/sweta1892/NameSorter.git>


### 2.3.2 Travis


.travis.yml


 sweta1892 / NameSorter  build unknown


Current   Branches   Build History   Pull Requests > Build #2

✓ master Set-up Travis CI


Commit 4fb71e0 


Compare f51b0a3...4fb71e0 

Branch master 

 Sweta Shah

👉 #2 passed

 Ran for 1 min 24 sec

 about 16 hours ago

```
language: csharp
dist: trusty
sudo: required
mono: none
dotnet: 2.1.503
branches:
  only:
    - master
before_script:
  - chmod a+x ./travis-build.sh
  - chmod a+x ./run-tests.sh
  - chmod a+x ./after-success.sh
script:
  - ./travis-build.sh
  - ./run-tests.sh
after_success:
  - ./after-success.sh
notifications:
  email:
    on_success: never
    on_failure: always
```

#### DOCUMENT SIGNOFF

Nature of Signoff	Person	Signature	Date	Role
Authors	Sweta Shah		08 Mar 2019	Project Member
Reviewers				Consultant

#### DOCUMENT CHANGE RECORD

Date	Version	Author	Change Details
08 Mar 2019	0.1	Sweta Shah	First complete draft