

# Developer Technical Exercise

## Prerequisites

- @angular/cli : 9.1.12
- @angular: 9.1.12
- Node v14.15.0
- NPM 6.14.8

## Tools used

- Visual Studio : 2019
- Visual Studio Code

## Frameworks

- .Net Core Framework : 3.1
- .Net Standard 2.0
- .Net Core Web API
- XUnit
- Moq (Mocking Framework)
- Jasmine and Karma etc.

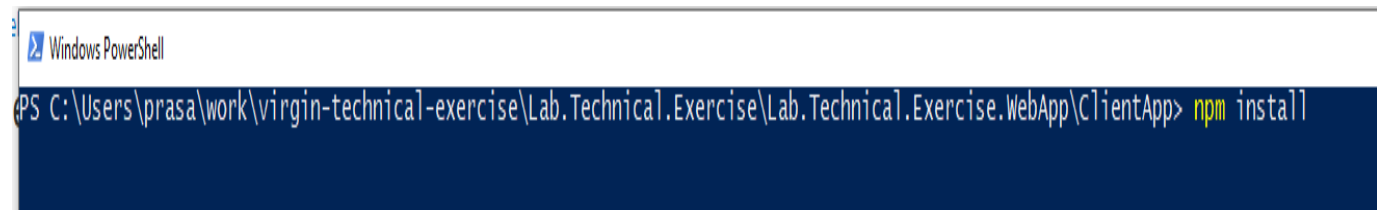
## Steps to run application

Step 1: Extract .zip file : Lab.Technical.Exercise

Step 2: Run '**npm install**' command at the location of package.json

Example:

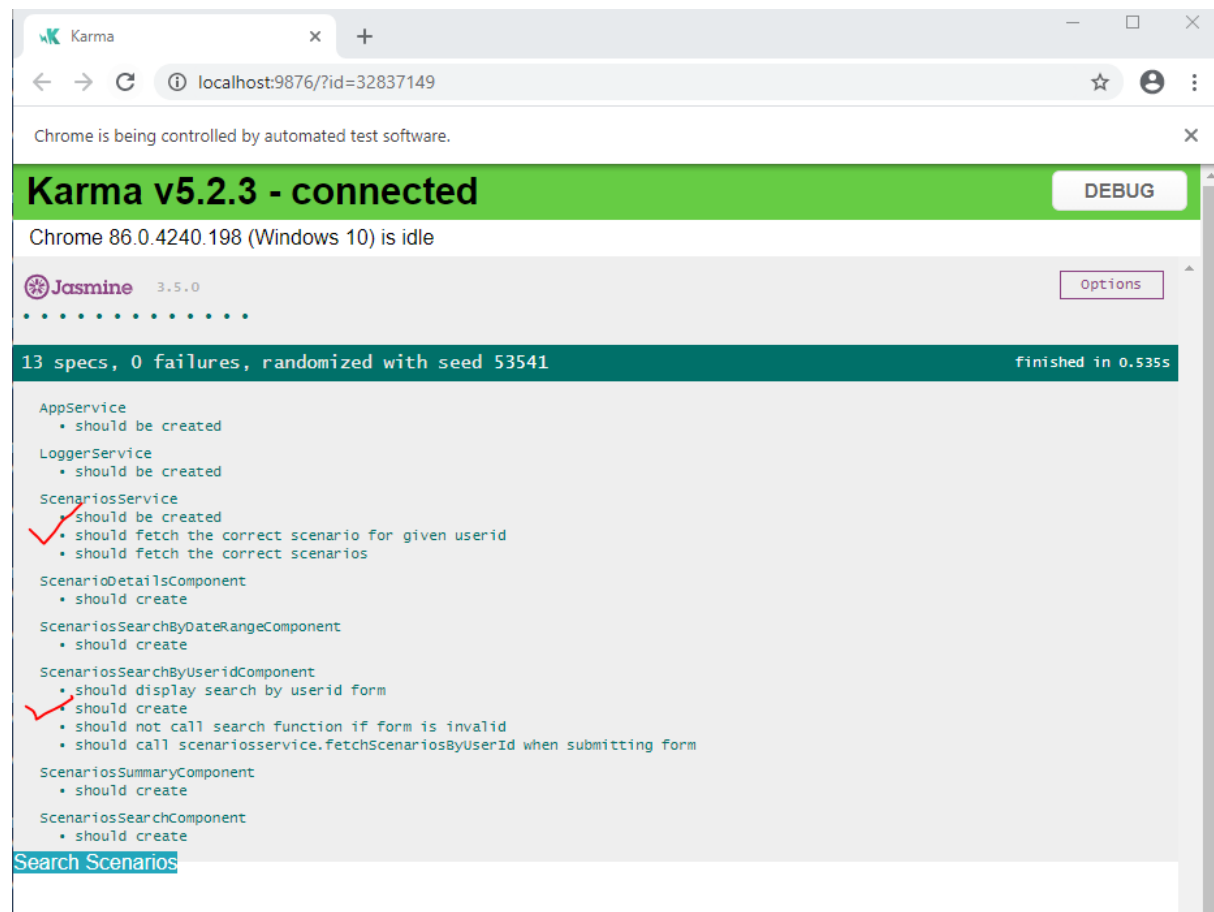
... Lab.Technical.Exercise\Lab.Technical.Exercise.WebApp\ClientApp



```
Windows PowerShell
PS C:\Users\prasa\work\virgin-technical-exercise\Lab.Technical.Exercise\Lab.Technical.Exercise.WebApp\ClientApp> npm install
```

Step 3: Run **ng build**

Step 4: Run **ng test**



Karma v5.2.3 - connected DEBUG

Chrome 86.0.4240.198 (Windows 10) is idle

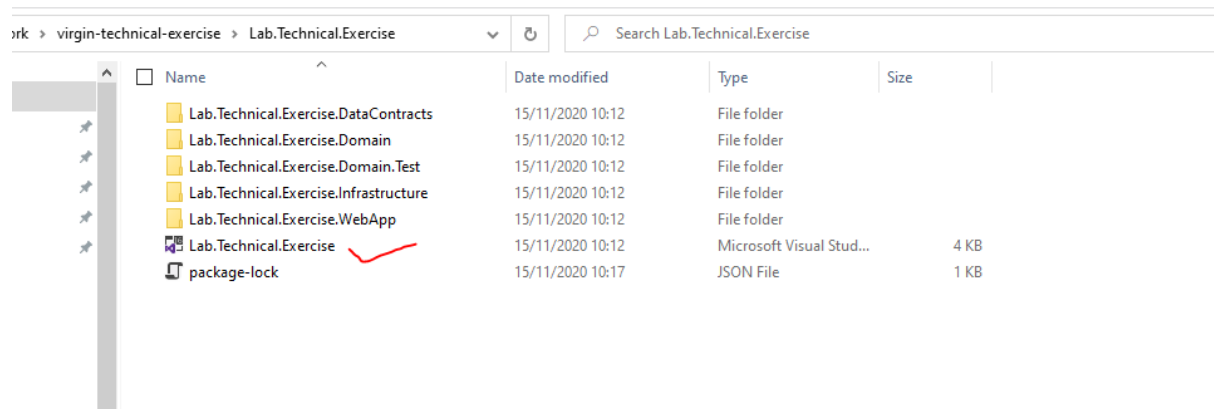
Jasmine 3.5.0 Options

13 specs, 0 failures, randomized with seed 53541 finished in 0.535s

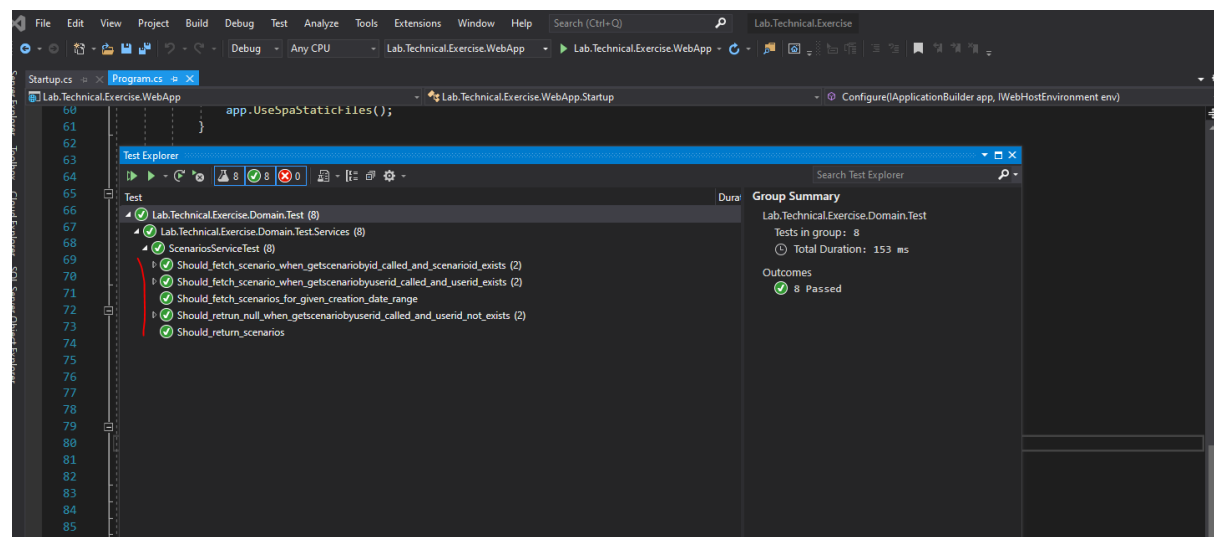
- AppService
  - should be created
- LoggerService
  - should be created
- ScenariosService
  - should be created
  - ✓ • should fetch the correct scenario for given userid
  - should fetch the correct scenarios
- ScenarioDetailsComponent
  - should create
- ScenariosSearchByDateRangeComponent
  - should create
- ScenariosSearchByUserIdComponent
  - should display search by userid form
  - ✓ • should create
  - should not call search function if form is invalid
  - should call scenarioservice.fetchScenariosByUserId when submitting form
- ScenariosSummaryComponent
  - should create
- ScenariosSearchComponent
  - should create

Search Scenarios

Step 5: Open the .sln in Visual Studio 2019 by double click on .sln file

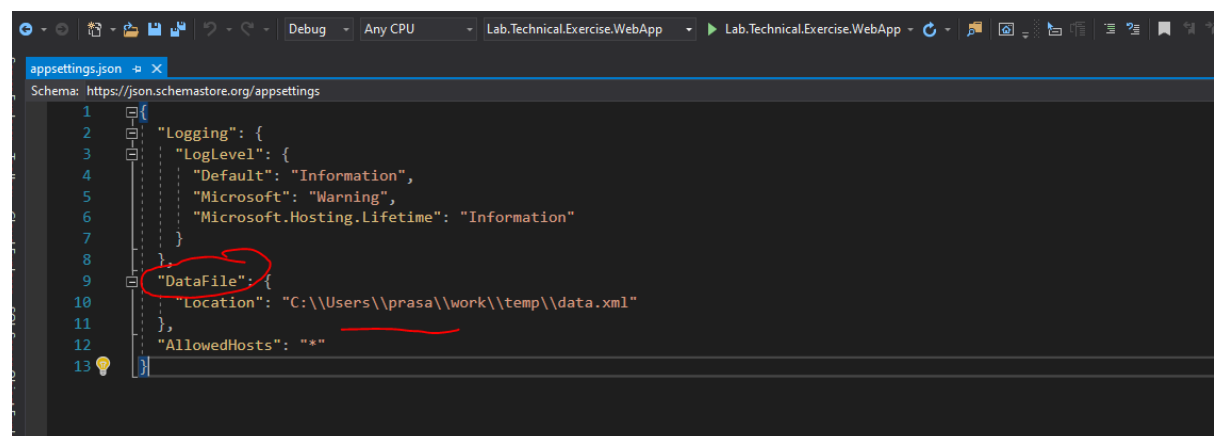


Step 6: Run Unit tests:

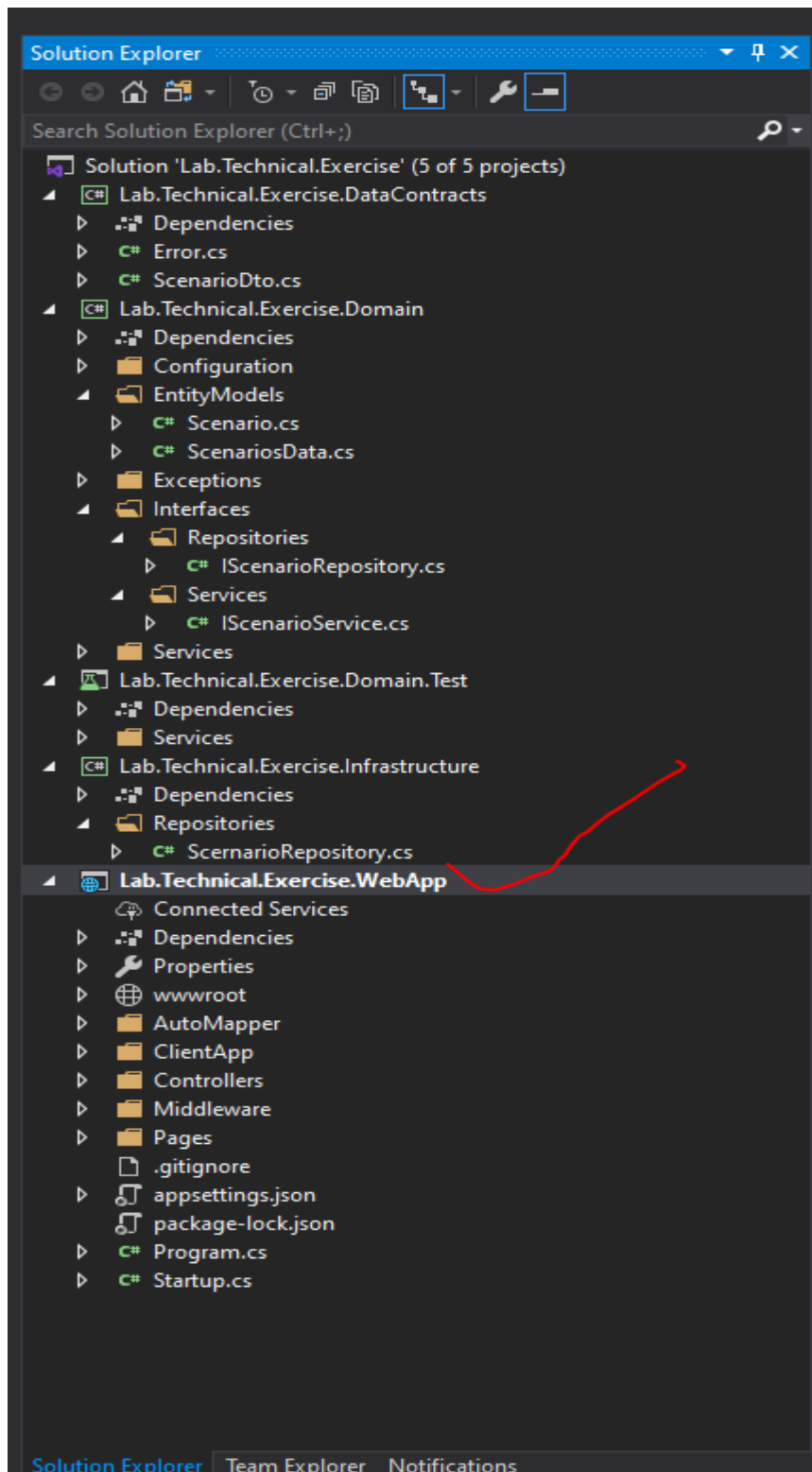


Step7: Provide **Data file** location

Update data file (data.xml) file location in **appsettings.json** file at



Step 8 : Set 'Lab.Technical.Exercise.WebApp' project as Startup Project



Step 9: Then run the application either thru 'Kestrel web server' or IIS express

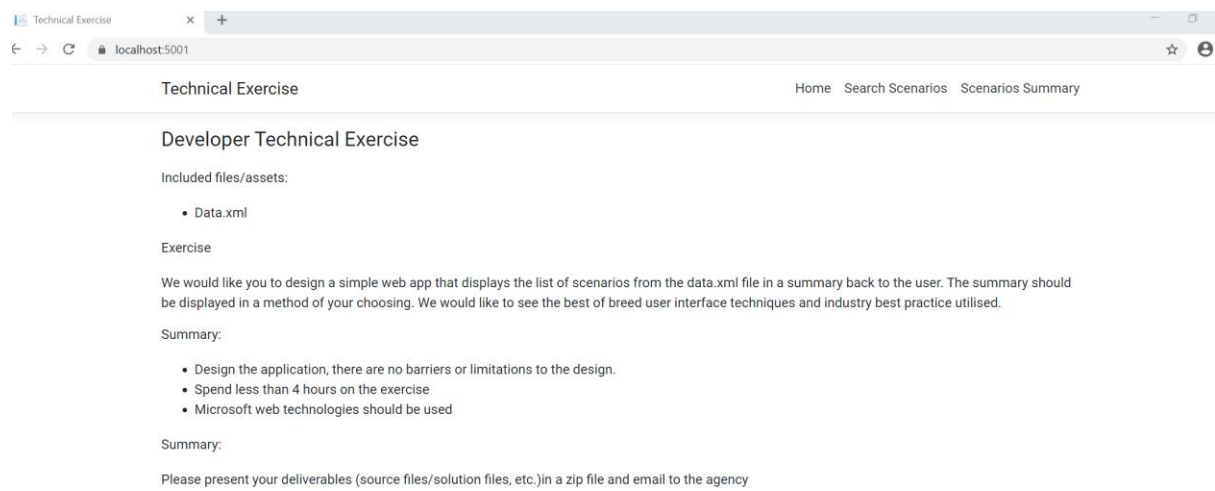
**NOTE: Please use the following URL if cannot run the project locally:**

- <https://techexercisewebapp.azurewebsites.net/scenarios-summary>

**REST End Points for Scenario Resources:**

- To retrieve all resources
  - <https://techexercisewebapp.azurewebsites.net/api/scenarios>
- To retrieve scenario by UserId
  - <https://techexercisewebapp.azurewebsites.net/api/scenarios/byuserid/ECA4A6AA-72FF-4885-9BEB-5B040FC5EF5C>
- To retrieve scenario by ScenarioId
  - <https://techexercisewebapp.azurewebsites.net/api/scenarios/byscenarioid/45>
- To retrieve scenarios by Creation Date Range
  - <https://techexercisewebapp.azurewebsites.net/api/scenarios/ByCreationDateRange?dateFrom=2013-01-01&dateTo=2020-11-15>

## Web App Landing page/home page:



To **Search Scenarios** by 'UserId' or 'CreationByDate' range click on menu option: **Search Scenarios**

**Search Scenarios by UserId: For example : ECA4A6AA-72FF-4885-9BEB-5B040FC5EF5C**

scenarios

Technical Exercise

Home **Search Scenarios** Scenarios Summary

### Search Scenarios

Search for scenarios by UserId and CreationDate range

By UserId

By Creation Date

Please enter the UserId and then press Search

UserId:

### Search Result

Scenario:ECA4A6AA-72FF-4885-9BEB-5B040FC5EF5C

Scenario	Details
ScenarioId	17
Name	Scenario
Forename	RICHARD GUY L
Surname	WIDDOWSON

To **Search Scenarios** by 'Creation Date' range:

Technical Exercise

[Home](#)

[Search Scenarios](#)

[Scenarios Summary](#)

## Search Scenarios

Search for scenarios by UserId and CreationDate range

By UserId

By Creation Date

Please enter the from and to dates below to find scenarios and then press Search

From date

11/1/2020



To date

11/15/2020



 Search



For **Scenarios Summary** click on menu option: **Scenarios Summary**

ary

Technical Exercise

Home Search Scenarios **Scenarios Summary**

**Scenarios Summary**

Filter

Apply

Clear

Id	Name	Surname	Forename	UserId	Sample Date	Creation Date	Number of Months	Market Id	Network Layer Id
1	Scenario1	BALDWIN	EDWARD	6F55DFD1-A235-4BAE-B958-C1A0AB4D5236	01-02-2013 06:02:00	01-02-2013 13:00:00	12	2	1
2	Scenario2	BALDWIN	EDWARD	6F55DFD1-A235-4BAE-B958-C1A0AB4D5236	01-02-2013 06:02:00	01-02-2013 13:00:00	12	2	1
3	Scenario3	BALDWIN	EDWARD	6F55DFD1-A235-4BAE-B958-C1A0AB4D5236	01-02-2013 06:02:00	01-02-2013 13:00:00	12	2	1
4	Scenario4	BALDWIN	EDWARD	6F55DFD1-A235-4BAE-B958-C1A0AB4D5236	01-02-2013 06:02:00	01-02-2013 13:00:00	12	2	1
5	Scenario5	BALDWIN	EDWARD	6F55DFD1-A235-4BAE-B958-C1A0AB4D5236	01-02-2013 06:02:00	01-02-2013 13:00:00	12	2	1
6	Scenario6	BALDWIN	EDWARD	6F55DFD1-A235-4BAE-B958-C1A0AB4D5236	01-02-2013 06:02:00	01-02-2013 13:00:00	12	2	1
7	Scenario7	BALDWIN	EDWARD	6F55DFD1-A235-4BAE-B958-C1A0AB4D5236	01-02-2013 06:02:00	01-02-2013 13:00:00	12	2	1
8	Scenario8	BALDWIN	EDWARD	6F55DFD1-A235-4BAE-B958-C1A0AB4D5236	01-02-2013 06:02:00	01-02-2013 13:00:00	12	2	1
9	Scenario9	BALDWIN	EDWARD	6F55DFD1-A235-4BAE-B958-C1A0AB4D5236	01-02-2013 06:02:00	01-02-2013 13:00:00	12	2	1
10	Scenario10	BALDWIN	EDWARD	6F55DFD1-A235-4BAE-B958-C1A 0AB4D5236	01-02-2013 06:02:00	01-02-2013 13:00:00	12	2	1

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## To Filter Scenarios:

Technical Exercise

[Home](#) [Search Scenarios](#) [Scenarios Summary](#)

### Scenarios Summary

Filter

Marriott

Apply

Clear

Id	Name	Surname	Forename	Userid	Sample Date	Creation Date	Number of Months	Market Id	Network Layer Id
54	Scenario	Marriott	Gerald	91F9E135-94F3-4210-87AB-E953779545FB	01-02-2013 06:01:00	01-02-2013 14:11:00	12	2	1
56	Scenario	Marriott	Gerald	91F9E135-94F3-4210-87AB-E953779545FB	01-02-2013 06:01:00	01-02-2013 14:11:00	12	2	1
57	Scenario	Marriott	Gerald	91F9E135-94F3-4210-87AB-E953779545FB	01-02-2013 06:01:00	01-02-2013 14:11:00	12	2	1
58	Scenario	Marriott	Gerald	91F9E135-94F3-4210-87AB-E953779545FB	01-02-2013 06:01:00	01-02-2013 14:11:00	12	2	1
59	Scenario	Marriott	Gerald	91F9E135-94F3-4210-87AB-E953779545FB	01-02-2013 06:01:00	01-02-2013 14:11:00	12	2	1
60	Scenario60	Marriott	Gerald	91F9E135-94F3-4210-87AB-E953779545FB	01-02-2013 06:01:00	01-02-2013 14:11:00	12	2	1

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## To Sort Summary Table Columns:

Technical Exercise

Home Search Scenarios Scenarios Summary

### Scenarios Summary

Filter

Apply

Clear

Id	Name	Surname	Forename	UserId	Sample Date	Creation Date	Number of Months	Market Id	Network Layer Id
17	Scenario	WIDDOWSON	RICHARD GUY L	ECA4A6AA-72FF-4885-9BEB-5B040FC5EF5C	01-02-2013 06:03:00	01-02-2013 19:00:00	12	2	1
18	Scenario	WIDDOWSON	RICHARD GUY L	ECA4A6AA-72FF-4885-9BEB-5B040FC5EF5C	01-02-2013 06:03:00	01-02-2013 19:00:00	12	2	1
19	Scenario	WIDDOWSON	RICHARD GUY L	ECA4A6AA-72FF-4885-9BEB-5B040FC5EF5C	01-02-2013 06:03:00	01-02-2013 19:00:00	12	2	1
20	Scenario	WIDDOWSON	RICHARD GUY L	ECA4A6AA-72FF-4885-9BEB-5B040FC5EF5C	01-02-2013 06:03:00	01-02-2013 19:00:00	12	2	1
21	Scenario	WIDDOWSON	RICHARD GUY L	ECA4A6AA-72FF-4885-9BEB-5B040FC5EF5C	01-02-2013 06:03:00	01-01-0001 00:00:00	12	2	1
22	Scenario	WIDDOWSON	RICHARD GUY L	ECA4A6AA-72FF-4885-9BEB-5B040FC5EF5C	01-02-2013 06:03:00	01-02-2013 19:00:00	12	2	1
23	Scenario	WIDDOWSON	RICHARD GUY L	ECA4A6AA-72FF-4885-9BEB-5B040FC5EF5C	01-02-2013 06:03:00	01-02-2013 19:00:00	12	2	1