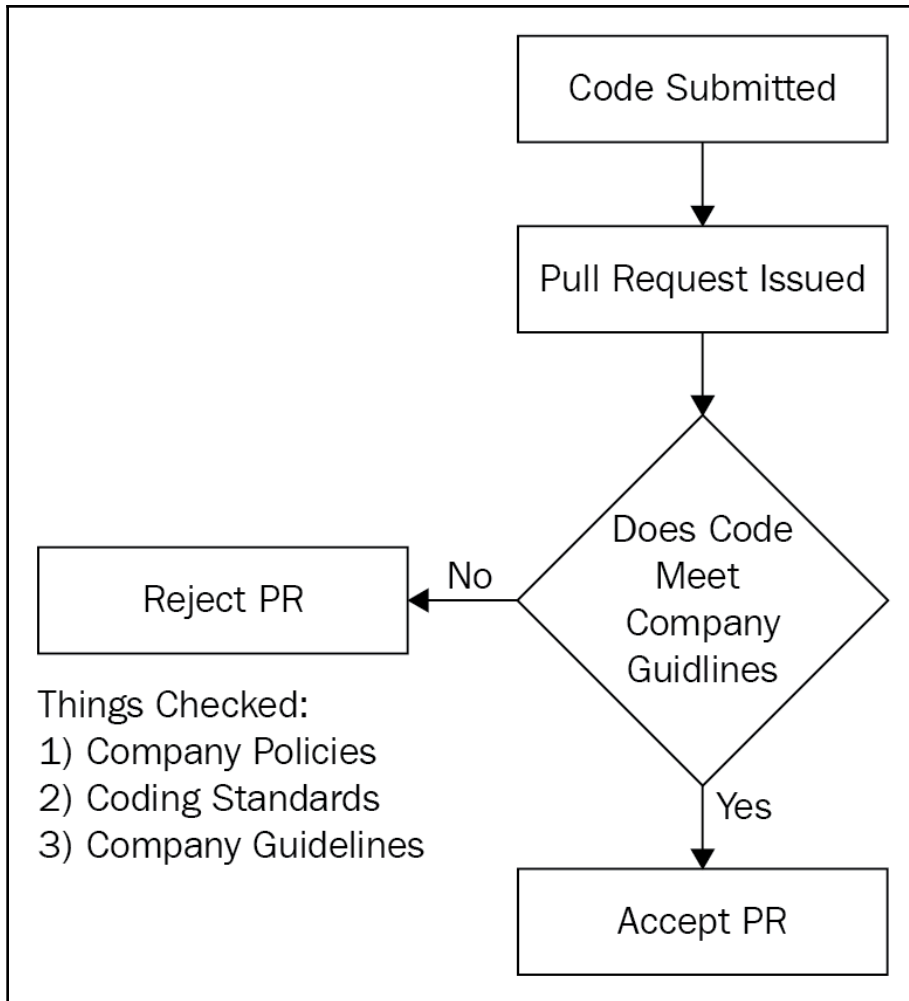


Chapter 1: Coding Standards and Principles in C#

No images...

Chapter 2: Code Review – Process and Importance



Code

Issues 0

Pull requests 0

Projects 0

Wiki

Security

Insights

Settings

Your recently pushed branches:

dev (1 minute ago)

Compare & pull request

Filters

is:pr is:open

Labels 7

Milestones 0

New pull request



Welcome to Pull Requests!

Pull requests help you collaborate on code with other people. As pull requests are created, they'll appear here in a searchable and filterable list. To get started, you should [create a pull request](#).

[Code](#) [Issues 0](#) [Pull requests 0](#) [Projects 0](#) [Wiki](#) [Security](#) [Insights](#) [Settings](#)

Comparing changes

Choose two branches to see what's changed or to start a new pull request. If you need to, you can also [compare across forks](#).

base: master

compare: dev

✓ Able to merge. These branches can be automatically merged.

Create pull request

Discuss and review the changes in this comparison with others.

1 commit

3 files changed

0 commit comments

1 contributor

Commits on Sep 04, 2019

vector

Jasonalls

Updated packages and added paragraph to index.html

5548a27

Showing 3 changed files with 1,612 additions and 6 deletions.

Unified

Split

4

index.html

...

13	14	@@ -14,6 +14,10 @@	Start Grunt
14	14		Hello, world!
15	15		
16	16		<button>Press me</button>
	17	+	
	18	+	<p>
	19	+	This paragraph is a mdifiedd item added to learn about pull requests.
	20	+	</p>
17	21		</main>
18	22		
19	23		<script src="https://ajax.googleapis.com/ajax/libs/jquery/2.1.4/jquery.min.js"></script>
20			

CodeIssues 0Pull requests 0Projects 0WikiSecurityInsightsSettings

Open a pull request

Create a new pull request by comparing changes across two branches. If you need to, you can also [compare across forks](#).

base: mastercompare: dev

✓ Able to merge. These branches can be automatically merged.

Updated packages and added paragraph to index.html

WritePreview

AA B i “ > ↻ ⋮ ⋮ ⋮ @ 📌 ↶

Updated packages to the latest versions, and added a paragraph to index.html

Attach files by dragging & dropping, selecting or pasting them.

Create pull request

Reviewers

No reviews

Assignees

 jasonalls

Labels

None yet

Projects

None yet

Milestone

No milestone

1 commit

3 files changed

0 commit comments

1 contributor

Commits on Sep 04, 2019

 jasonalls Updated packages and added paragraph to index.html 5548a27

Showing 3 changed files with 1,612 additions and 6 deletions.

UnifiedSplit

4 index.html

@@ -14,6 +14,10 @@ <h1>Start Grunt</h1>

14 14 <p>Hello, world!</p>

15 15

16 16 <button>Press me</button>

17 +

18 + <p>

19 + This paragraph is a mdifiedd item added to learn about pull requests.

20 + </p>

17 21 </main>

[5]

<> Code

Issues 0

Pull requests 1

Projects 0

Wiki

Security

Insights

Settings

Updated packages and added paragraph to index.html #1

Open

jasonalls wants to merge 1 commit into master from dev

Conversation 0

Commits 1

Checks 0

Files changed 3

+1,612 -6

jasonalls commented now

Updated packages to the latest versions, and added a paragraph to index.html

Updated packages and added paragraph to index.html

5548a27

jasonalls self-assigned this now

Add more commits by pushing to the dev branch on jasonalls/startgrunt.

✓

This branch has no conflicts with the base branch

Merging can be performed automatically.

Merge pull request

You can also [open this in GitHub Desktop](#) or view [command line instructions](#).

Write

Preview

AA B i “ <> ☰ ☷ ☰ ☷ ☷ @ 📎 ↶

Leave a comment

Attach files by dragging & dropping, selecting or pasting them.

Close pull request

Comment

Reviewers

No reviews

Assignees

jasonalls

Labels

None yet

Projects

None yet

Milestone

No milestone

Notifications

Customize

Unsubscribe

You're receiving notifications because you're watching this repository.

1 participant

Lock conversation

[Code](#) [Issues 0](#) [Pull requests 1](#) [Projects 0](#) [Wiki](#) [Security](#) [Insights](#) [Settings](#)

Updated packages and added paragraph to index.html #1

Open jasonalls wants to merge 1 commit into `master` from `dev`

[Conversation 0](#) [Commits 1](#) [Checks 0](#) [Files changed 3](#) +1,612 -6

Jasonalls commented 2 minutes ago

Updated packages to the latest versions, and added a paragraph to index.html

Updated packages and added paragraph to index.html

5548a27

Jasonalls self-assigned this 2 minutes ago

Add more commits by pushing to the dev branch on jasonalls/startgrunt.

Merge pull request #1 from jasonalls/dev

Updated packages and added paragraph to index.html

Confirm merge

Cancel

Write Preview

AA B i “ <> ↺ ☰ ☷ ☹ @ 📎 ↶

Leave a comment

Attach files by dragging & dropping, selecting or pasting them.

Close pull request

Comment

Reviewers

No reviews

Assignees

Jasonalls

Labels

None yet

Projects

None yet

Milestone

No milestone

Notifications

Customize

Unsubscribe

You're receiving notifications because you're watching this repository.

1 participant

Lock conversation

[Code](#) [Issues 0](#) [Pull requests 1](#) [Projects 0](#) [Wiki](#) [Security](#) [Insights](#) [Settings](#)

Updated packages and added paragraph to index.html #1

Merged

jasonalls merged 1 commit into master from dev now

Conversation 0

Commits 1

Checks 0

Files changed 3

+1,612 -6

jasonalls commented 4 minutes ago

Updated packages to the latest versions, and added a paragraph to index.html

Updated packages and added paragraph to index.html

5548a27

jasonalls self-assigned this 3 minutes ago

jasonalls merged commit ce0d5dc into master now

Revert

Pull request successfully merged and closed

You're all set—the dev branch can be safely deleted.

Delete branch

Write

Preview

AA B i “ < > 🔗 ☰ ☷ ☰ @ 📌 ↶

Leave a comment

Attach files by dragging & dropping, selecting or pasting them.

Comment

ProTip! Add comments to specific lines under Files changed.

Reviewers

No reviews

Assignees

jasonalls

Labels

None yet

Projects

None yet

Milestone

No milestone

Notifications

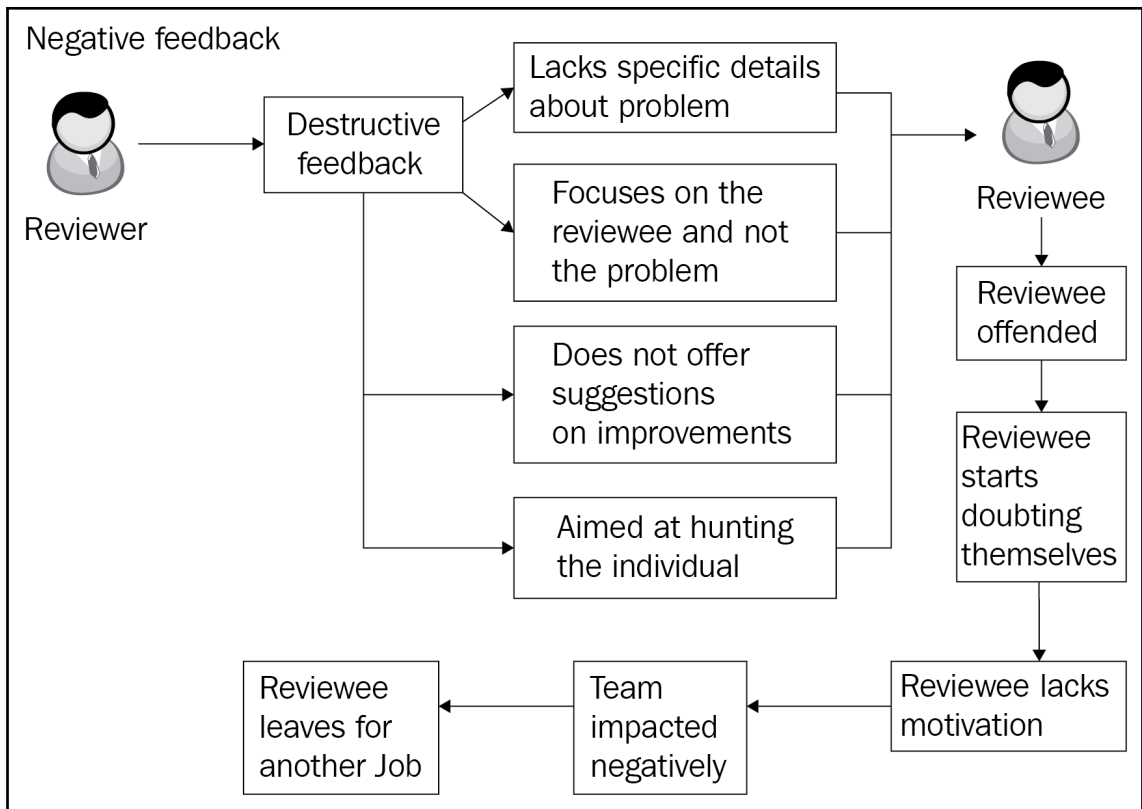
Customize

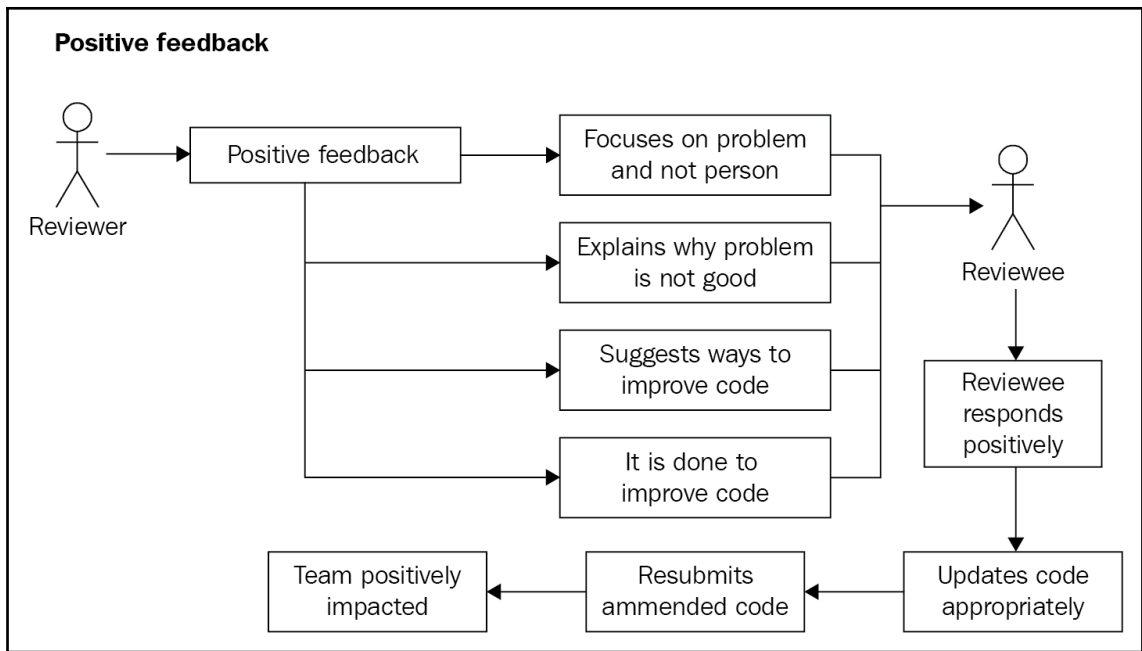
Unsubscribe

You're receiving notifications because you're watching this repository.

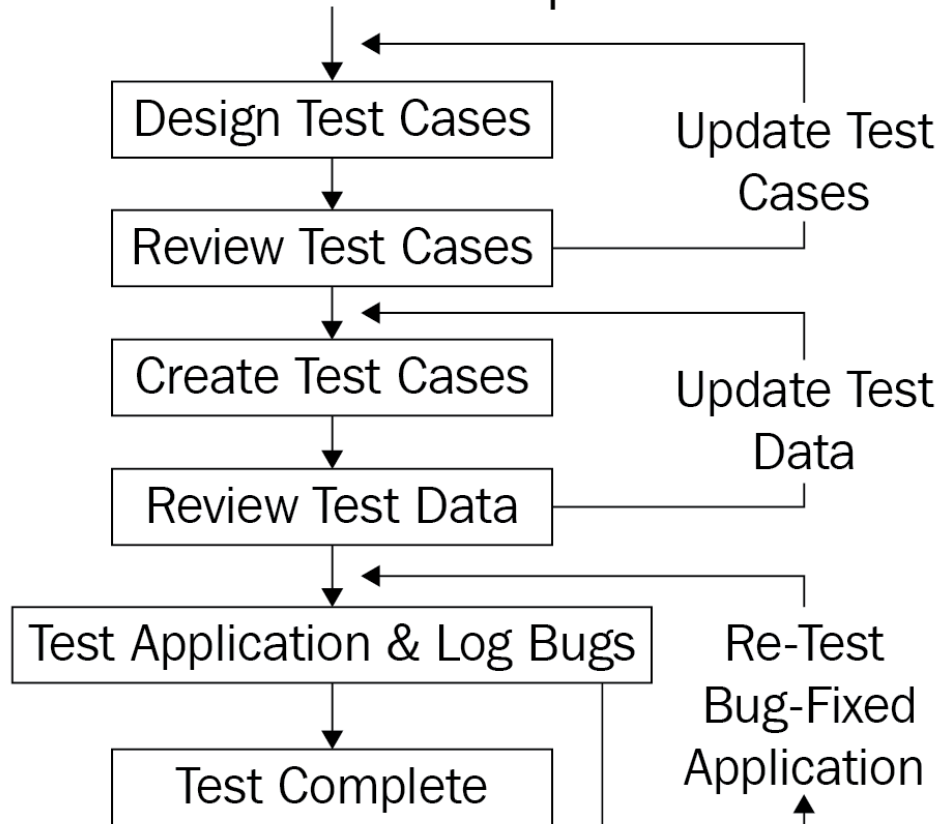
1 participant

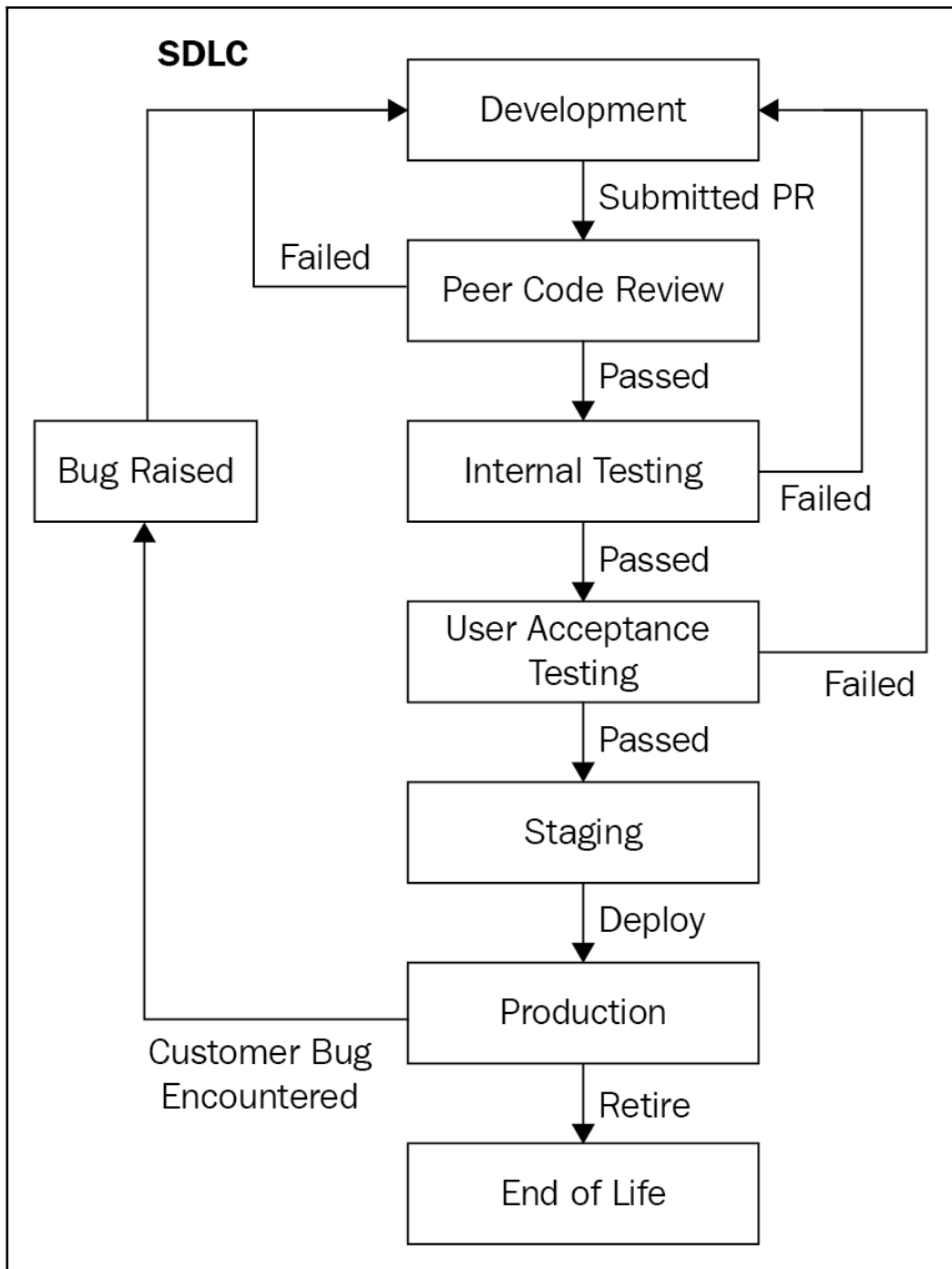
Lock conversation



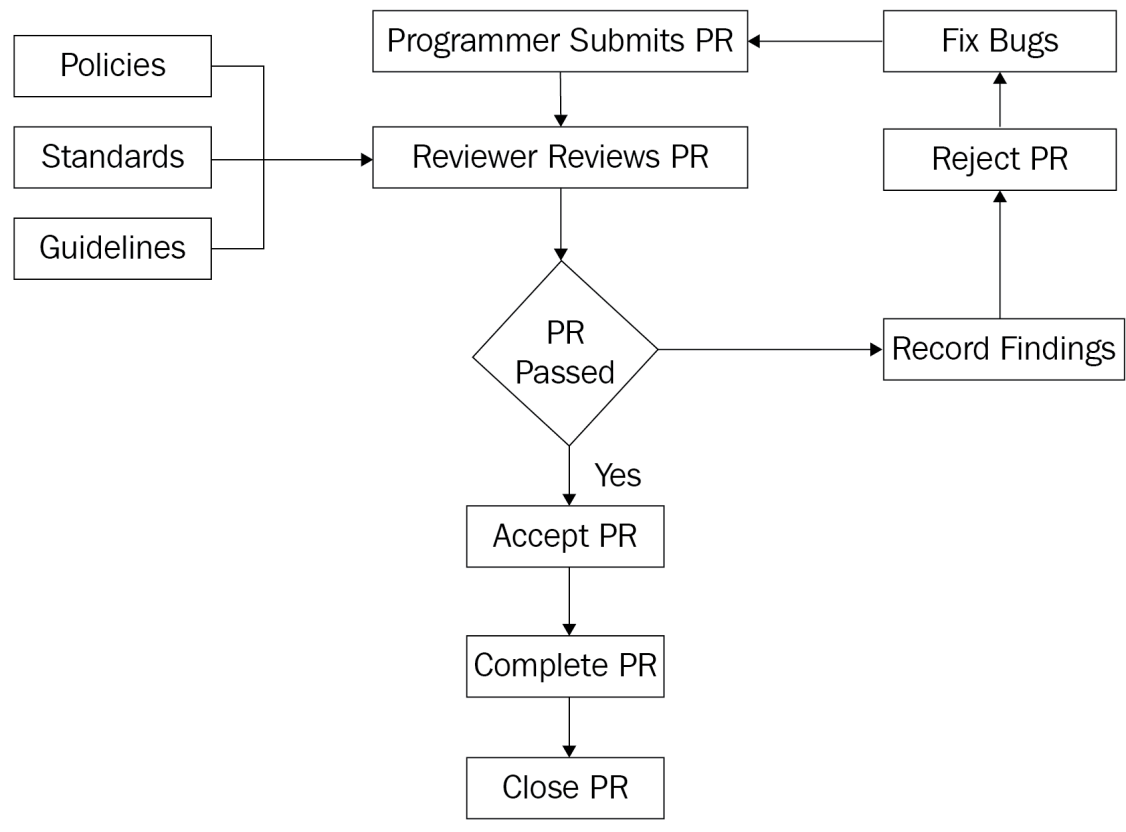


Prepare Test Plan From Requirements

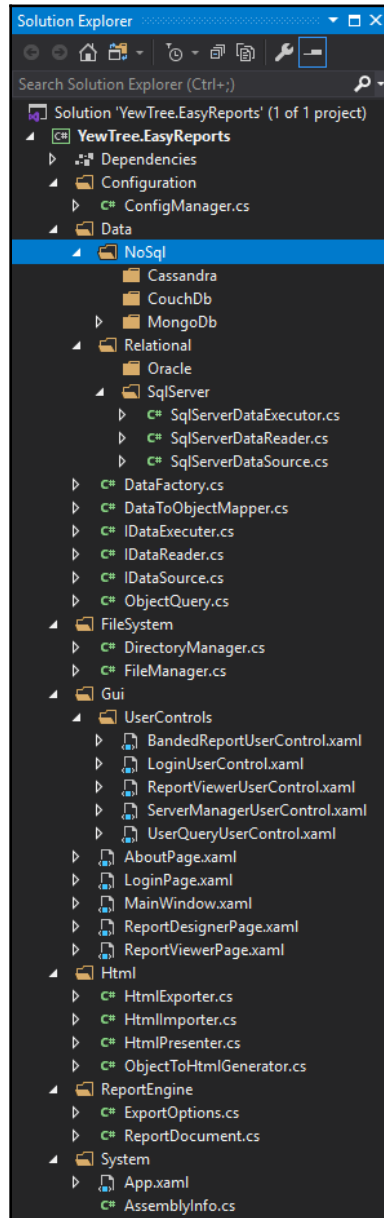




Peer Code Review



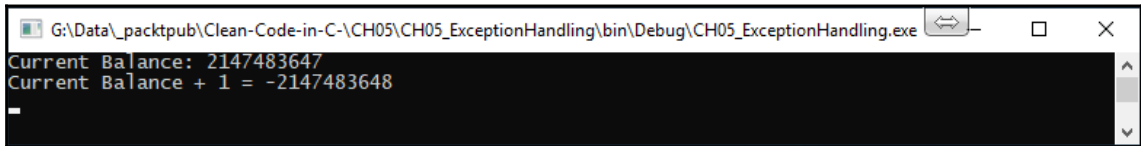
Chapter 3: Classes, Objects, and Data Structures



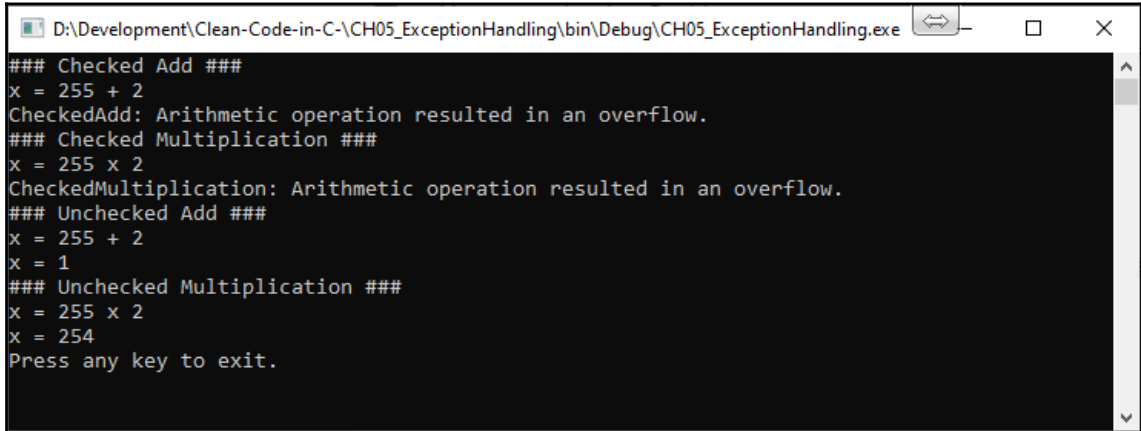
Chapter 4: Writing Clean Functions

No images...

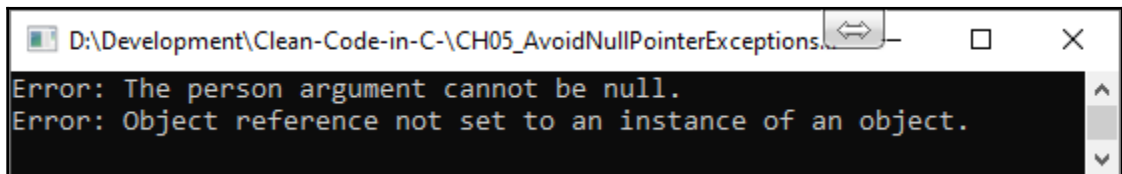
Chapter 5: Exception Handling



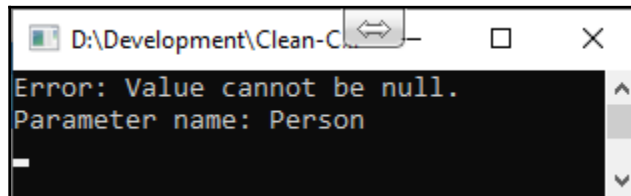
```
G:\Data\_packtpub\Clean-Code-in-C-\CH05\ExceptionHandling\bin\Debug\CH05_ExceptionHandling.exe
Current Balance: 2147483647
Current Balance + 1 = -2147483648
```



```
D:\Development\Clean-Code-in-C-\CH05_ExceptionHandling\bin\Debug\CH05_ExceptionHandling.exe
### Checked Add ###
x = 255 + 2
CheckedAdd: Arithmetic operation resulted in an overflow.
### Checked Multiplication ###
x = 255 x 2
CheckedMultiplication: Arithmetic operation resulted in an overflow.
### Unchecked Add ###
x = 255 + 2
x = 1
### Unchecked Multiplication ###
x = 255 x 2
x = 254
Press any key to exit.
```

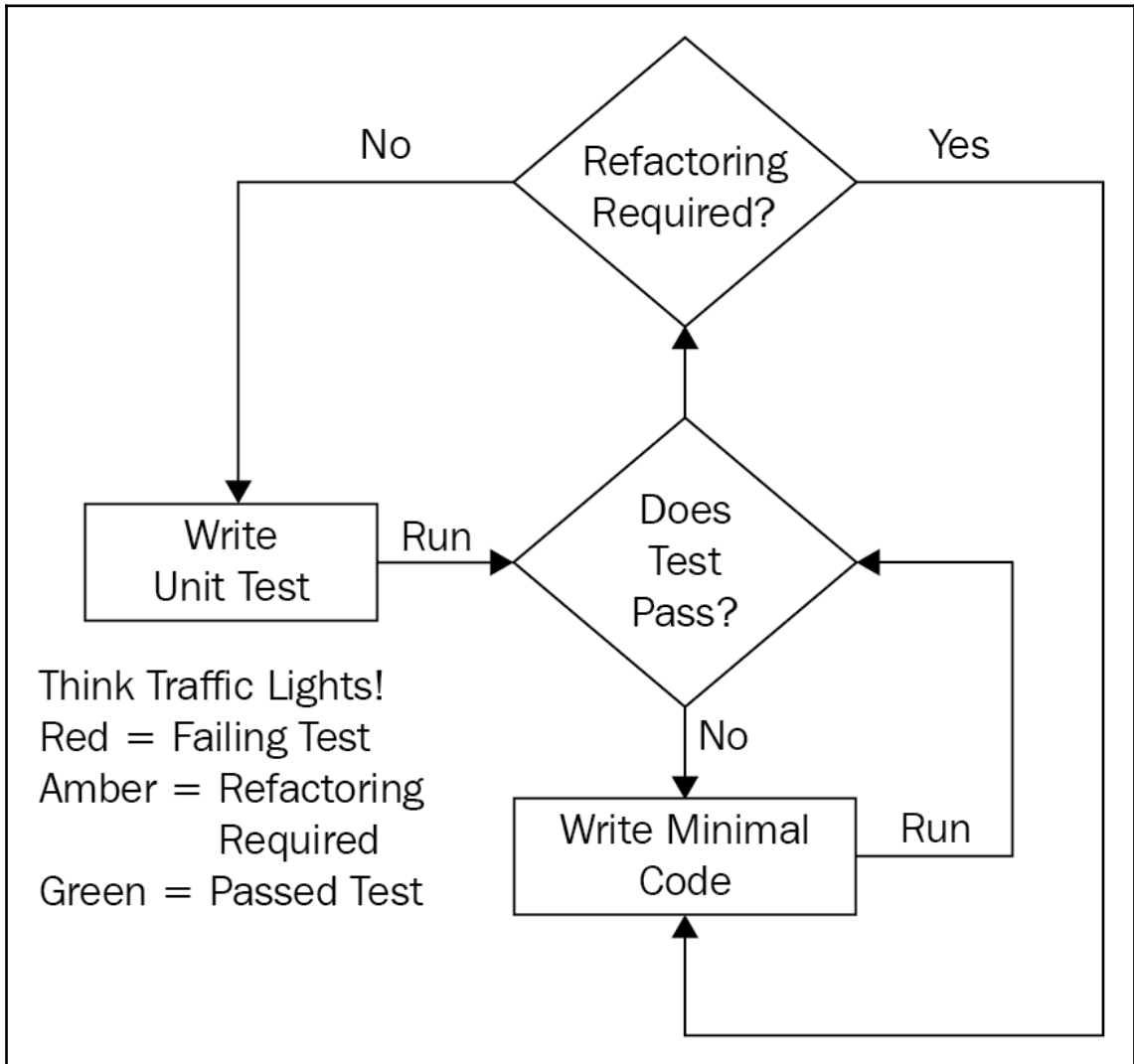


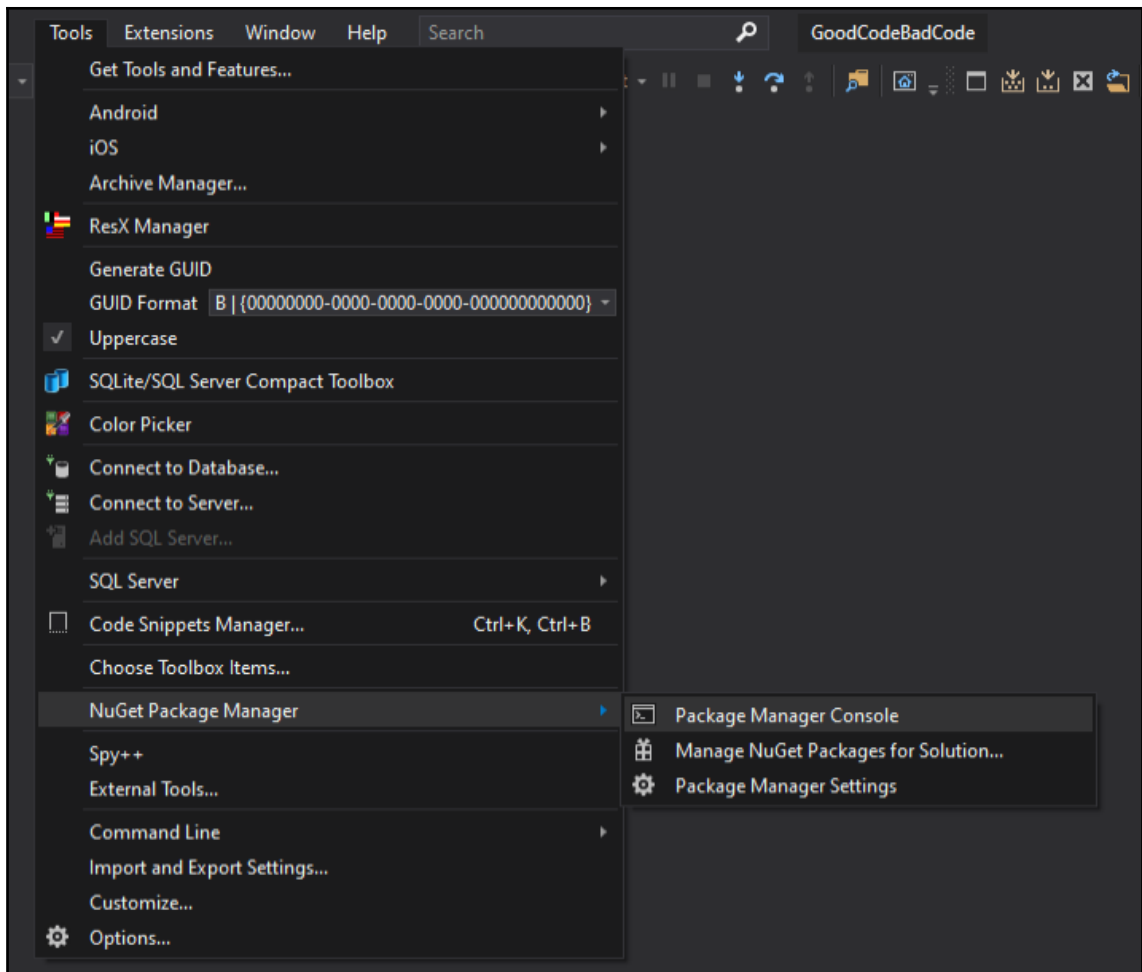
```
D:\Development\Clean-Code-in-C-\CH05_AvoidNullPointerExceptions...
Error: The person argument cannot be null.
Error: Object reference not set to an instance of an object.
```

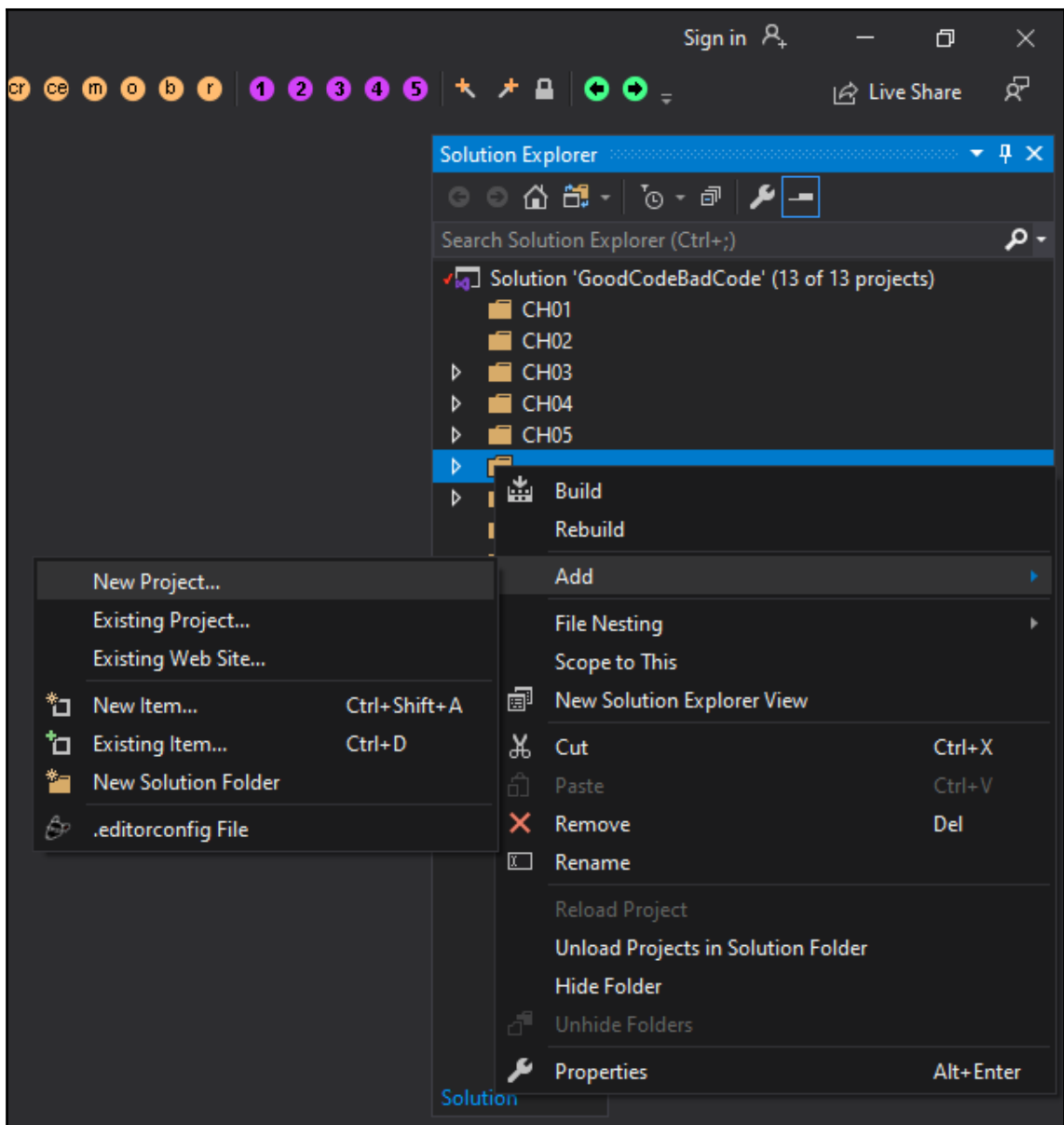


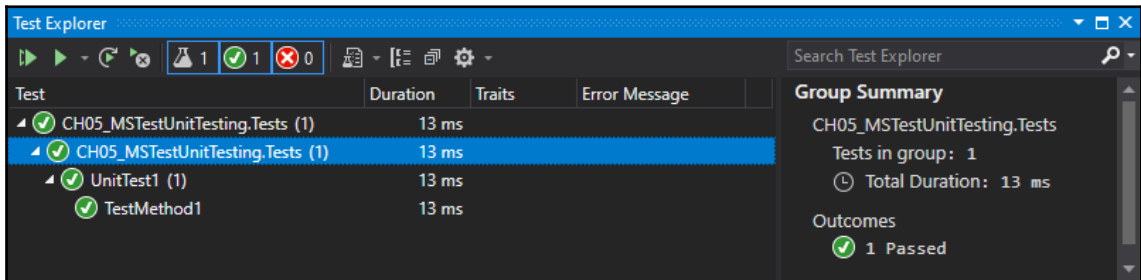
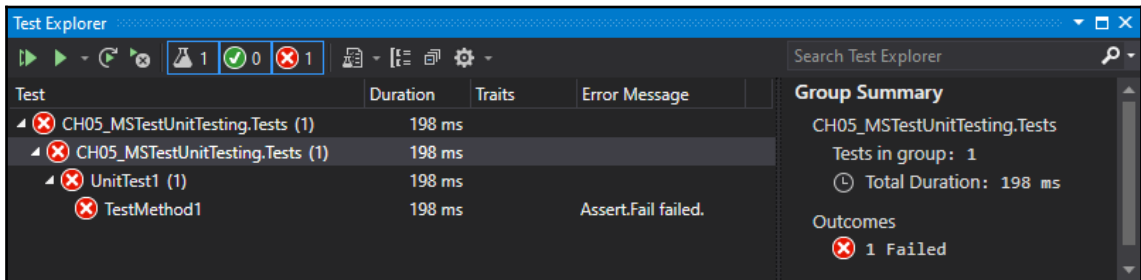
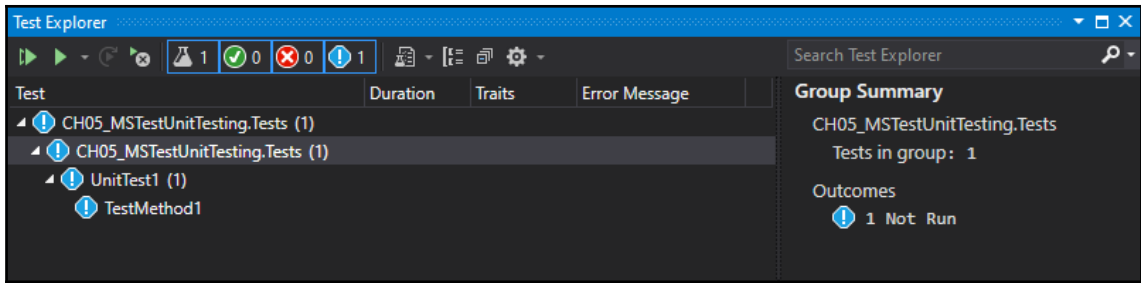
```
D:\Development\Clean-C...
Error: Value cannot be null.
Parameter name: Person
```

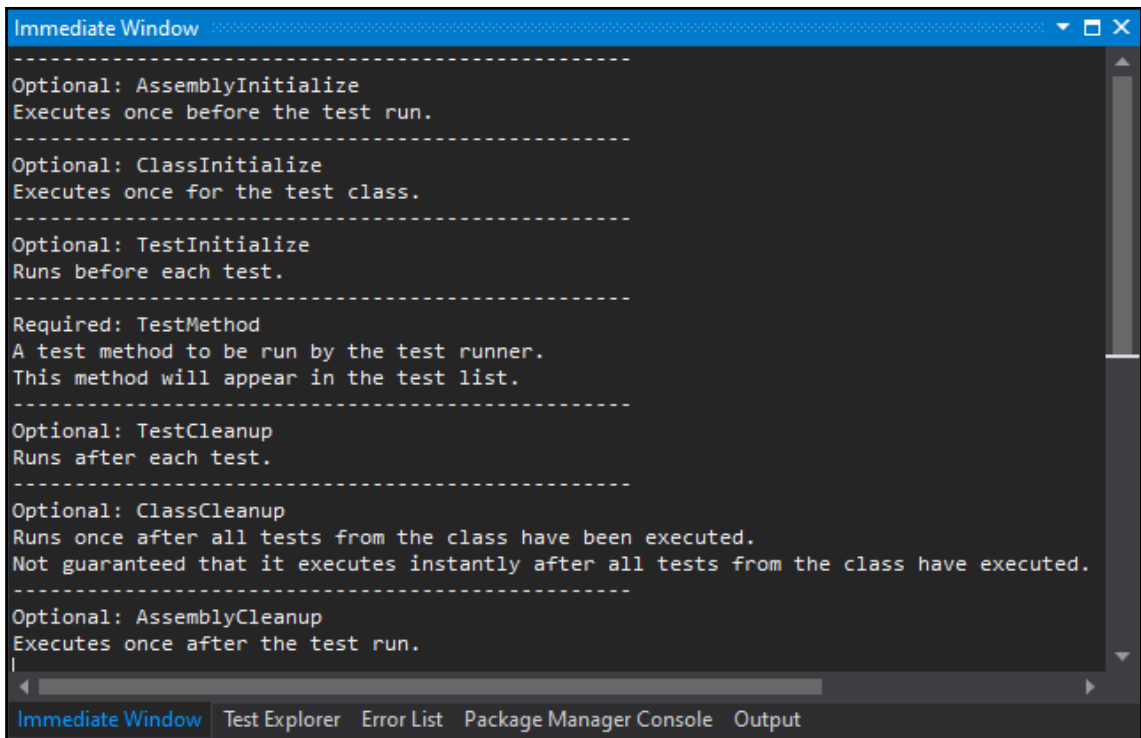
Chapter 6: Unit Testing





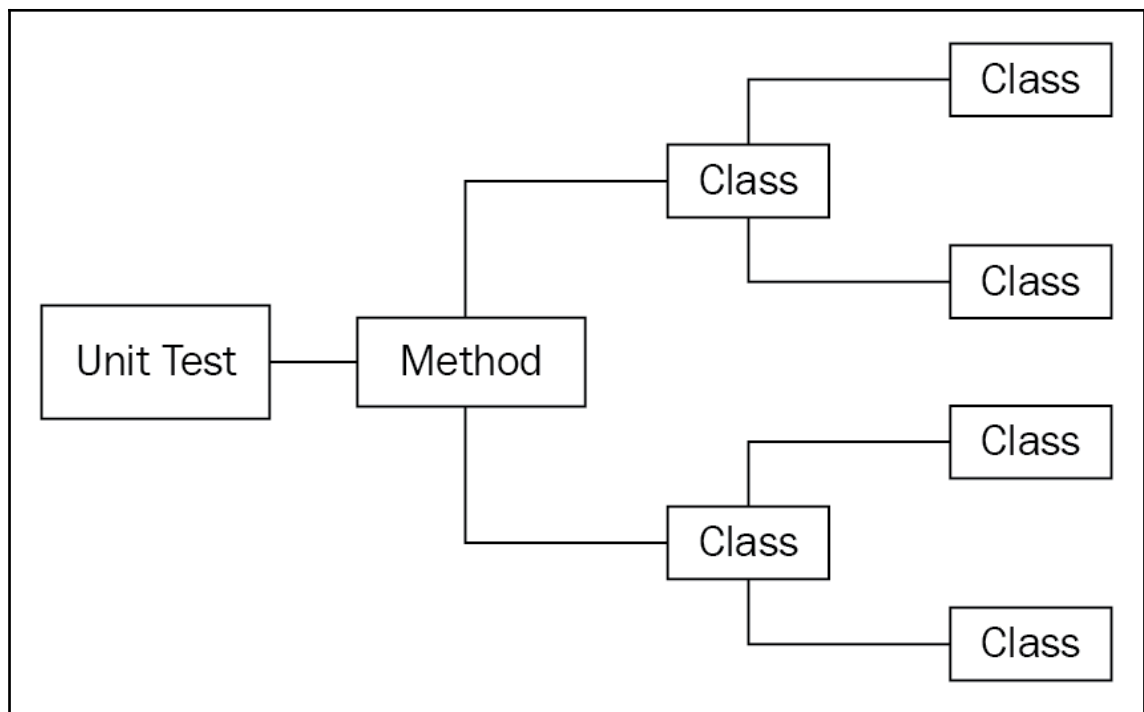






```
Immediate Window
-----
Constructor
-----
OneTimeSetUp
This method is run once before any tests in this class are run.
-----
Setup
This method is run before each test method is run.
-----
Test:Test1
Order: 0
Exception thrown: 'NUnit.Framework.SuccessException' in nunit.framework.dll
-----
Teardown
This method is run after each test method has been run.
This method runs even when an exception occurs.
-----
Setup
This method is run before each test method is run.
-----
Test:Test2
Order: 1
Exception thrown: 'NUnit.Framework.InconclusiveException' in nunit.framework.dll
-----
Teardown
This method is run after each test method has been run.
This method runs even when an exception occurs.
-----
Setup
This method is run before each test method is run.
-----
Test:Test3
Order: 2
Exception thrown: 'NUnit.Framework.AssertException' in nunit.framework.dll
-----
Teardown
This method is run after each test method has been run.
This method runs even when an exception occurs.
-----
OneTimeTearDown
This method is run once after all tests in this class have been run.
This method runs even when an exception occurs.
-----
Dispose
```

Immediate Window | Test Explorer | Error List | Package Manager Console | Output



Generate Step Definition Skeleton - SpecFlow

The following steps have no matching step definition yet. Select the steps you want to generate a step definition skeleton for.

all

none

☒ [Given] "Given I have entered 50 into the calculator" in scenario "Add two numbers"

☒ [Given] "And I have entered 70 into the calculator" in scenario "Add two numbers"

☒ [When] "When I press add" in scenario "Add two numbers"

☒ [Then] "Then the result should be 120 on the screen" in scenario "Add two numbers"

Class name:

CalculatorSteps

Style:

Regular expressions in attributes

Preview

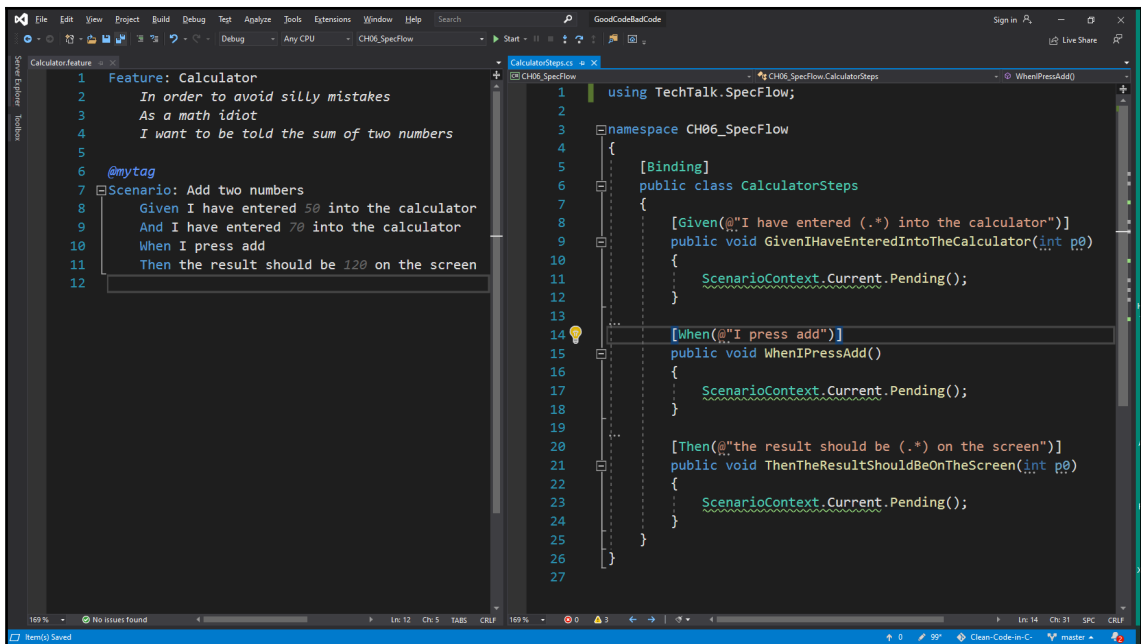
[learn more about step definition styles](#)

Copy methods to clipboard

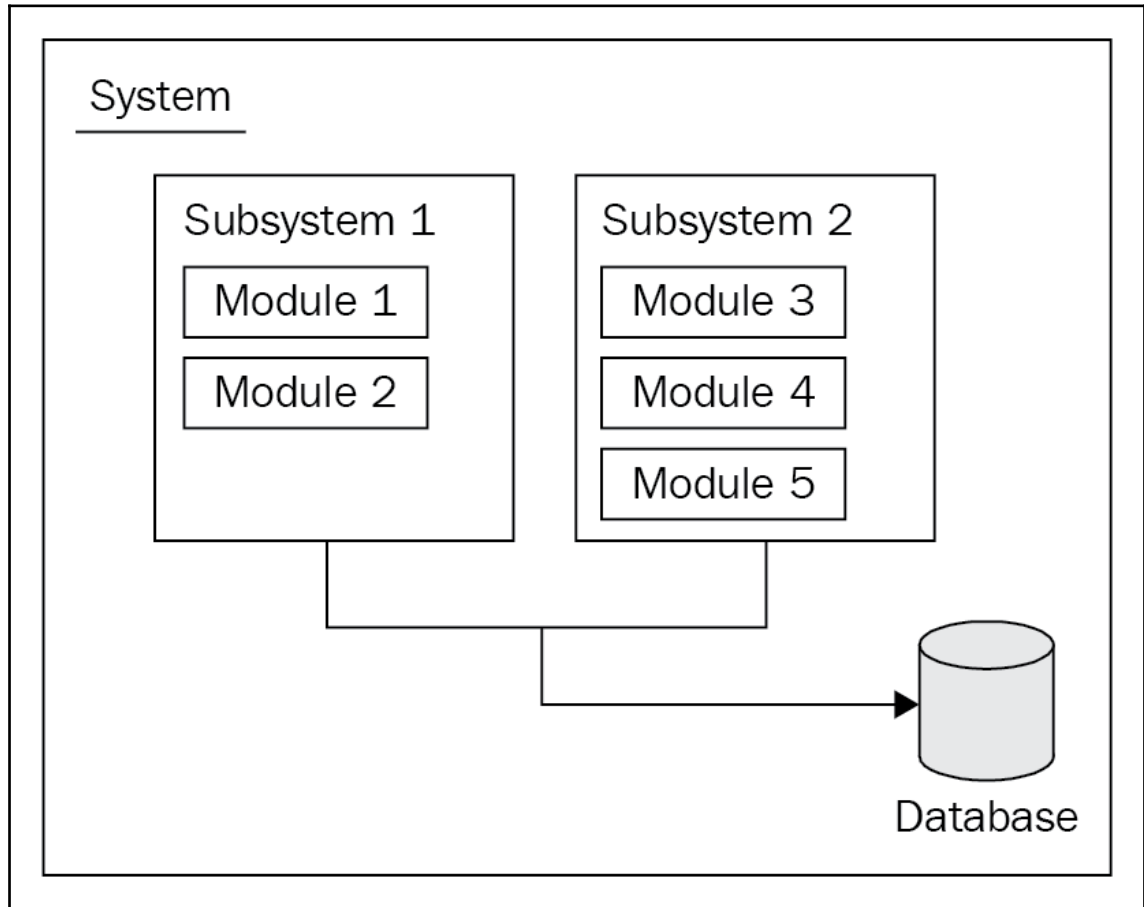
Generate

Cancel

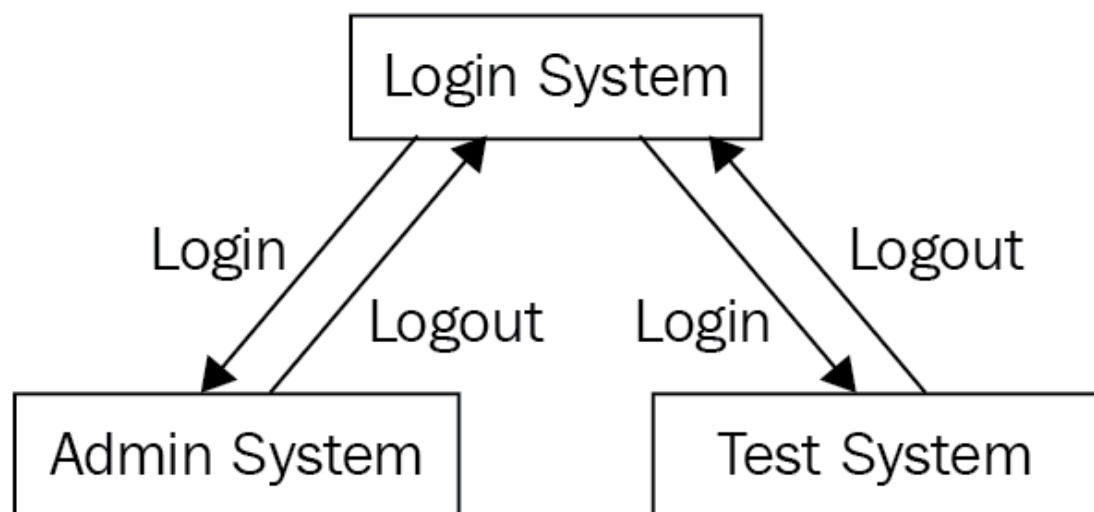
[24]



Chapter 7: End-to-End System Testing



System under test

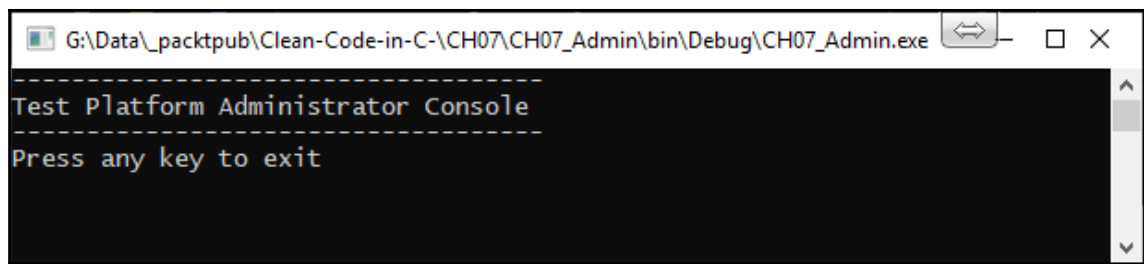


Select G:\Data_packtpub\Clean-Code-in-C-\CH07\CH07_Logon\bin\Debug\CH07_Logon.exe

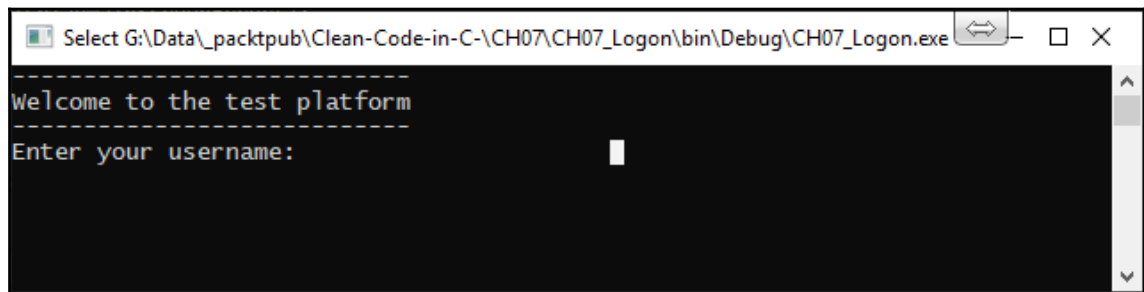
```
Welcome to the test platform
Enter your username: 
```

G:\Data_packtpub\Clean-Code-in-C-\CH07\CH07_Logon\bin\Debug\CH07_Logon.exe

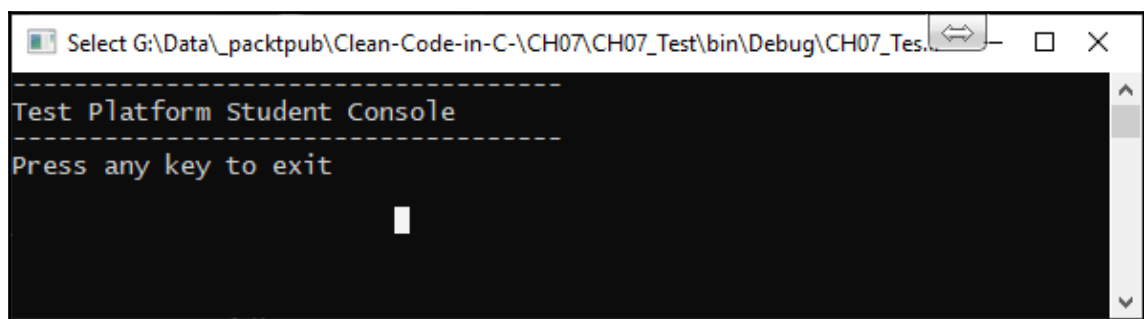
```
Invalid username or password
Enter your username: 
```



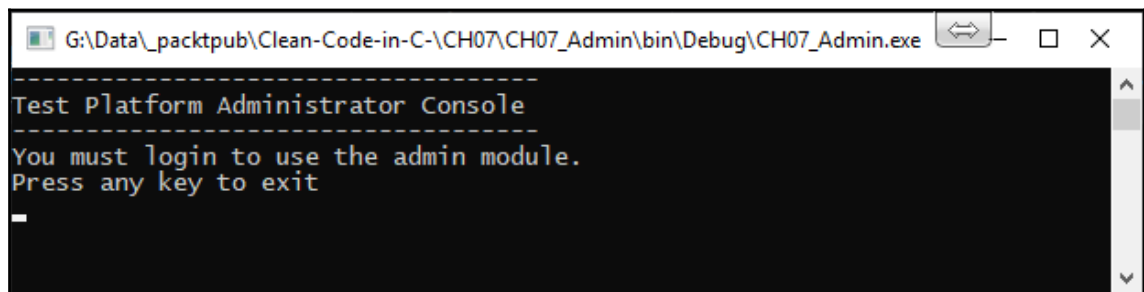
```
G:\Data\_packtpub\Clean-Code-in-C-\CH07\CH07_Admin\bin\Debug\CH07_Admin.exe
-----
Test Platform Administrator Console
-----
Press any key to exit
```



```
Select G:\Data\_packtpub\Clean-Code-in-C-\CH07\CH07_Logon\bin\Debug\CH07_Logon.exe
-----
Welcome to the test platform
-----
Enter your username: |
```

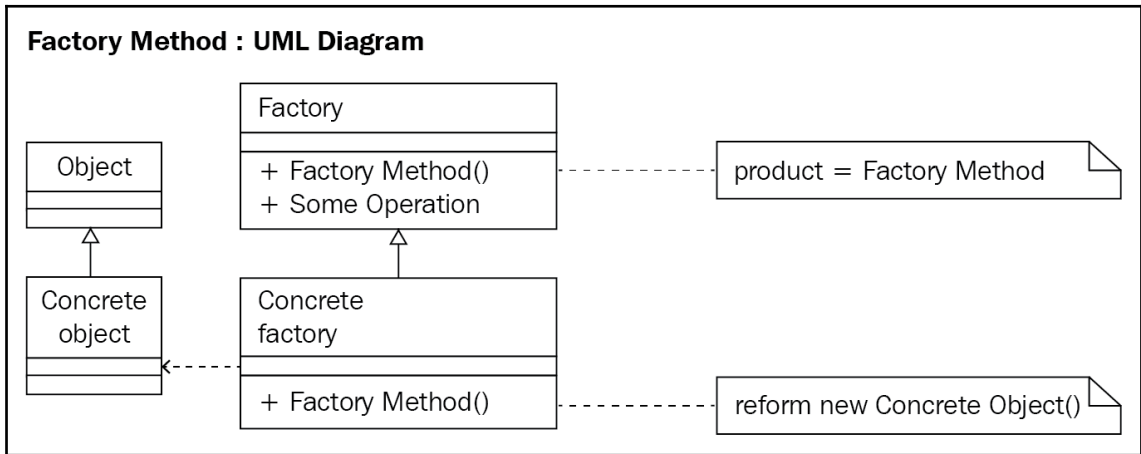


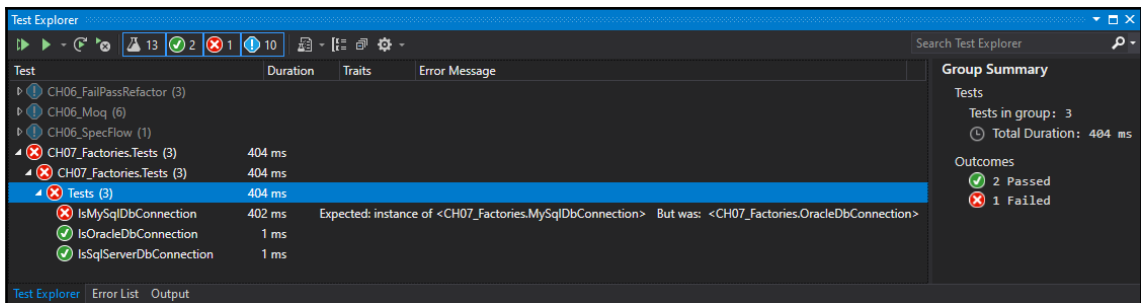
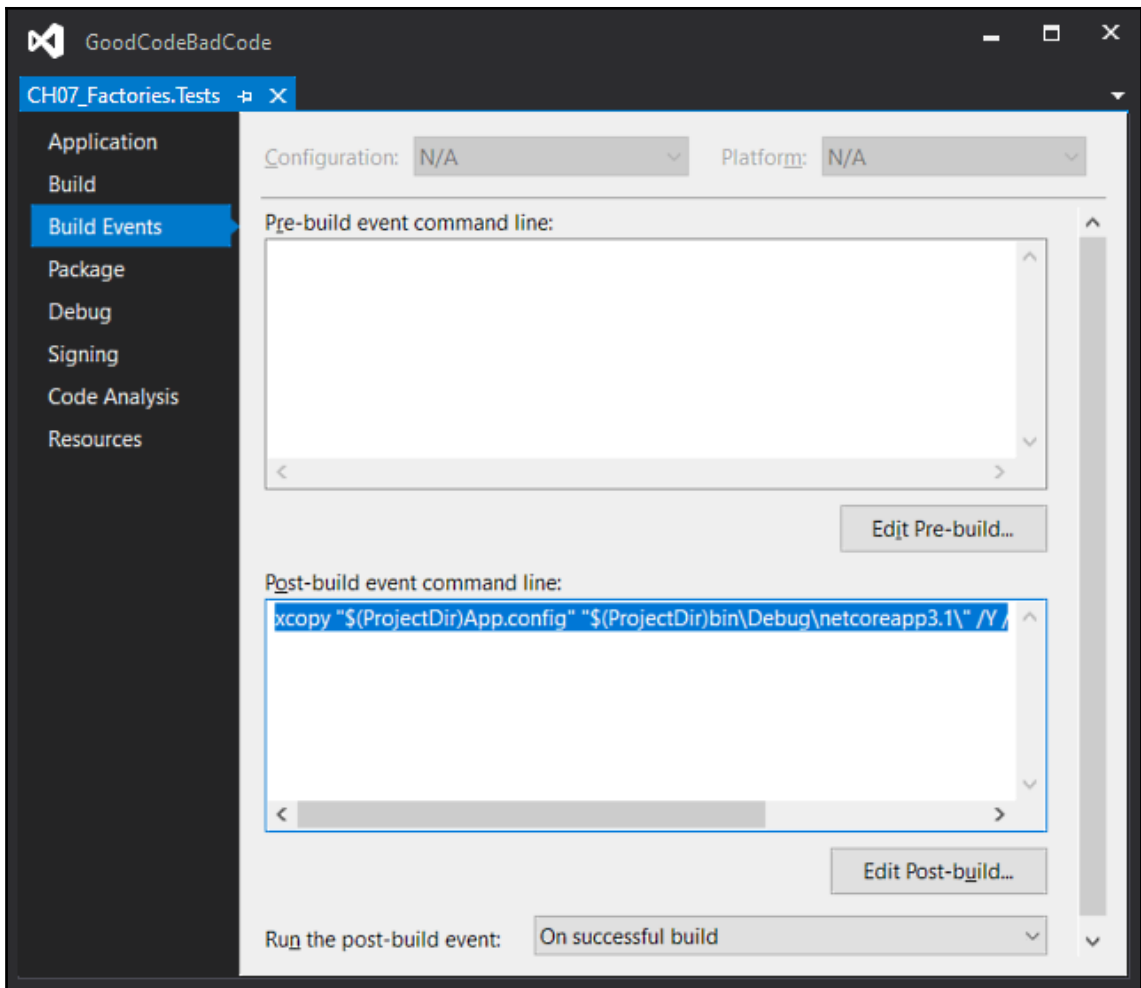
```
Select G:\Data\_packtpub\Clean-Code-in-C-\CH07\CH07_Test\bin\Debug\CH07_Tes...
-----
Test Platform Student Console
-----
Press any key to exit
|
```



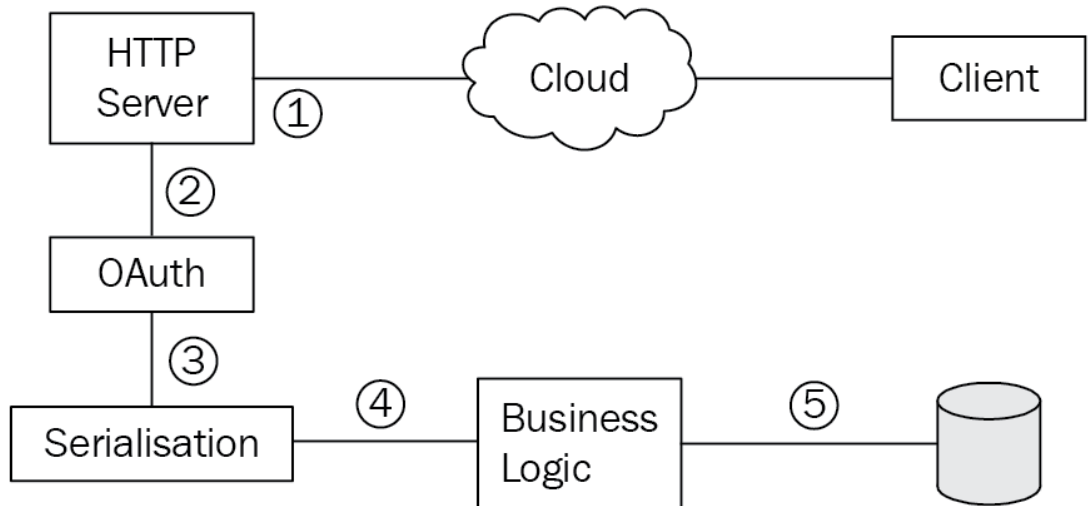
```
G:\Data\_packtpub\Clean-Code-in-C-\CH07\CH07_Admin\bin\Debug\CH07_Admin.exe
-----
Test Platform Administrator Console
-----
You must login to use the admin module.
Press any key to exit
|
```

```
G:\Data\_packtpub\Clean-Code-in-C-\CH07\CH07_Test\bin\Debug\CH07_Test.exe
-----
Test Platform Student Console
-----
You must login to use the student module.
Press any key to exit
-
```



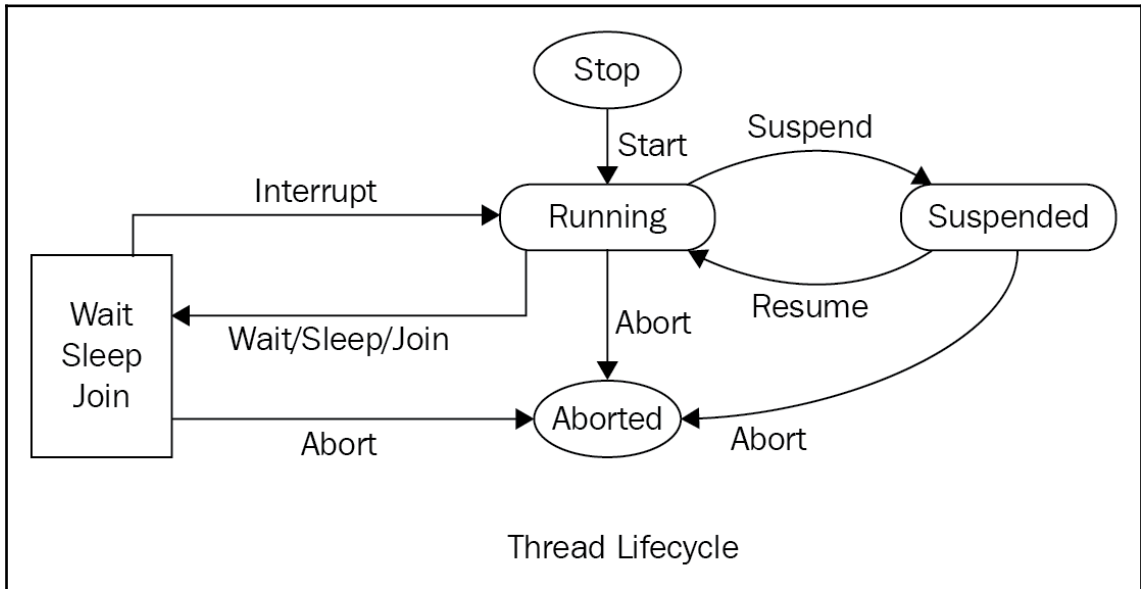


Areas of interest for API Integration tests



- 1) Client Connectivity
- 2) Authentication
- 3) Authorization
- 4) Serialization/Deserialization
- 5) Persistence

Chapter 8: Threading and Concurrency

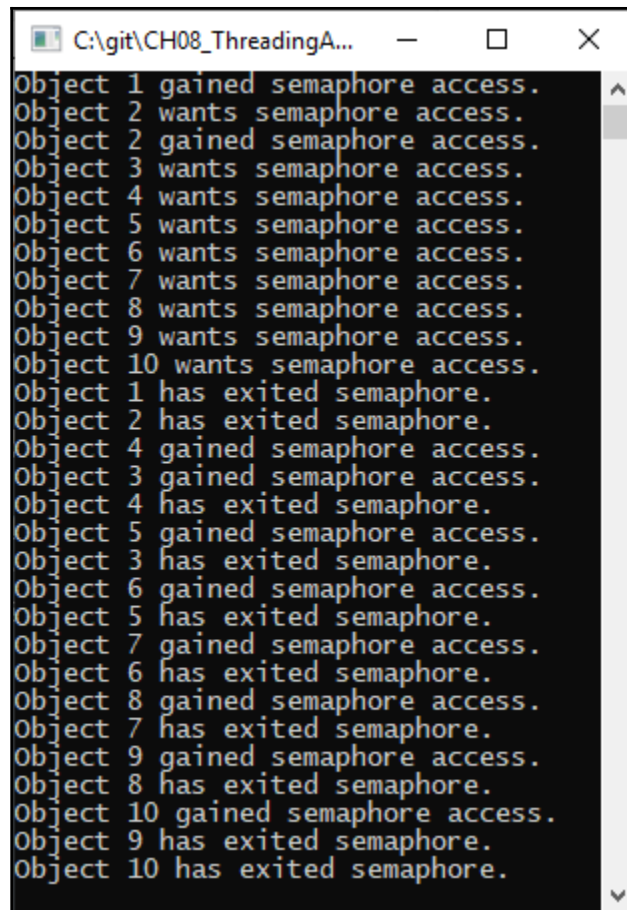


```
Select C:\git\CH08_ThreadingAndConcurrency\bin\Debug\net45\CH08_ThreadingAndConcurrency.exe
The addition of 1 plus 2 is 3.
```

```
C:\git\CH08_ThreadingAndConcurrency\bin\Debug\net45\CH08_ThreadingAndConcurrency.exe
UsingTaskParallelLibrary Started: Thread Id = (1)
MethodOne Executed: Thread Id(1)
MethodThree Executed: Thread Id(3)
MethodTwo Executed: Thread Id(4)
UsingTaskParallelLibrary Completed.
=== Press any Key to exit ===
```

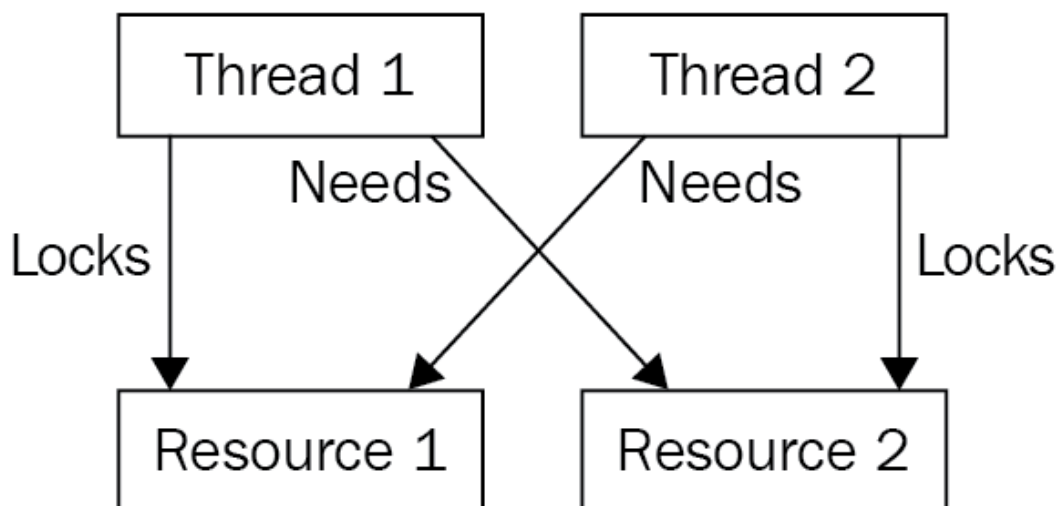
```
C:\git\CH08_ThreadingAndConcurrenc... — □ ×
Method Executed: Thread Id(6)
Method Executed: Thread Id(5)
Method Executed: Thread Id(1)
Method Executed: Thread Id(1)
Method Executed: Thread Id(5)
Method Executed: Thread Id(4)
Method Executed: Thread Id(3)
Method Executed: Thread Id(3)
Method Executed: Thread Id(3)
Method Executed: Thread Id(3)
Method Executed: Thread Id(6)
Method Executed: Thread Id(5)
Method Executed: Thread Id(5)
Method Executed: Thread Id(4)
Method Executed: Thread Id(5)
Method Executed: Thread Id(5)
Method Executed: Thread Id(1)
Method Executed: Thread Id(1)
Method Executed: Thread Id(1)
Method Executed: Thread Id(1)
Method Executed: Thread Id(1)
Method Executed: Thread Id(1)
Method Executed: Thread Id(1)
Method Executed: Thread Id(1)
Method Executed: Thread Id(1)
Method Executed: Thread Id(1)
Method Executed: Thread Id(1)
Method Executed: Thread Id(1)
UsingTaskParallelLibraryFor Completed.
```

```
C:\git\CH08_ThreadingAndConcurre... — □ ×
Domain Entered By: Mutex Example Thread: 1
Domain Left By: Mutex Example Thread: 1
Domain Entered By: Mutex Example Thread: 7
Domain Left By: Mutex Example Thread: 7
Domain Entered By: Mutex Example Thread: 6
Domain Left By: Mutex Example Thread: 6
Domain Entered By: Mutex Example Thread: 5
Domain Left By: Mutex Example Thread: 5
Domain Entered By: Mutex Example Thread: 3
Domain Left By: Mutex Example Thread: 3
```



```
Object 1 gained semaphore access.  
Object 2 wants semaphore access.  
Object 2 gained semaphore access.  
Object 3 wants semaphore access.  
Object 4 wants semaphore access.  
Object 5 wants semaphore access.  
Object 6 wants semaphore access.  
Object 7 wants semaphore access.  
Object 8 wants semaphore access.  
Object 9 wants semaphore access.  
Object 10 wants semaphore access.  
Object 1 has exited semaphore.  
Object 2 has exited semaphore.  
Object 4 gained semaphore access.  
Object 3 gained semaphore access.  
Object 4 has exited semaphore.  
Object 5 gained semaphore access.  
Object 3 has exited semaphore.  
Object 6 gained semaphore access.  
Object 5 has exited semaphore.  
Object 7 gained semaphore access.  
Object 6 has exited semaphore.  
Object 8 gained semaphore access.  
Object 7 has exited semaphore.  
Object 9 gained semaphore access.  
Object 8 has exited semaphore.  
Object 10 gained semaphore access.  
Object 9 has exited semaphore.  
Object 10 has exited semaphore.
```

Thread Deadlock



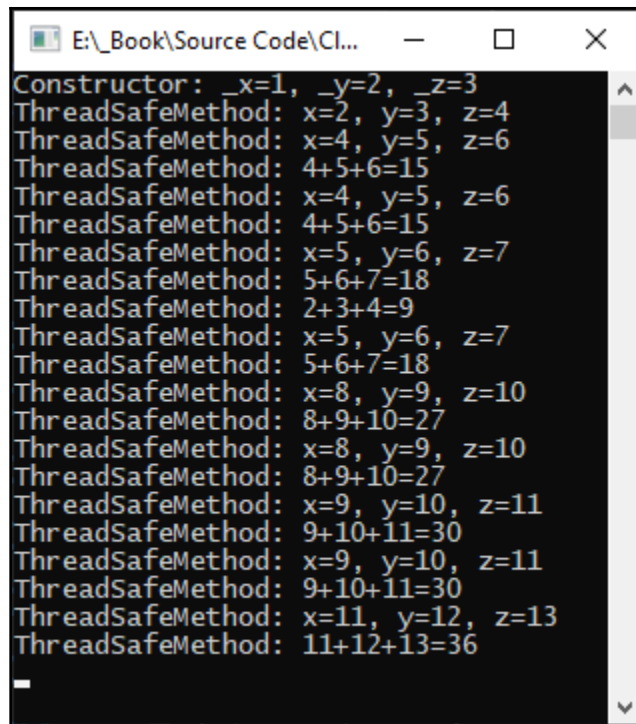
```
G:\Data\_packtpub\Clean-Code-in-C-\CH08\CH08...
Press any key to exit.
Thread1Method: Thread1Method Entered.
Thread1Method: Entered _object1 lock. Sleeping...
Thread2Method: Thread1Method Entered.
Thread2Method: Entered _object2 lock. Sleeping...
Thread2Method: Woke from sleep.
Thread1Method: Woke from sleep
```

```
G:\Data\_packtpub\Clean-Code-in-C-\CH08\CH08_De...
Thread4Method: Entered _object1 lock. Sleeping...
Thread5Method: Entered _object2 lock. Sleeping...
Press any key to exit.
Thread4Method: Woke from sleep
Thread5Method: Woke from sleep
Thread4Method: Doing work with _object2.
Thread4Method: Released _object2 lock.
Thread4Method: Released _object2 lock.
Thread5Method: Failed to lock _object2.
```

```
G:\Data\_packtpub\Clean-Code-in-C-\CH08\CH08_RaceConditions\bin\...
Race Condition:
Press any key to exit.
a b c d B A D E F G H I J K L M N O P Q R S T U V W C Y Z [ \ ] ^ _
` a b c d e f g h i j k l m n o p q r s t u v w X x z
```

```
G:\Data\_packtpub\Clean-Code-in-C-\CH08\CH08_RaceConditions\bin\Debug\CH08_RaceConditions.exe
Race Condition Fixed:
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z a b c d e f g h i j k l m n o p q r s t u v w x y z
Press any key to exit.
```

```
E:\_Book\Source Code\Clean-Code-in-C-\CH08\CH08_StaticConstr...
4: ClassInitializerInThread() starting.
5: ClassInitializerInThread() starting.
3: ClassInitializerInThread() starting.
StaticConstructorTestClass static constructor started.
StaticConstructorTestClass static constructor finished.
5: ClassInitializerInThread() status = Message: Goodbye, World!
4: ClassInitializerInThread() status = Message: Goodbye, World!
3: ClassInitializerInThread() status = Message: Goodbye, World!
```



```
E:\_Book\Source Code\Cl...
Constructor: _x=1, _y=2, _z=3
ThreadSafeMethod: x=2, y=3, z=4
ThreadSafeMethod: x=4, y=5, z=6
ThreadSafeMethod: 4+5+6=15
ThreadSafeMethod: x=4, y=5, z=6
ThreadSafeMethod: 4+5+6=15
ThreadSafeMethod: x=5, y=6, z=7
ThreadSafeMethod: 5+6+7=18
ThreadSafeMethod: 2+3+4=9
ThreadSafeMethod: x=5, y=6, z=7
ThreadSafeMethod: 5+6+7=18
ThreadSafeMethod: x=8, y=9, z=10
ThreadSafeMethod: 8+9+10=27
ThreadSafeMethod: x=8, y=9, z=10
ThreadSafeMethod: 8+9+10=27
ThreadSafeMethod: x=9, y=10, z=11
ThreadSafeMethod: 9+10+11=30
ThreadSafeMethod: x=9, y=10, z=11
ThreadSafeMethod: 9+10+11=30
ThreadSafeMethod: x=11, y=12, z=13
ThreadSafeMethod: 11+12+13=36
```

```
E:\_Book\Source Code\Clean-Code-in-...
Constructor: _x=1, _y=2, _z=3
3-NotThreadSafeMethod: _x=2, _y=3, _z=4
5-NotThreadSafeMethod: _x=4, _y=5, _z=6
4-NotThreadSafeMethod: _x=3, _y=4, _z=5
6-NotThreadSafeMethod: _x=5, _y=6, _z=7
7-NotThreadSafeMethod: _x=5, _y=6, _z=7
8-NotThreadSafeMethod: _x=7, _y=8, _z=9
9-NotThreadSafeMethod: _x=8, _y=9, _z=10
10-NotThreadSafeMethod: _x=9, _y=10, _z=11
11-NotThreadSafeMethod: _x=10, _y=11, _z=12
12-NotThreadSafeMethod: _x=11, _y=12, _z=13
3-ThreadSafeMethod: 11+12+13=36
4-ThreadSafeMethod: 11+12+13=36
5-ThreadSafeMethod: 11+12+13=36
7-ThreadSafeMethod: 11+12+13=36
8-ThreadSafeMethod: 11+12+13=36
9-ThreadSafeMethod: 11+12+13=36
10-ThreadSafeMethod: 11+12+13=36
6-ThreadSafeMethod: 11+12+13=36
11-ThreadSafeMethod: 11+12+13=36
12-ThreadSafeMethod: 11+12+13=36
```

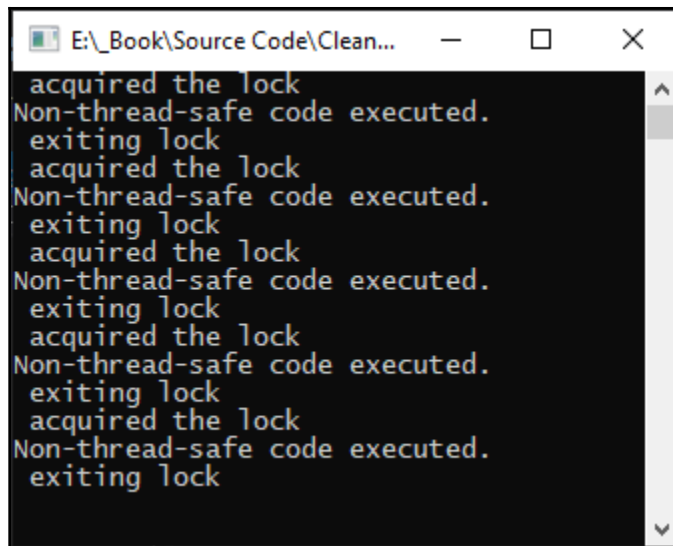
```
E:\_Book\Source Code\Clean-Code-in-...
Initial Array: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9
Array [2]: 0, 1, 3, 3, 4, 5, 6, 7, 8, 9
Array [2]: 0, 1, 3, 3, 4, 5, 6, 7, 8, 9
Array [2]: 0, 1, 3, 3, 4, 5, 6, 7, 8, 9
Array [4]: 0, 1, 3, 3, 5, 5, 6, 7, 8, 9
Array [4]: 0, 1, 3, 3, 5, 5, 6, 7, 8, 9
Array [6]: 0, 1, 3, 3, 5, 5, 7, 7, 8, 9
Array [7]: 0, 1, 3, 3, 5, 5, 7, 8, 8, 9
Array [8]: 0, 1, 3, 3, 5, 5, 7, 8, 9, 9
Array [9]: 0, 1, 3, 3, 5, 5, 7, 8, 9, 10
```

```

E:\_Book\Source Code\Clean-Code-...
Initial Array: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9
Array [3]: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9
Array [4]: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9
Array [4]: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9
Array [5]: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9
Array [5]: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9
Array [6]: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9
Array [8]: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9
Array [8]: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9
Array [9]: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9

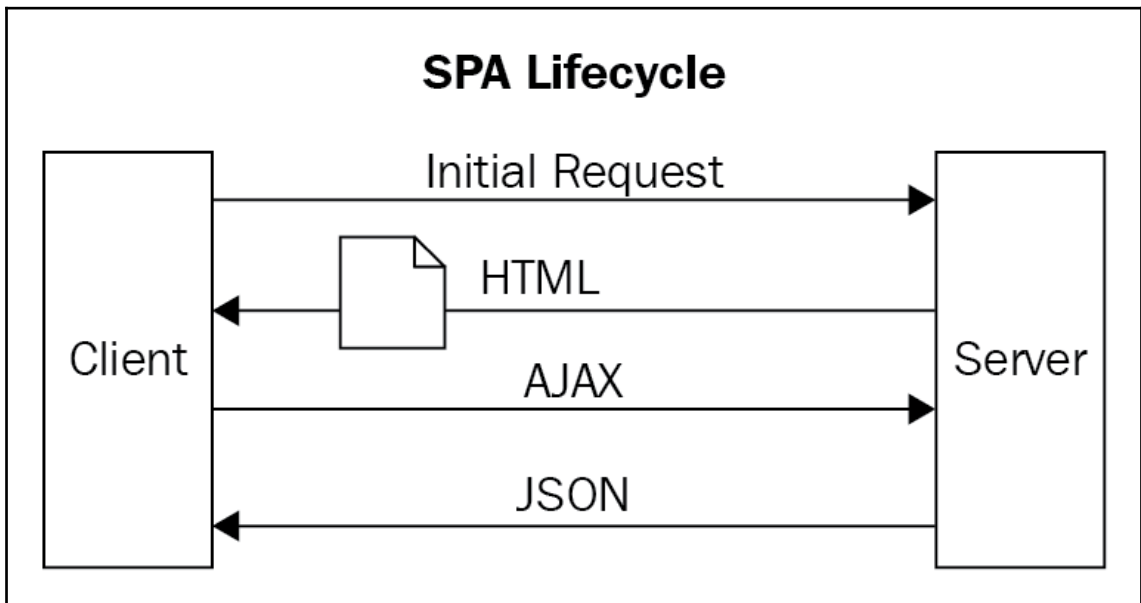
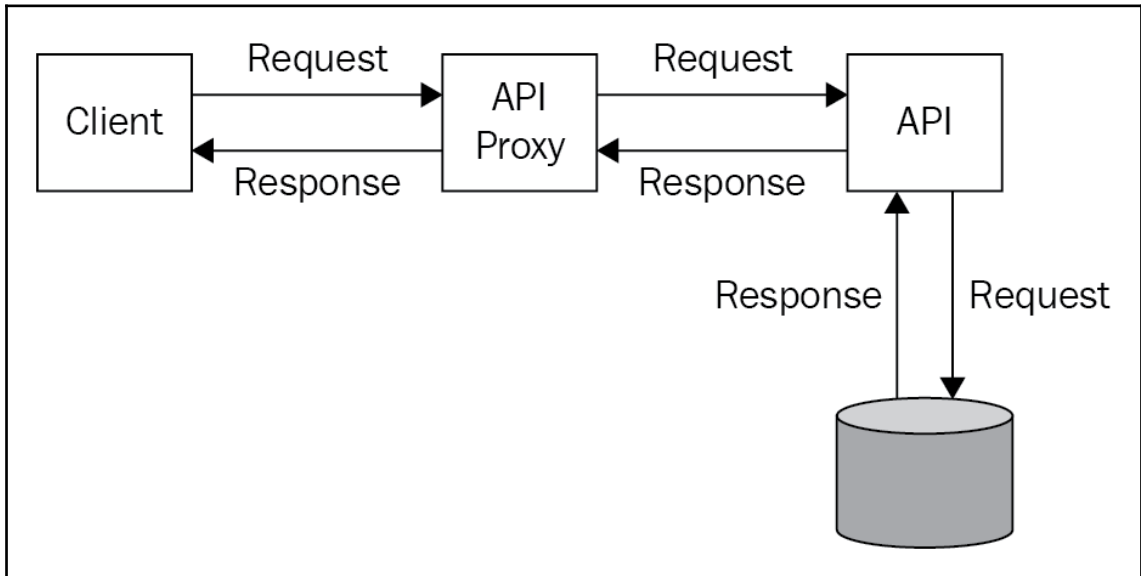
```

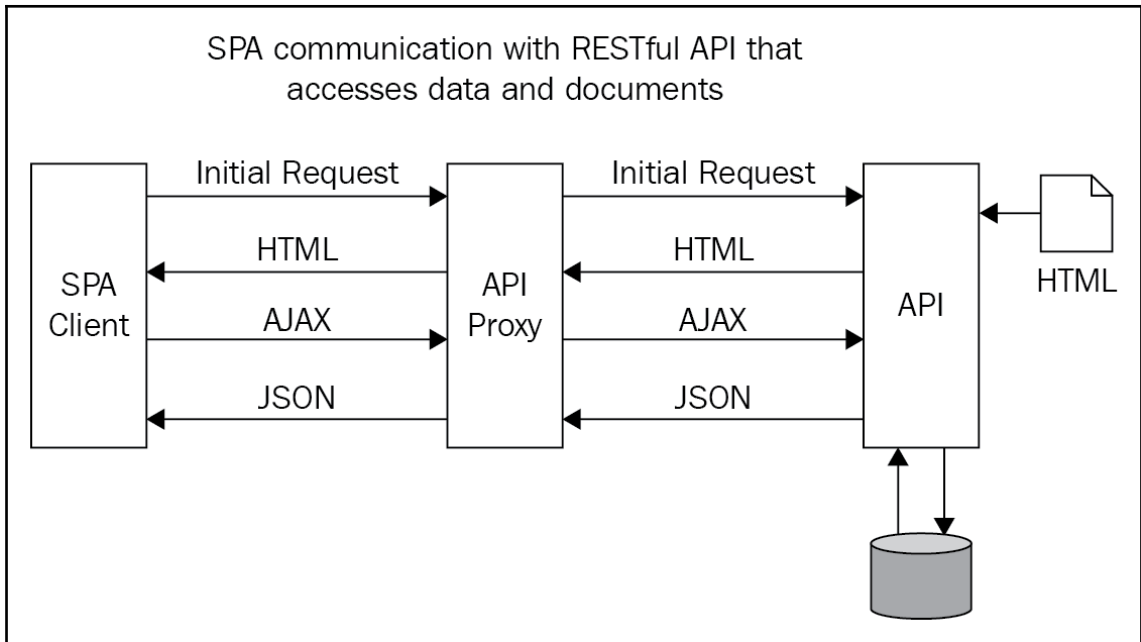
Classes	Structs	Interfaces
ImmutableArray	ImmutableArray<T>. Enumerator	IImmutableDictionary<TKey, TValue>
ImmutableArray<T>.Builder	ImmutableArray<T>	IImmutableList<T>
ImmutableDictionary	ImmutableDictionary <TKey, TValue>.Enumerator	IImmutableQueue<T>
ImmutableDictionary <TKey, TValue>.Builder	ImmutableHashSet<T>. Enumerator	IImmutableSet<T>
ImmutableDictionary <TKey, TValue>	ImmutableList<T>. Enumerator	IImmutableStack<T>
ImmutableHashSet	ImmutableQueue<T>. Enumerator	
ImmutableHashSet<T>. Builder	ImmutableSortedDictionary <TKey, TValue>.Enumerator	
ImmutableHashSet<T>	ImmutableSortedSet <T>.Enumerator	
ImmutableInterlocked	ImmutableStack<T>. Enumerator	
ImmutableList		
ImmutableList<T>.Builder		
ImmutableList<T>		
ImmutableQueue		
ImmutableQueue<T>		
ImmutableSortedDictionary		
ImmutableSortedDictionary <TKey, TValue>.Builder		
ImmutableSortedList		
ImmutableSortedList<T>. Builder		
ImmutableStack		
ImmutableStack<T>		



```
E:\_Book\Source Code\Clean...
acquired the lock
Non-thread-safe code executed.
exiting lock
acquired the lock
Non-thread-safe code executed.
exiting lock
acquired the lock
Non-thread-safe code executed.
exiting lock
acquired the lock
Non-thread-safe code executed.
exiting lock
acquired the lock
Non-thread-safe code executed.
exiting lock
```

Chapter 9: Designing and Developing APIs





 **Swagger**
Supported by SMARTBEAR

Select a definitionWeather Forecast API

Weather Forecast API

/swagger/v1/swagger.json

WeatherForecast

GET /WeatherForecast

Schemas

WeatherForecast {
 datestring(\$date-time)
 temperatureCinteger(\$int32)
 temperatureFinteger(\$int32)
 readOnly: true
 summarystring
 nullable: true
}

```
G:\Data\_packtpub\Clean...  
Object: 1440, Object Count: 1000000  
Struct: 841, Struct Count: 1000000  
Press any key to exit.
```


[Why GitHub?](#)
[Team](#)
[Enterprise](#)
[Explore](#)
[Marketplace](#)
[Pricing](#)

[Sign in](#)

[microsoft / CNTK](#)

[Watch](#) 1.4k
 [Star](#) 16.8k
 [Fork](#) 4.4k

[Code](#)
[Issues 738](#)
[Pull requests 84](#)
[Actions](#)
[Wiki](#)
[Security 0](#)
[Insights](#)

[Labels 28](#)
[Milestones 0](#)

[New issue](#)

[738 Open](#)
[2,506 Closed](#)

[Author](#)
[Label](#)
[Projects](#)
[Milestones](#)
[Assignee](#)
[Sort](#)


Can't train, but no error
15

#3820 opened 12 days ago by newoneincntk


Pagerank with distributed CNTK

#3817 opened on 25 Apr by ph0123


LayerNormalization layer has an edge case that causes NaN

#3816 opened on 19 Apr by delzac


[Discussion] How does CNTK computes on GPU?

#3815 opened on 19 Apr by faruknane


Error when install on sever linux.

#3813 opened on 15 Apr by ph0123


Undefined LAPACKE_dgesvd, LAPACKE_sgesvd

#3812 opened on 6 Apr by haryngod


CNTK to ONNX converter Bug - Inception-v3 model
1

#3811 opened on 6 Apr by JohnCraigPublic


How should I compile CNTK for Python from source code and save debug information as much as possible, so that I can use 'gdb' to watch the source code when debugging my python code?

#3809 opened on 30 Mar by shiningrain


Where is the implement of 'Padding' operation in CNTK source code ?
2

#3808 opened on 30 Mar by shiningrain


What's the CNTK successor?

#3807 opened on 30 Mar by ivanfarkas2


Memory Utilization: AlexNet vs Inception-V3 in CNTK
7

#3805 opened on 17 Mar by JohnCraigPublic


How to make Cmake for c++ project using CNTK libraries in linux

#3804 opened on 16 Mar by haryngod


Really possible to move from CNTK to ONNX and run in ORT?
20

#3803 opened on 12 Mar by JohnCraigPublic

PRODUCT BACKLOG ITEM 434*

434 API Data Extractor

Unassigned0 commentsAdd tagSave & CloseFollowRefreshUndoMore

Statg● NewAreaFinTechReasonNew backlog itemIterationFinTech\Sprint 1Updated by Jason William Alls: 7 FebDetails(1)

Description

Retrive financial data via third-party APIs and store the results in CosmosDB.

Acceptance Criteria

[1] Data is successfully obtained from third-party APIs.
[2] Data is successfully stored in Cosmos DB.

Discussion

JA

Add a comment. Use # to link a work item, ! to link a pull request, or @ to mention a person.

Details

Priority2EffortBusiness ValueValue areaBusiness

Deployment

To track releases associated with this work item, go to [Releases](#) and turn on deployment status reporting for Boards in your pipeline's Options menu. [Learn more](#)

Development

+ Add link

Link an Azure Repos [commit](#), [pull request](#) or [branch](#) to see the status of your development. You can also [create a branch](#) to get started.

Related Work

+ Add link

Parent429 FinTech SchedulerUpdated 2/7/2020, ● New

[45]

Get to know Atom!

 Open a Project

 Version control with Git and GitHub

 Collaborate in real time with Teletype

 Install a Package

 Choose a Theme

 Customize the Styling

 Hack on the Init Script

 Add a Snippet

 Learn Keyboard Shortcuts

+ Install Packages

? Packages are published to atom.io and are installed to C:\Users\Administrator\atom\packages

Packages

Themes

aml-workbench 0.0.19

2,342

API Workbench based on AMF



mulesoft

Install

de-workbench 0.1.17

568

Dynamic Engine Workbench



github-vipera

Install

api-workbench 0.8.48

117,133



mulesoft



Settings



Uninstall



Disable

dafny-workbench 0.1.0

326

Create RAML Project

Please select location to place your project:

C:\Development\RAML\petShopRamlProject

Title of your API:

Pet Shop

Version of your API

v1

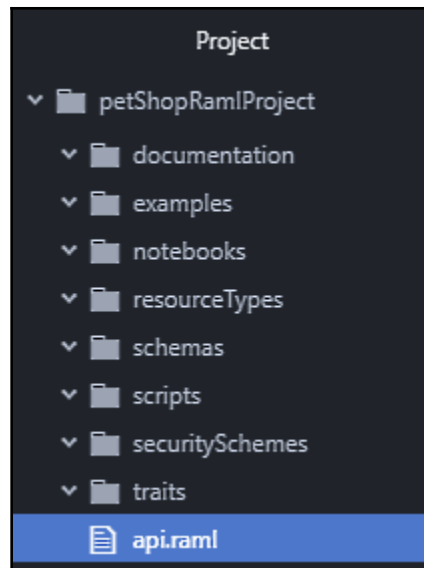
Base URI of your API

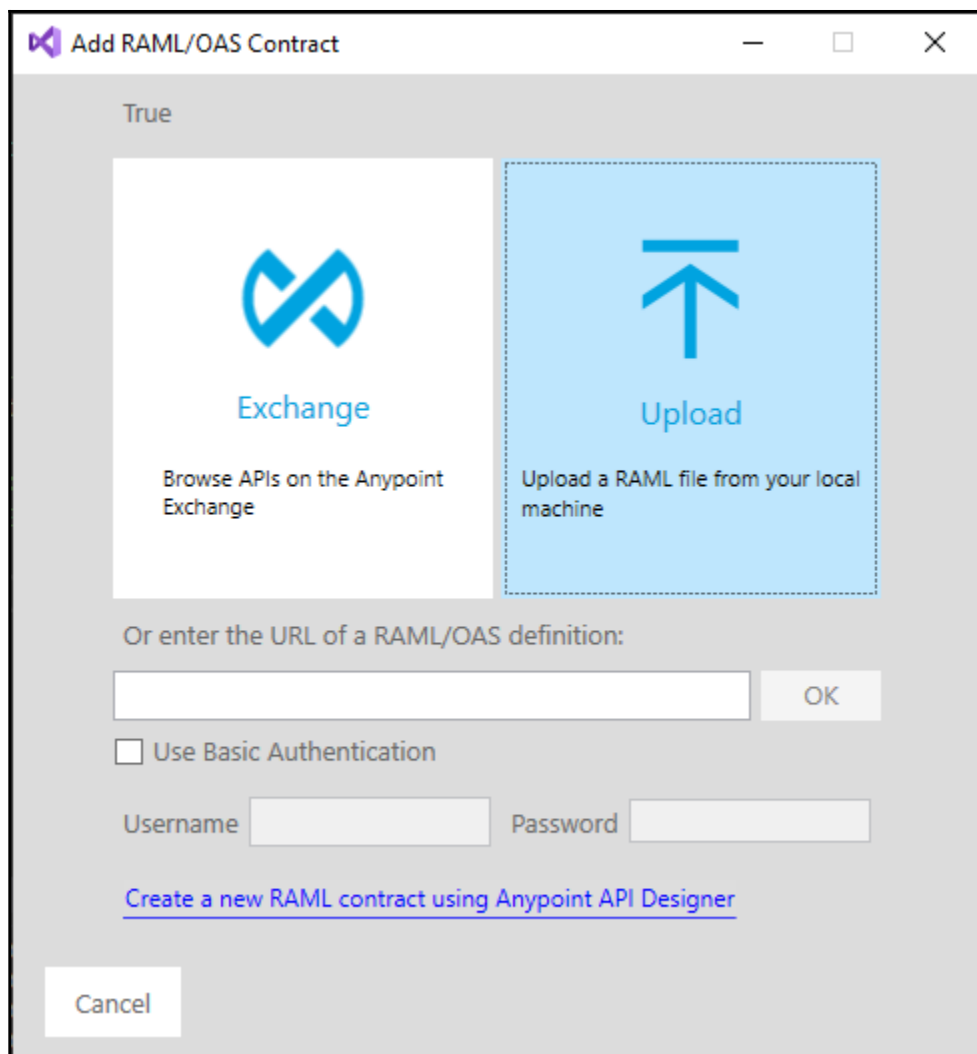
/petshop

- ☒ Use RAML 1.0
- ☒ Create default directory structure
- ☒ Create sample resource and method

Cancel

Create





The dialog box is titled "Add RAML/OAS Contract" and has a standard Windows-style title bar with minimize, maximize, and close buttons. The main content area is light gray. At the top left, the word "True" is displayed. Below it are two large, side-by-side buttons. The left button is white with a blue infinity-like icon, labeled "Exchange", and has the text "Browse APIs on the Anypoint Exchange" below it. The right button is light blue with a blue icon of an arrow pointing up to a horizontal bar, labeled "Upload", and has the text "Upload a RAML file from your local machine" below it. Below these buttons is the text "Or enter the URL of a RAML/OAS definition:". This is followed by a text input field and an "OK" button. Below the input field is a checkbox labeled "Use Basic Authentication". If checked, it would reveal "Username" and "Password" input fields. At the bottom left is a "Cancel" button. At the bottom center is a blue hyperlink that reads "Create a new RAML contract using Anypoint API Designer".

True



Exchange

Browse APIs on the Anypoint Exchange



Upload

Upload a RAML file from your local machine

Or enter the URL of a RAML/OAS definition:

OK

☐ Use Basic Authentication

Username Password

[Create a new RAML contract using Anypoint API Designer](#)

Cancel

 Import RAML/OAS

Filename

api.raml

Namespace

CH09_RamlClient

Generate Unit Tests

☐

Use api version

☒

V1

Use async methods

☒

Enable customization

☒

Controllers Folder

Controllers

Controllers Namespace

CH09_RamlClient.Api

Models Folder

Models

Models Namespace

CH09_RamlClient.Api.Models

Add '.generated.cs' suffix

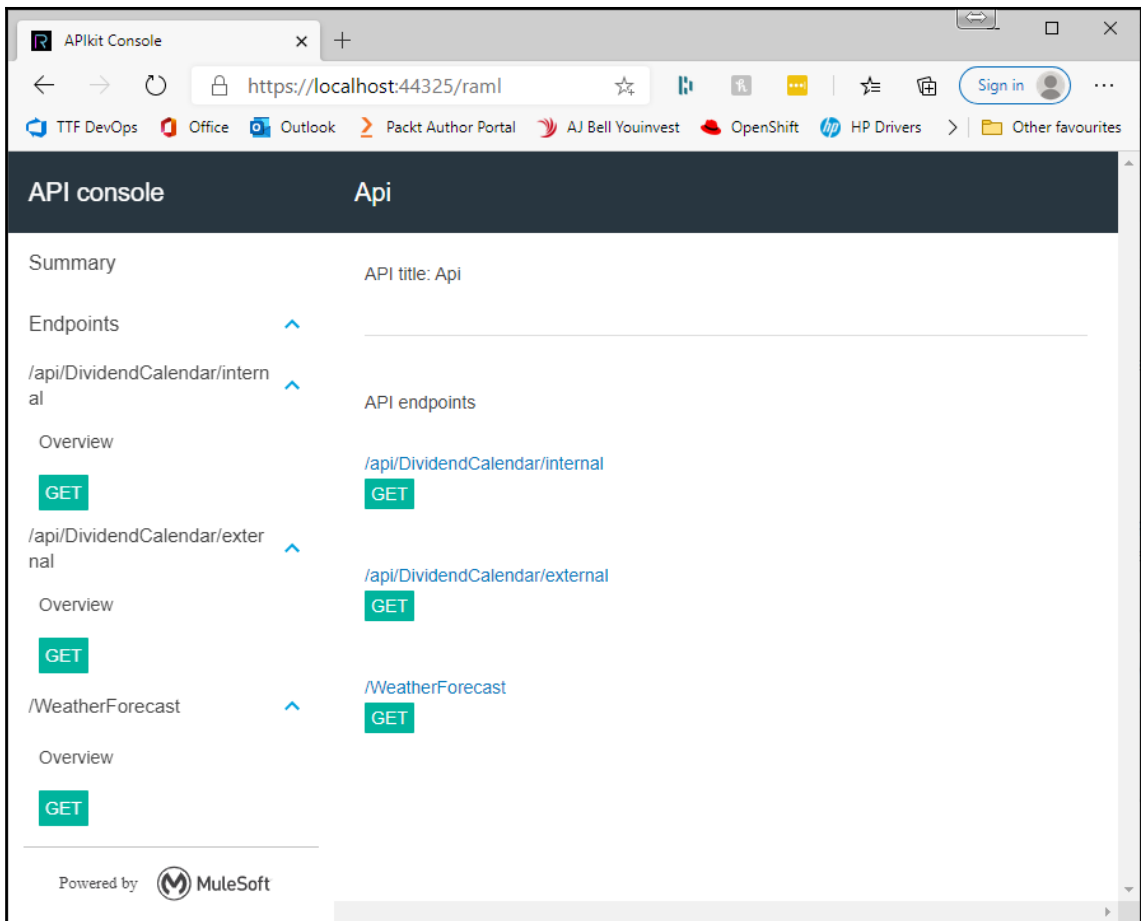
☐

Preview RAML/OAS

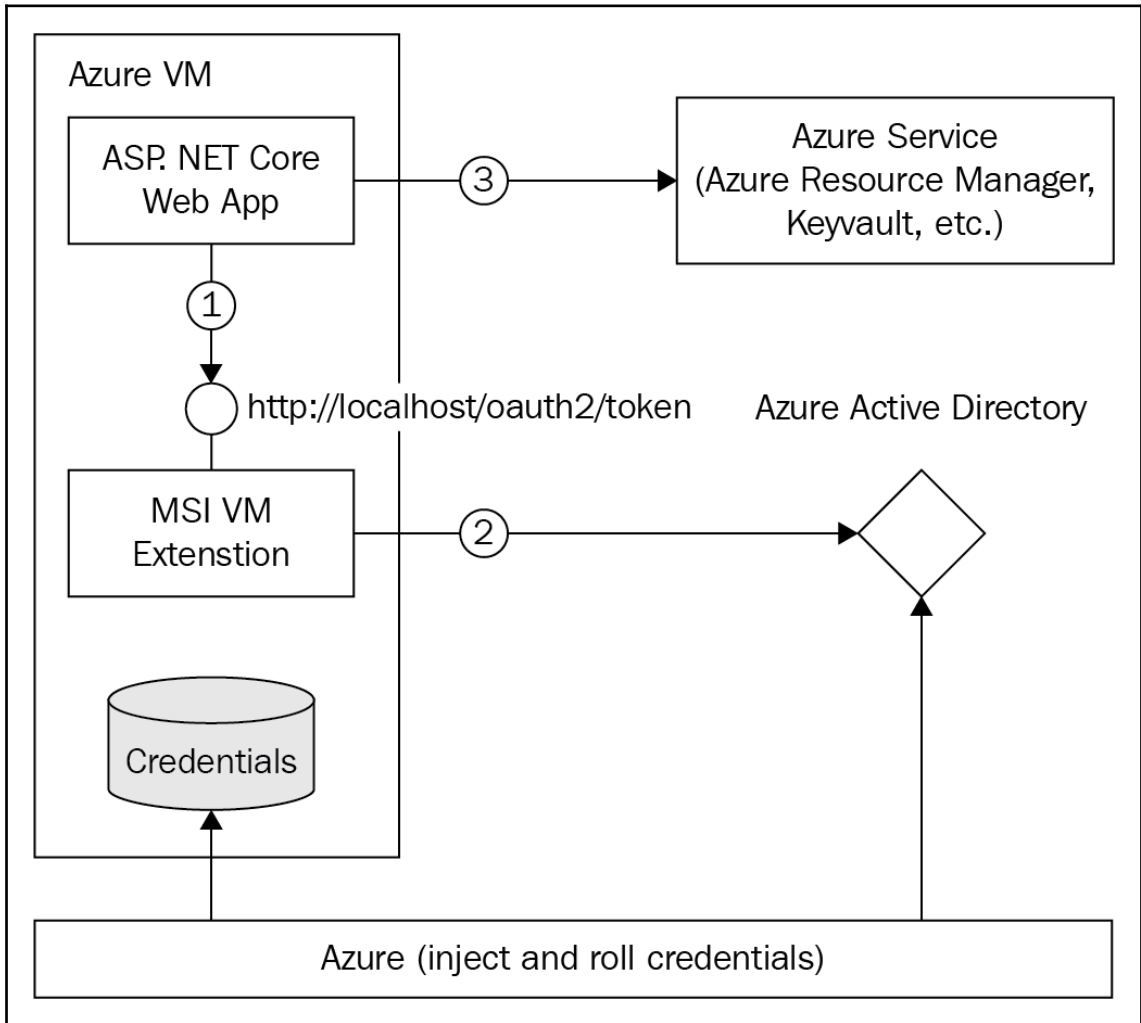
/helloWorld

Cancel

Import



Chapter 10: Securing APIs with API Keys and Azure Key Vault



×

Configure your new project

ASP.NET Core Web Application

C#LinuxmacOSWindowsCloudServiceWeb

Project name

CH09_DividendCalendar

Location

E:_dev\

...

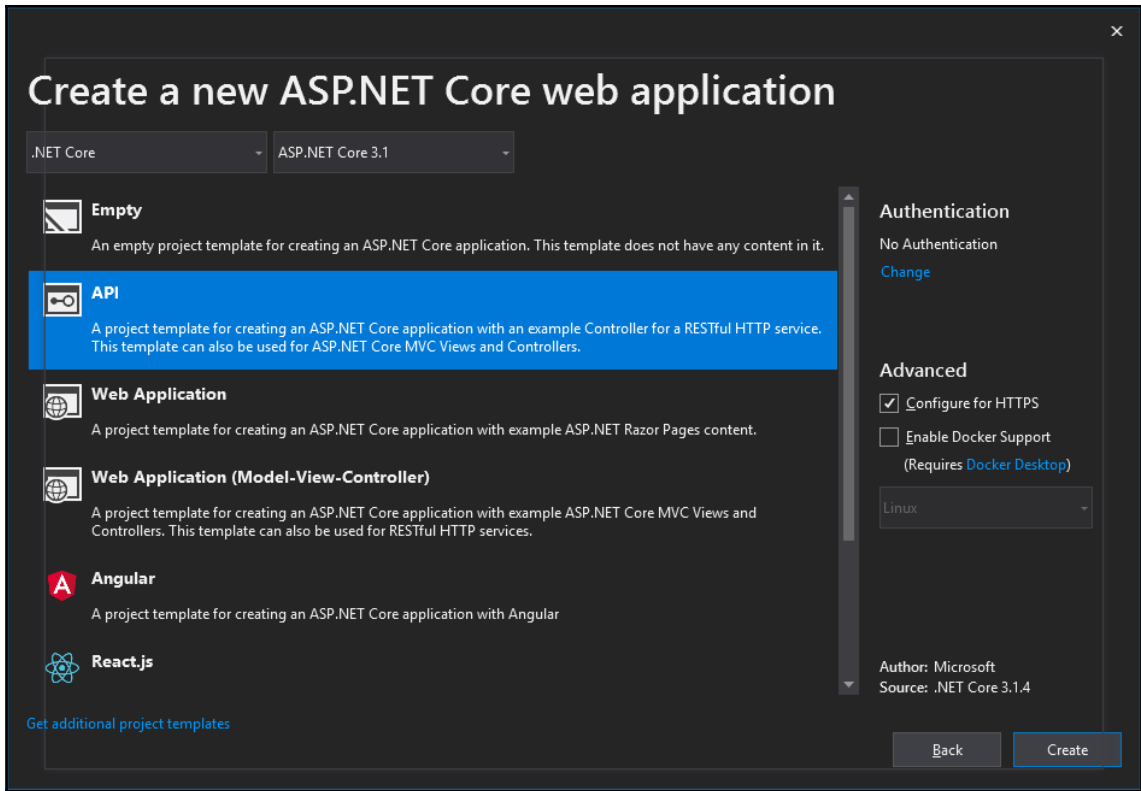
Solution name ⓘ

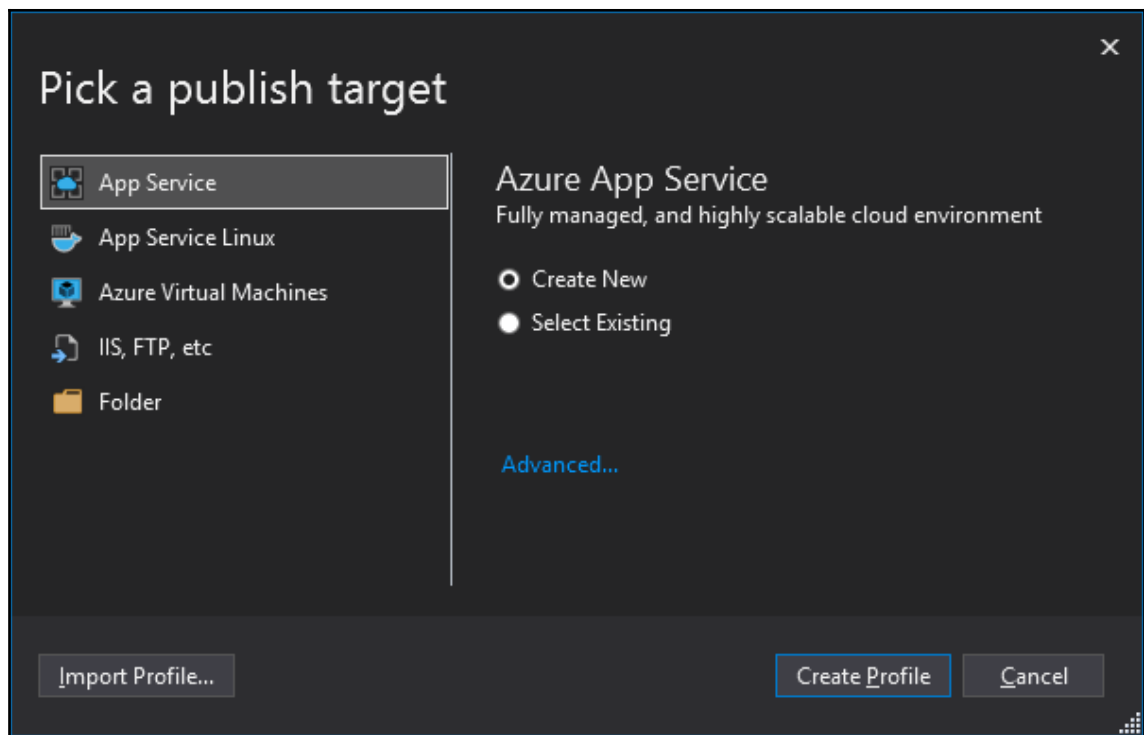
CH09_DividendCalendar

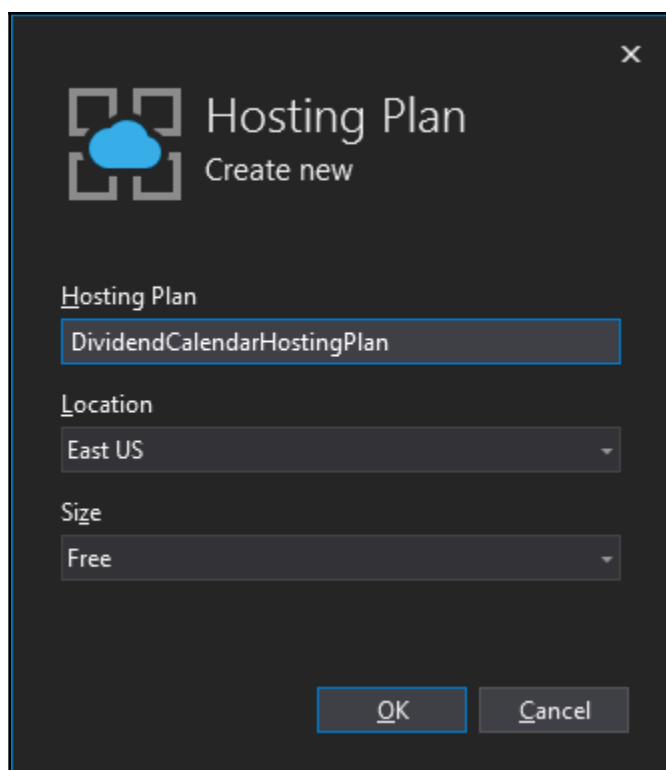
☐ Place solution and project in the same directory

Back

Create







A dark-themed dialog box titled "Hosting Plan" with a close button (X) in the top right corner. The subtitle is "Create new". To the left of the title is an icon consisting of four squares arranged in a larger square, with a blue cloud shape in the center. Below the title, there are three input fields: "Hosting Plan" with the text "DividendCalendarHostingPlan", "Location" with a dropdown menu showing "East US", and "Size" with a dropdown menu showing "Free". At the bottom right are two buttons: "OK" and "Cancel".

Hosting Plan
Create new

Hosting Plan
DividendCalendarHostingPlan

Location
East US

Size
Free

OK Cancel



App Service

Create new

Microsoft account

Name

dividend-calendar

Subscription

Pay-As-You-Go

Resource group

(East US)

New...

Hosting Plan

DividendCalendarHostingPlan* (East US, F1)

New...

Application Insights

East US

Export...

Explore additional Azure services

 Create a storage account

 Create a SQL Database

Clicking the Create button will create the following Azure resources

Hosting Plan - DividendCalendarHostingPlan

App Service - dividend-calendar

Create

Cancel

[58]

Publish

Deploy your app to a folder, IIS, Azure, or another destination. [More info](#)

 dividend-calendar - Web Deploy

Publish

[New](#) [Edit](#) [Rename](#) [Delete](#)

Summary

Site URL	https://dividend-calendar.azurewebsites.net 
Resource Group	Keys-APIs
Configuration	Release 
Target Framework	netcoreapp3.1 
Deployment Mode	Framework-Dependent 

Actions

- [Preview changes](#)
- [Manage in Cloud Explorer](#)
- [Edit Azure App Service settings](#)
- [Open troubleshooting guide](#)

Dependencies

 Add

To see the list of existing dependencies you need to be signed in with the appropriate Azure subscription.

[Sign in](#)

Continuous Delivery

Automatically publish your application to Azure with continuous delivery.

[Configure](#)

 Microsoft Azure

Hey, App Service developers!

Your app service is up and running.
Time to take the next step and deploy your code.

Have your code ready?

Use deployment center to get code published from your client or setup continuous deployment.

[Deployment Center](#)

Don't have your code yet?

Follow our quickstart guide and you'll have a full app ready in 5 minutes or less.

[Quickstart](#)



[59]

Microsoft Azure

Search resources, services, and docs (G+/)

Home >

Keys-APIs

Resource group

Search (Ctrl+/)

+ Add

Edit columns

Delete resource group

Refresh

Move

Export to CSV

Assign tags

Delete

Export template

Feedback

Overview

Activity log

Access control (IAM)

Tags

Events

Settings

Quickstart

Deployments

Policies

Properties

Locks

Export template

Subscription (change) : Pay-As-You-Go

Deployments : 3 Succeeded

Subscription ID :

Tags (change) : Click here to add tags

Filter by name...

Type == all

Location == all

Add filter

Showing 1 to 4 of 4 records.

Show hidden types

☐ Name ↑↓	Type ↑↓	Location ↑↓
☐ dividend-calendar	App Service	East US
☐ dividend-calendar	Application Insights	East US
☐ DividendCalendarHostingPlan	App Service plan	East US
☐ Keys-APIs	Key vault	East US

Home > Pay-As-You-Go | Resource groups > Keys-APIs > dividend-calendar

dividend-calendar

App Service

Search (Ctrl+/)

Browse

Stop

Swap

Restart

Delete

Get publish profile

Reset publish profile

Overview

Activity log

Access control (IAM)

Tags

Diagnose and solve problems

Security

Deployment

Quickstart

Deployment slots

Deployment Center

Settings

Configuration

Authentication / Authorizati...

Application Insights

Identity

Backups

Custom domains

TLS/SSL settings

Networking

Scale up (App Service plan)

Scale out (App Service plan)

WebJobs

Push

App Service has installed a patch that changes cross-site and iframe cookie handling due to upcoming changes in the new version of Chrome. Developers relying on these scenarios need to update their apps.

Resource group (change) : Keys-APIs

Status : Running

Location : East US

Subscription (change) : Pay-As-You-Go

Subscription ID :

Tags (change) : Click here to add tags

URL : https://dividend-calendar.azurewebsites.net

App Service Plan : DividendCalendarHostingPlan (F1: Free)

FTP/deployment userma... : No FTP/deployment user set

FTP hostname : ftp://waws-prod-blu-063.ftp.azurewebsites.w

FTPS hostname : ftps://waws-prod-blu-063.ftp.azurewebsites.w

Diagnose and solve problems

Our self-service diagnostic and troubleshooting experience helps you identify and resolve issues with your web app.

Application Insights

Application Insights helps you detect and diagnose quality issues in your apps, and helps you understand what your users actually do with it.

App Service Advisor

App Service Advisor provides insights for improving app experience on the App Service platform. Recommendations are sorted by freshness, priority and impact to your app.

Http 5xx

Http Server Errors (Sum) dividend-calendar

0

Data In

Data In (Sum) dividend-calendar

2.13 MB

Data Out

Data Out (Sum) dividend-calendar

18.91 MB

Launchpad GET https://localhost:44325/weathe... GET https://localhost:44325/api/divi... No Environment

Untitled Request Comments 0

GET https://localhost:44325/api/dividendcalendar/internal Send Save

Params Authorization Headers (8) Body Pre-request Script Tests Settings Cookies Code

Headers 7 hidden

	KEY	VALUE	DESCRIPTION	...	Bulk Edit	Presets
☐	x-api-key	C5BFF7F0-B4DF-475E-A331-F737424F013C				
	Key	Value	Description			

Body Cookies Headers (5) Test Results Status: 401 Unauthorized Time: 125 ms Size: 257 B Save Response

Pretty Raw Preview Visualize JSON

```
1 {
2   "type": "https://httpstatuses.com/403",
3   "title": "Forbidden",
4   "status": 403
5 }
```

Launchpad GET https://localhost:44325/weathe... GET https://localhost:44325/api/divi... No Environment

Untitled Request Comments 0

GET https://localhost:44325/api/dividendcalendar/internal Send Save

Params Authorization Headers (8) Body Pre-request Script Tests Settings Cookies Code

Headers 7 hidden

	KEY	VALUE	DESCRIPTION	...	Bulk Edit	Presets
☒	x-api-key	C5BFF7F0-B4DF-475E-A331-F737424F013C				
	Key	Value	Description			

Body Cookies Headers (7) Test Results Status: 200 OK Time: 120 ms Size: 254 B Save Response

Pretty Raw Preview Visualize Text

```
1 Hello from GetDividendCalendar.
```

Launchpad

GET https://localhost:44325/weathe...

GET https://localhost:44325/api/divi...

+

...

No Environment

▼

👁

⚙

Untitled Request

Comments 0

GET

▼

https://localhost:44325/api/dividendcalendar/external

Send

▼

Save

▼

Params●AuthorizationHeaders (8)BodyPre-request ScriptTestsSettingsCookiesCode

Headers👁 7 hidden

	KEY	VALUE	DESCRIPTION	...	Bulk Edit	Presets
☒	x-api-key	C5BFF7F0-B4DF-475E-A331-F737424F013C				
	Key	Value	Description			

BodyCookiesHeaders (5)Test Results

Status: 403 ForbiddenTime: 125 msSize: 254 BSave Response

▼

PrettyRawPreviewVisualizeJSON

▼

🔗

📄🔍

1

2

3

4

5

"type": "https://httpstatuses.com/403",

"title": "Forbidden",

"status": 403

Launchpad

GET https://localhost:44325/weathe...

GET https://localhost:44325/api/divi...

+

...

No Environment

▼

👁

⚙

Untitled Request

Comments 0

GET

▼

https://localhost:44325/api/dividendcalendar/external

Send

▼

Save

▼

Params●AuthorizationHeaders (8)BodyPre-request ScriptTestsSettingsCookiesCode

Headers👁 7 hidden

	KEY	VALUE	DESCRIPTION	...	Bulk Edit	Presets
☒	x-api-key	9218FACE-3EAC-6574-C3F0-08357FEDABE9				
	Key	Value	Description			

BodyCookiesHeaders (7)Test Results

Status: 200 OKTime: 114 msSize: 264 BSave Response

▼

PrettyRawPreviewVisualizeText

▼

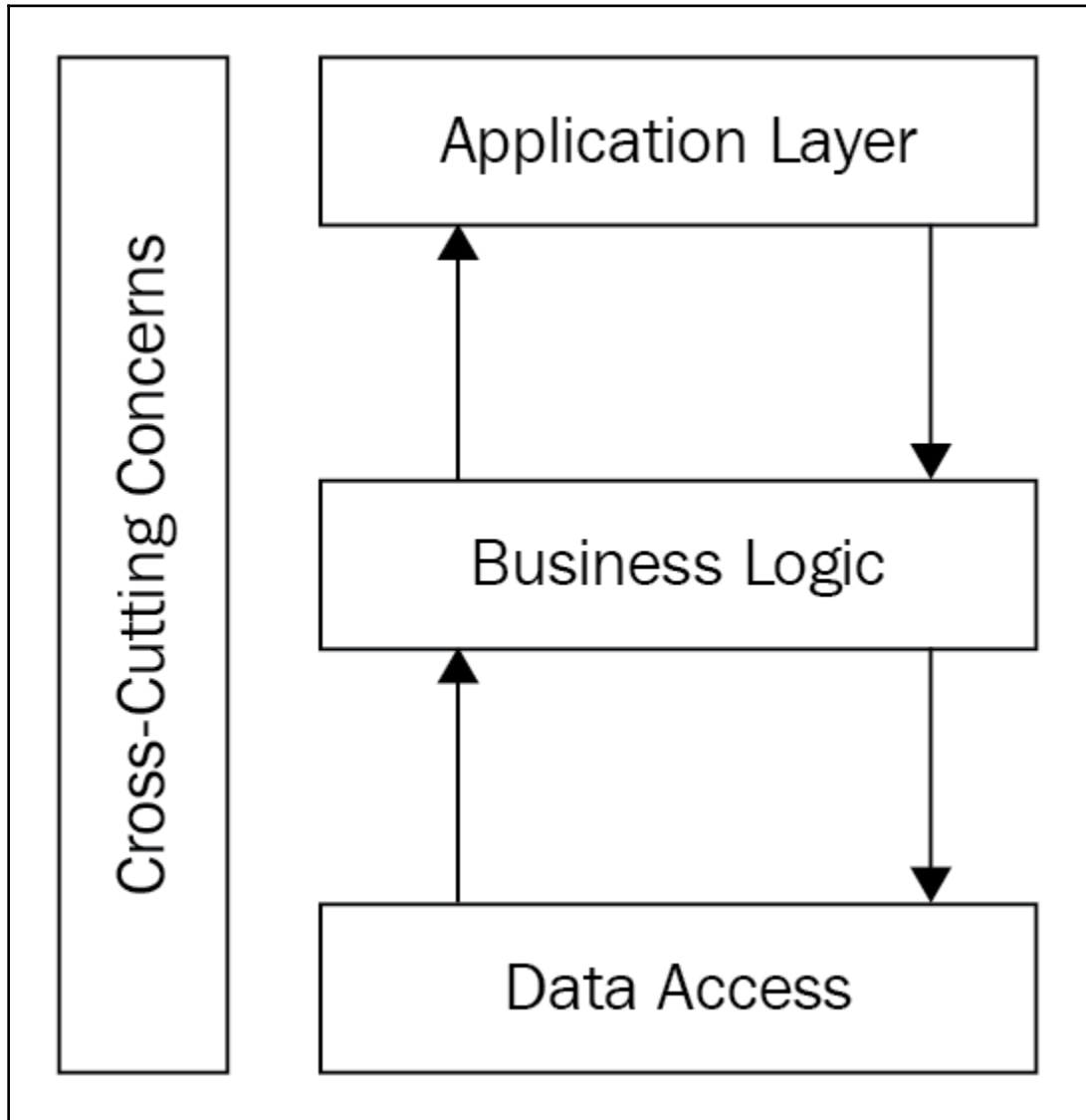
🔗

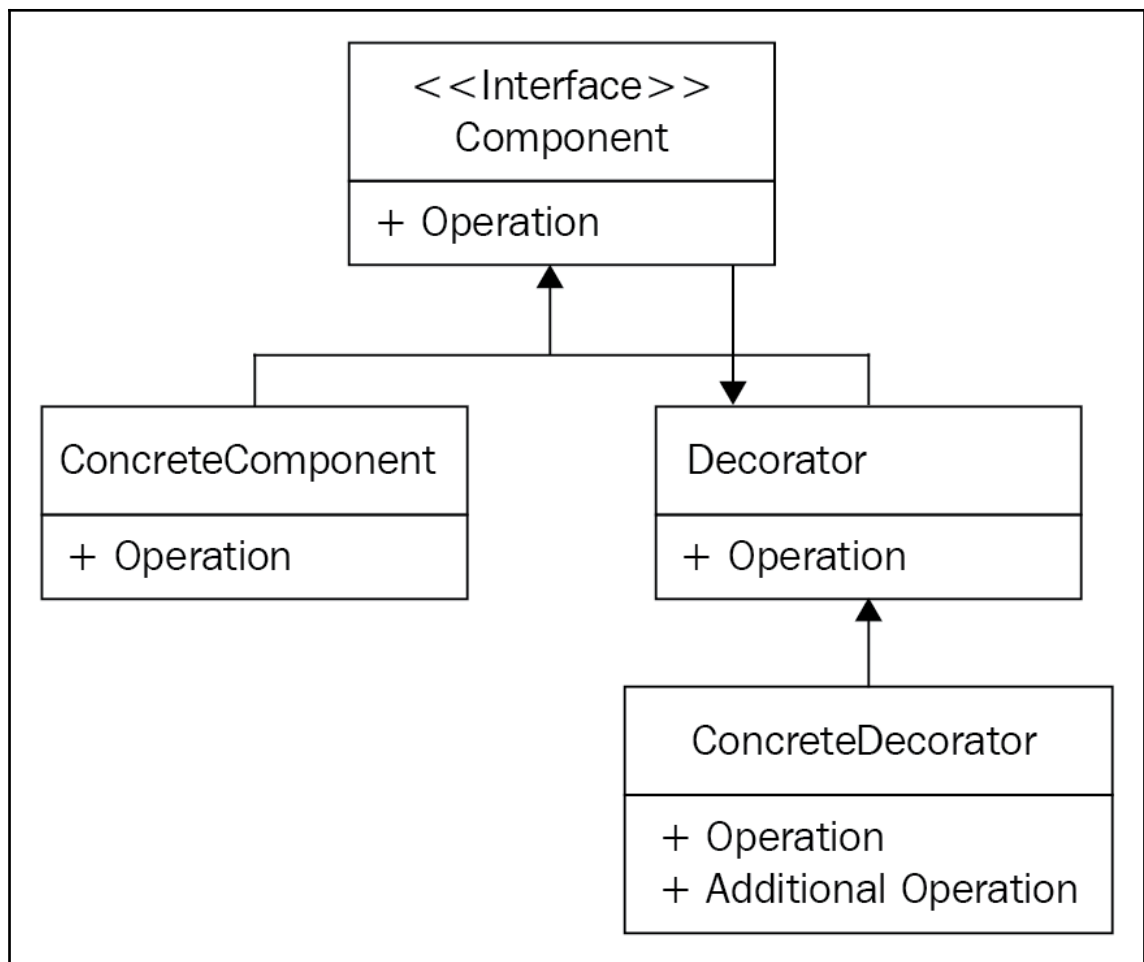
📄🔍

1

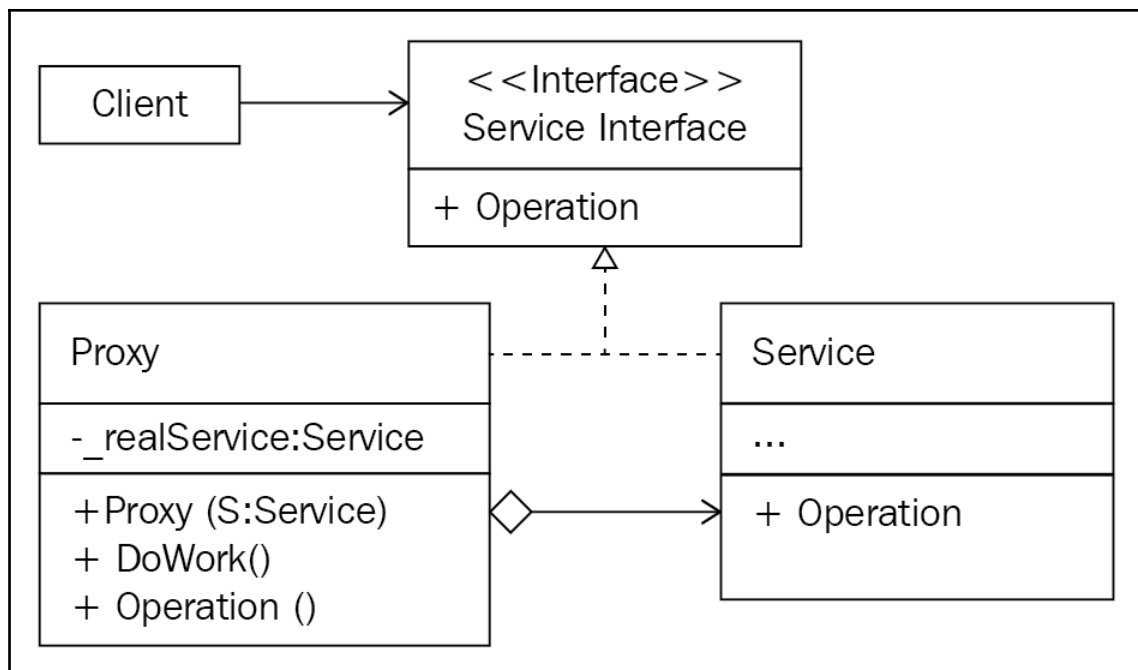
External access is currently unavailable.

Chapter 11: Addressing Cross-Cutting Concerns



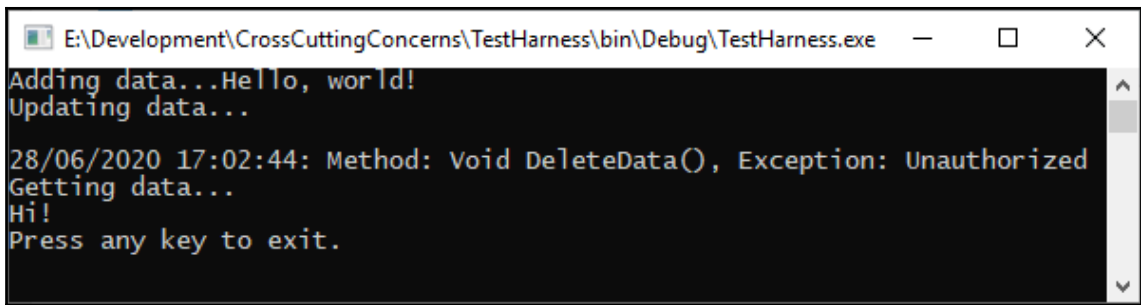


```
G:\Data\_packtpub\Clean-Code-in-C-\CH...
Operation: try block.
Operation: catch block.
The method or operation is not implemented.
_
```



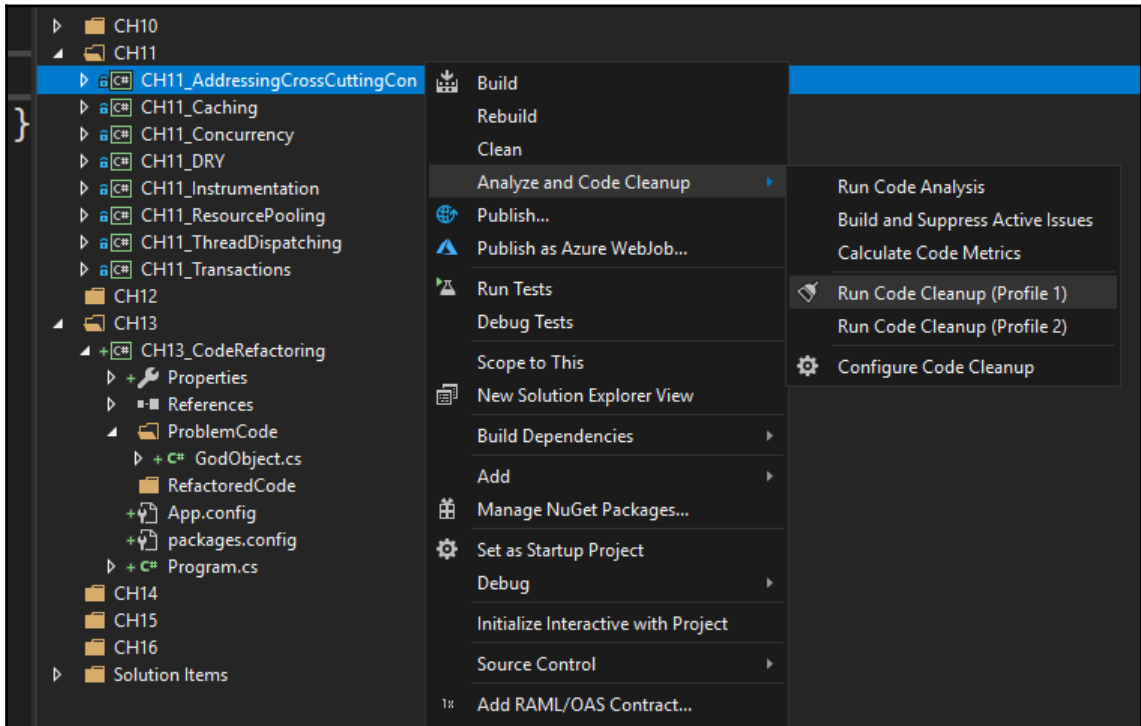
```
G:\Data\_packtpub\Clean-Code...
### Calling the Service directly. ###
Service: Request();
## Calling the Service via a Proxy. ##
Proxy: Request();
Service: Request();
```

```
Select G:\Data\_packtpub\Clean-Code-in-C\C...
The SuccessfulMethod method has been entered.
Hello World, I am a success!
The SuccessfulMethod method executed successfully.
The SuccessfulMethod method has exited.
The FailedMethod method has been entered.
Hello World, I am a failure!
An exception was thrown in FailedMethod.
```



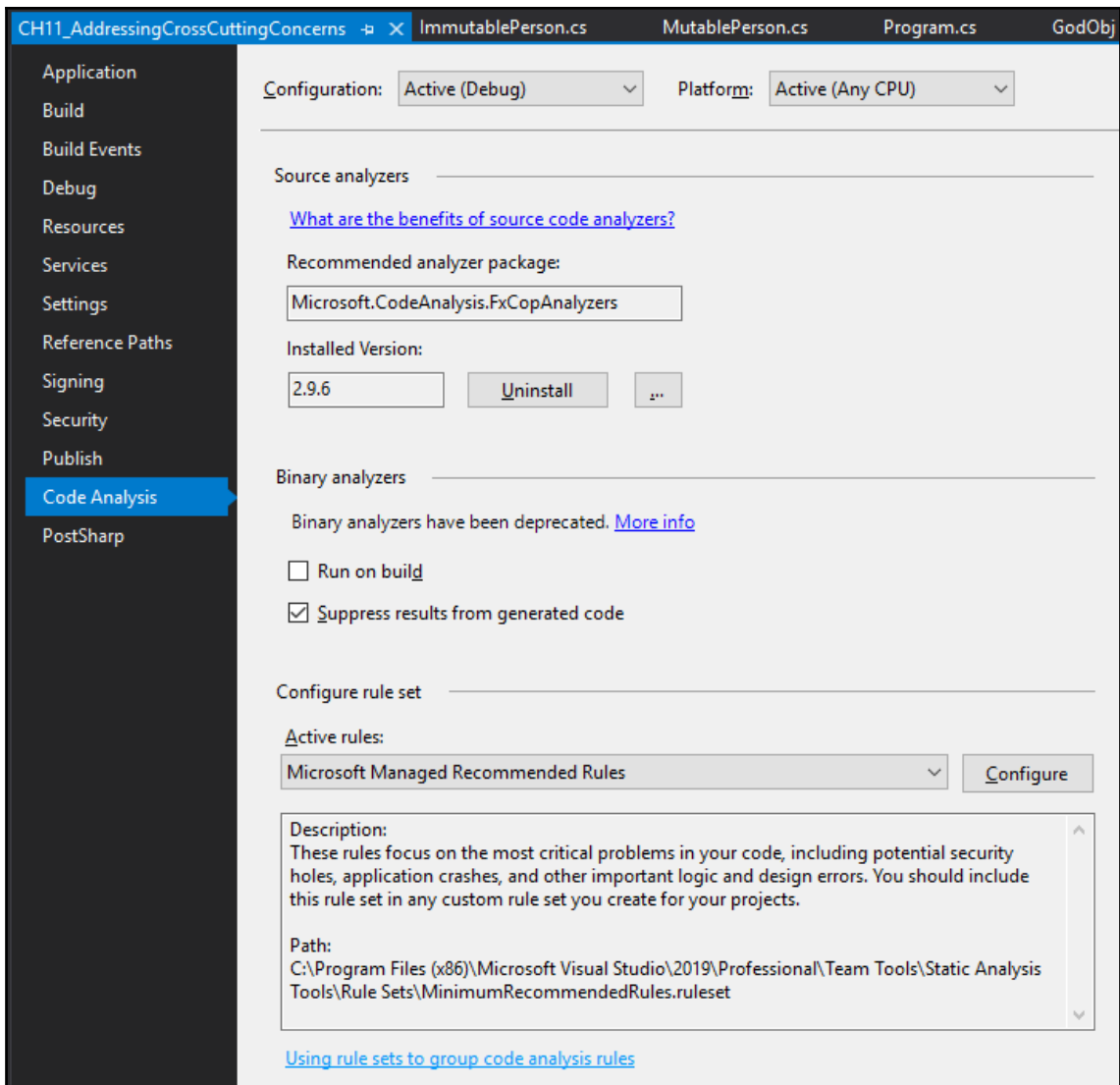
```
E:\Development\CrossCuttingConcerns\TestHarness\bin\Debug\TestHarness.exe
Adding data...Hello, world!
Updating data...
28/06/2020 17:02:44: Method: Void DeleteData(), Exception: Unauthorized
Getting data...
Hi!
Press any key to exit.
```

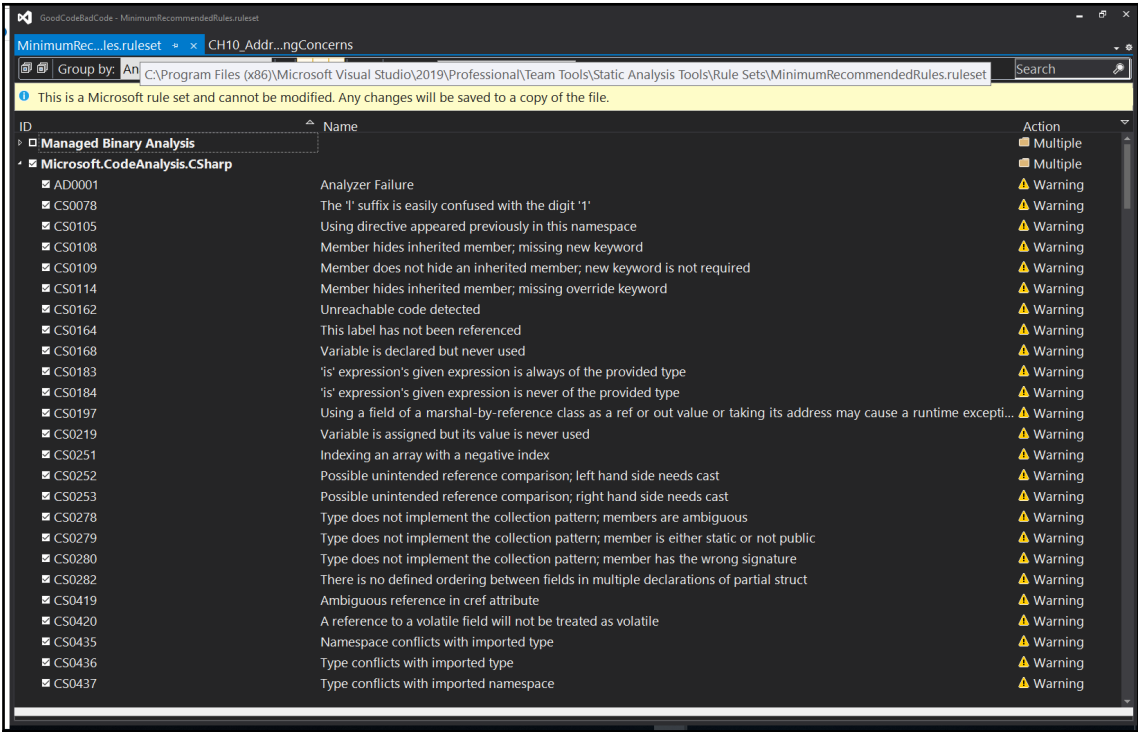
Chapter 12: Using Tools to Improve Code Quality



Code Metrics Results							
Filter: None		Min:	Max:				
Hierarchy		Maintainability Index	Cyclomatic Complexity	Depth of Inheritance	Class Coupling	Lines of Source code	Lines of Executable code
CH10/CH10_AddressCrossCuttingConcerns (Debug)		87	62	6	89	517	127
CH10_AddressCrossCuttingConcerns		93	13	1	25	109	28
CH10_AddressCrossCuttingConcerns.ArchitecturalConstraints		70	2	5	7	22	5
CH10_AddressCrossCuttingConcerns.Aspects		85	16	6	34	119	28
CH10_AddressCrossCuttingConcerns.Attributes		74	20	6	41	160	53
CH10_AddressCrossCuttingConcerns.DecoratorPattern		95	6	2	6	61	8
ConcreteComponent		100	1	1	3	8	1
Operation() : void		100	1	1	1	4	1
ConcreteDecorator		86	2	2	4	19	5
ConcreteDecorator(IComponent)		100	1		2	2	0
Operation() : void		76	1		3	14	5
Decorator		96	2	1	1	14	2
component : IComponent		100	0		1	1	0
Decorator(IComponent)		96	1		1	5	1
Operation() : void		100	1		1	5	1
IComponent		100	1	0	0	4	0
Operation() : void		100	1		0	1	0
CH10_AddressCrossCuttingConcerns.Interfaces		100	1	0	0	7	0
IFilterable		100	1	0	0	4	0
ApplyFilter() : void		100	1		0	1	0
CH10_AddressCrossCuttingConcerns.ProxyPattern		98	4	1	3	39	5
IService		100	1	0	0	4	0
Request() : void		100	1		0	1	0
Proxy		94	2	1	3	16	4
logSource : LogSource		93	0		1	1	1
_service : IService		100	0		1	1	0
Proxy(IService)		96	1		1	5	1
Request() : void		88	1		2	6	2
Service		100	1	1	2	7	1
Request() : void		100	1		1	4	1

Code Metrics Results | Error List | Immediate Window | Output





Error List					
Entire Solution 0 Errors 32 Warnings 13 Messages Build + IntelliSense					
Code	Description	Project	File	Line	Suppression State
CA1710	Rename CH10_AddressCrossCuttingConcerns.ArchitecturalConstraints.BusinessRulePatternValidation to end in 'Attribute'.	CH10_AddressCrossCuttingConcerns	BusinessRulePa...	8	Active
CA1710	Rename CH10_AddressCrossCuttingConcerns.Aspects.FilterMethodArgumentsAspect to end in 'Attribute'.	CH10_AddressCrossCuttingConcerns	FilterMethodAr...	11	Active
CA1710	Rename CH10_AddressCrossCuttingConcerns.Aspects.FilterTypePropertiesAspect to end in 'Attribute'.	CH10_AddressCrossCuttingConcerns	FilterTypePrope...	15	Active
CA1710	Rename CH10_AddressCrossCuttingConcerns.Aspects.LoggingAspect to end in 'Attribute'.	CH10_AddressCrossCuttingConcerns	LoggingAspect.cs	8	Active
CA1801	Parameter args of method Main is never used. Remove the parameter or use it in the method body.	CH10_AddressCrossCuttingConcerns	Program.cs	17	Active
CA1823	Unused field 'logSource'.	CH10_AddressCrossCuttingConcerns	Proxy.cs	9	Active
IDE0019	Use pattern matching	CH10_AddressCrossCuttingConcerns	ApplyFiltersAttri...	28	Active



```

7      public class Proxy : IService
8      {
9          private static readonly LogSource _logSource = LogSource.Get();
10         private IService _service;
11     }

```

1 Add readonly modifier
1 Encapsulate field: '_service' (and use property)
1 Encapsulate field: '_service' (but still use field)
1 Suppress or Configure issues

```

17      public void Request()
18      {
19          Console.WriteLine("Proxy: Requ
20          _service.Request();
21      }
22  }

```

IDE0044 Make field readonly

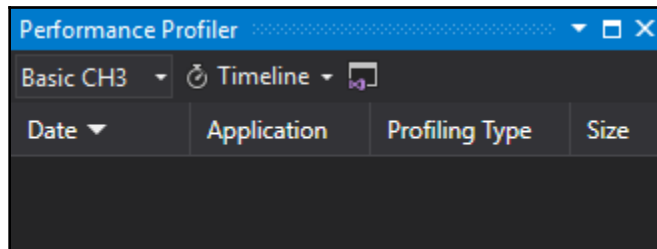
```

...
private static readonly LogSource _logSource = LogSource.Get
private IService _service;
private readonly IService _service;
...

```

Preview changes

Fix all occurrences in: [Document](#) | [Project](#) | [Solution](#)



G:\Data_packtpub\Clean-Code-in-C-\CH03\bin\Debug\netcoreapp3.0\CH3.exe - 13/05/2020, 20:28:36 - JetBrains dotTrace Performance Viewer

File Edit View Help

All Calls Overview

Threads (user/all): 1/4 ☐ Show system threads

- Main Thread • 1,040 ms
 - 80.41% [Native or optimized code] • 837 ms
 - 13.17% Main • 137 ms • CH3.Program.Main(String[])
 - 10.76% WriteLine • 112 ms • System.Console.WriteLine(String)
 - 4.04% ProcessStartupHooks • 42 ms • System.StartupHookProvider.ProcessStartupHooks
 - 2.38% Setup • 25 ms • System.AppContext.Setup(Char*, Char*, Int32)

Source View - System.Console.WriteLine

Error Decompiled source

PDB file System.Console.pdb is not found

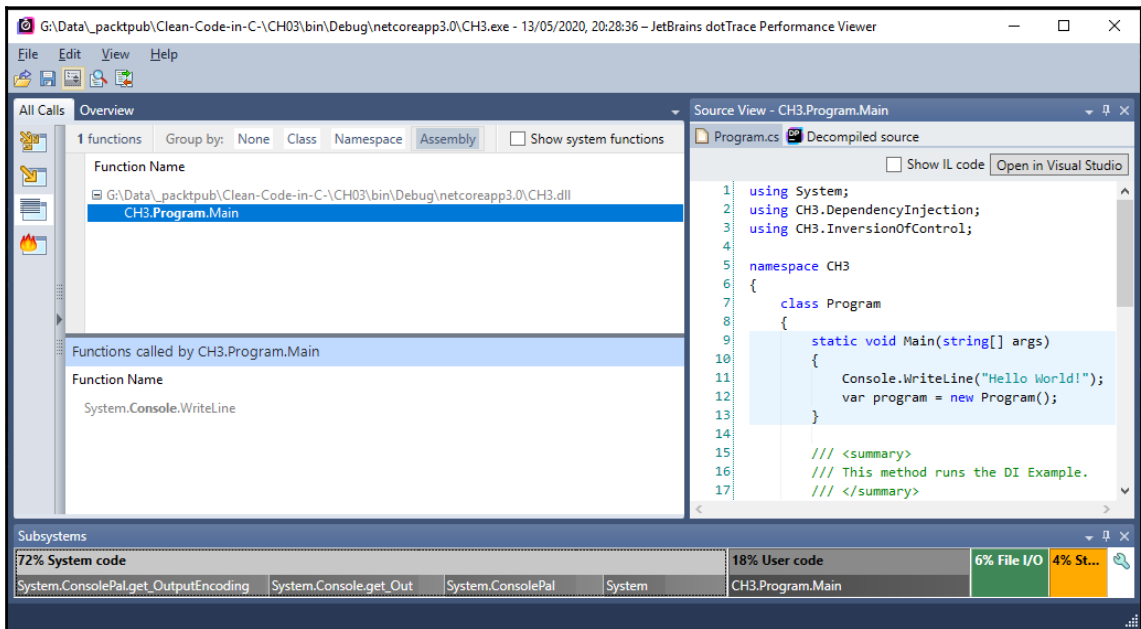
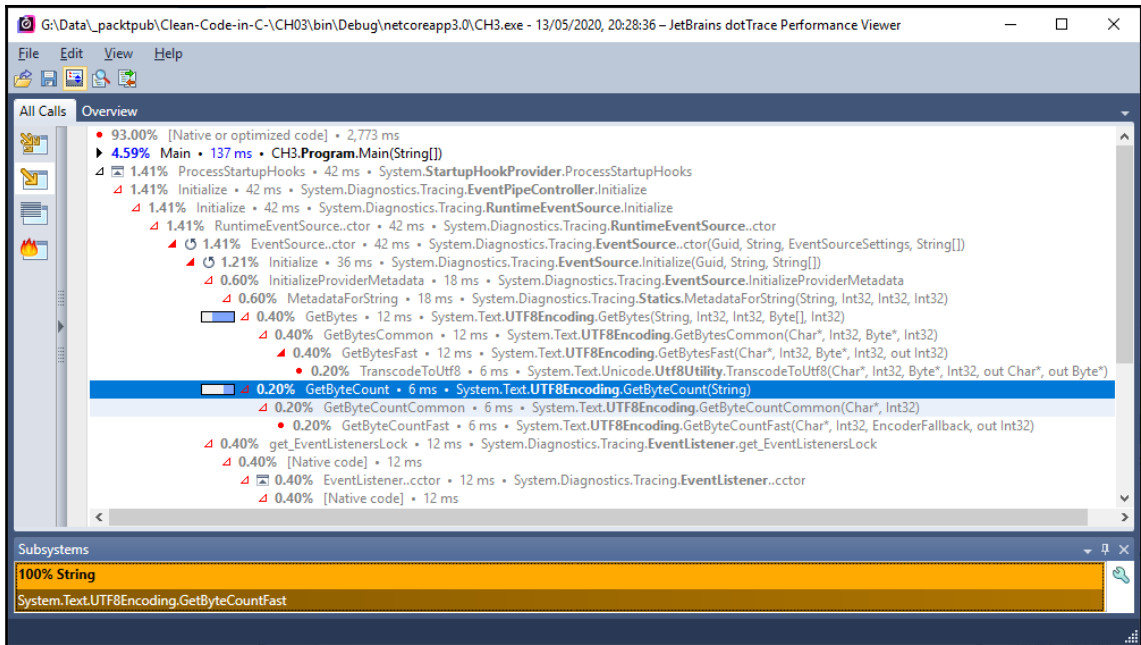
Original PDB path for the absent file: C:\Program Files\dotnet\shared\Microsoft.NETCore.App\3.1.3\System.Console.pdb

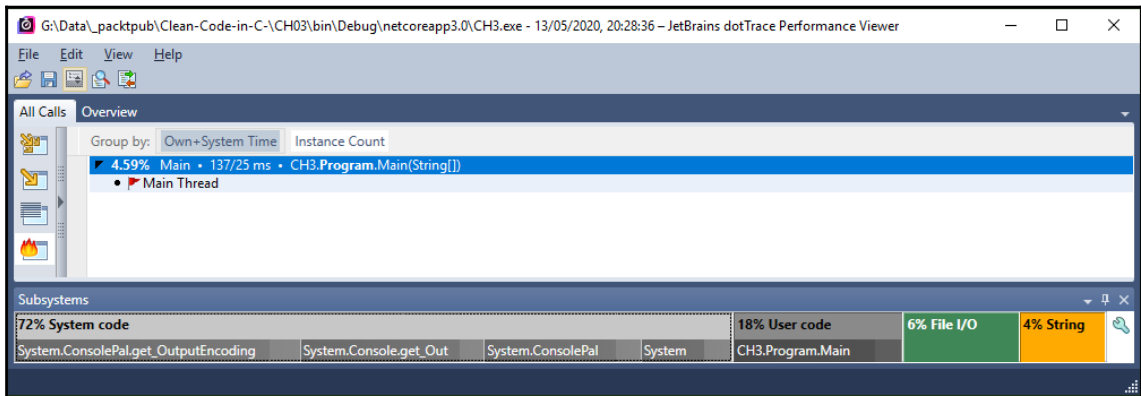
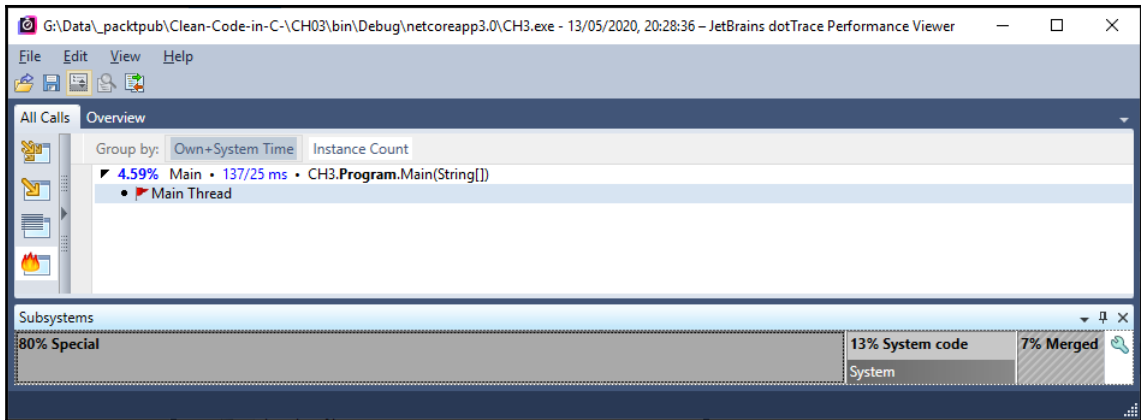
[Browse for PDB...](#) (locally)

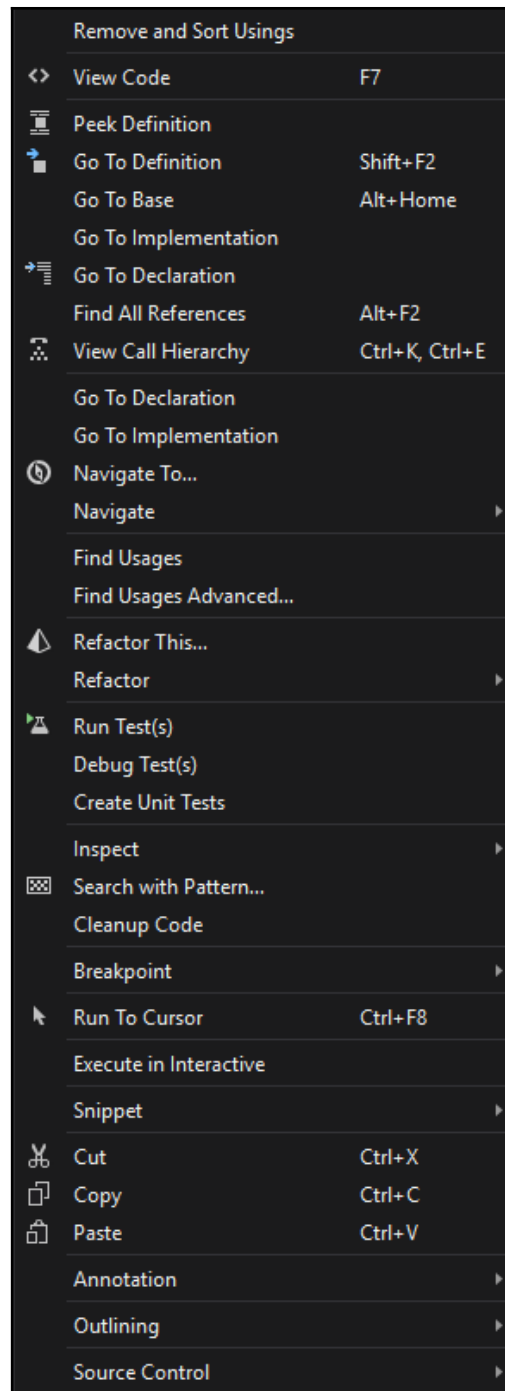
Subsystems

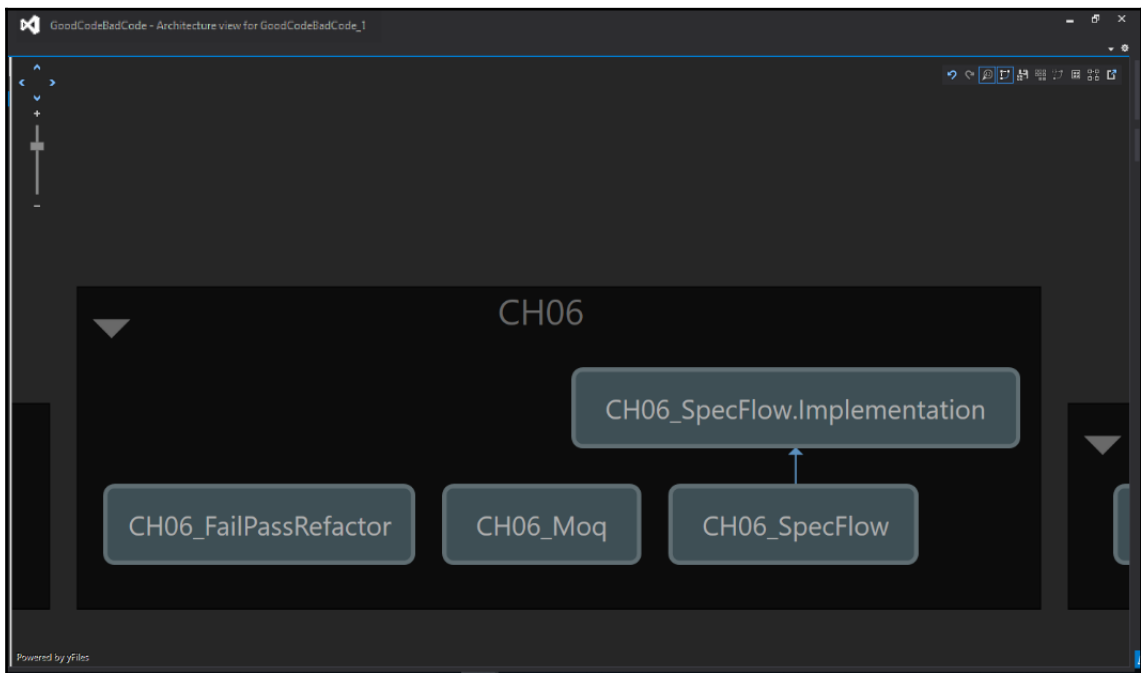
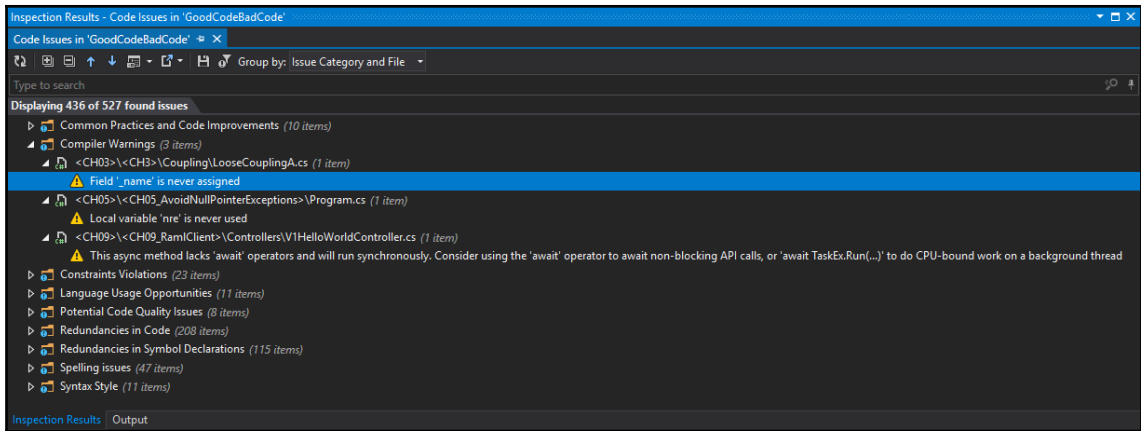
88% System code

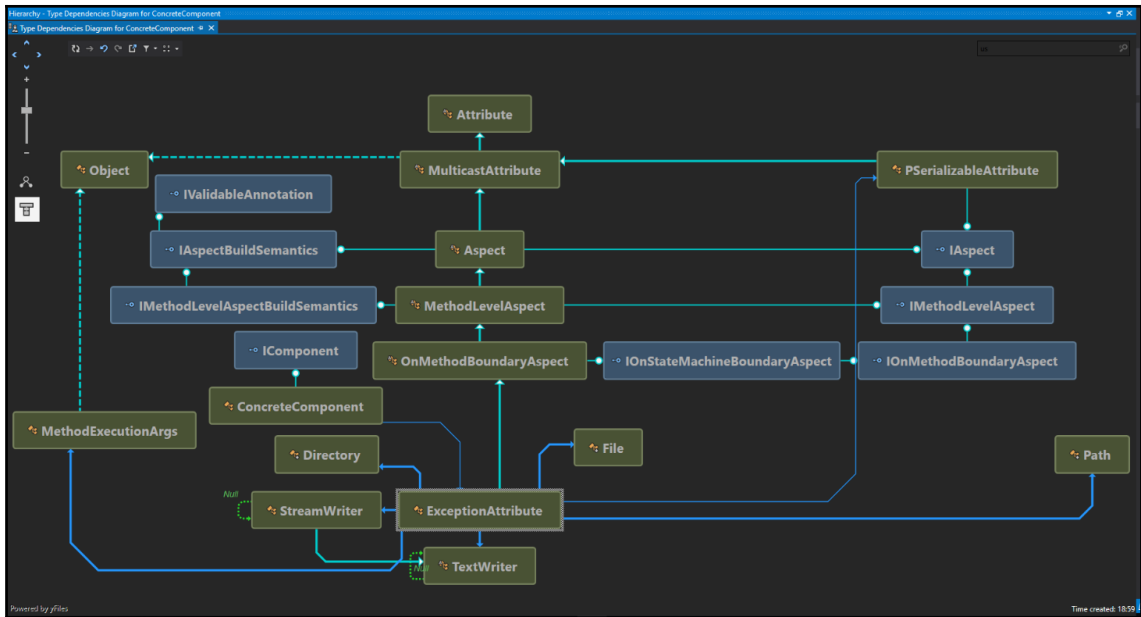
System.ConsolePal.get_OutputEncoding	System	System.Console.get_Out	System.ConsolePal...	7% File I/O	5% Str...
--------------------------------------	--------	------------------------	----------------------	-------------	-----------

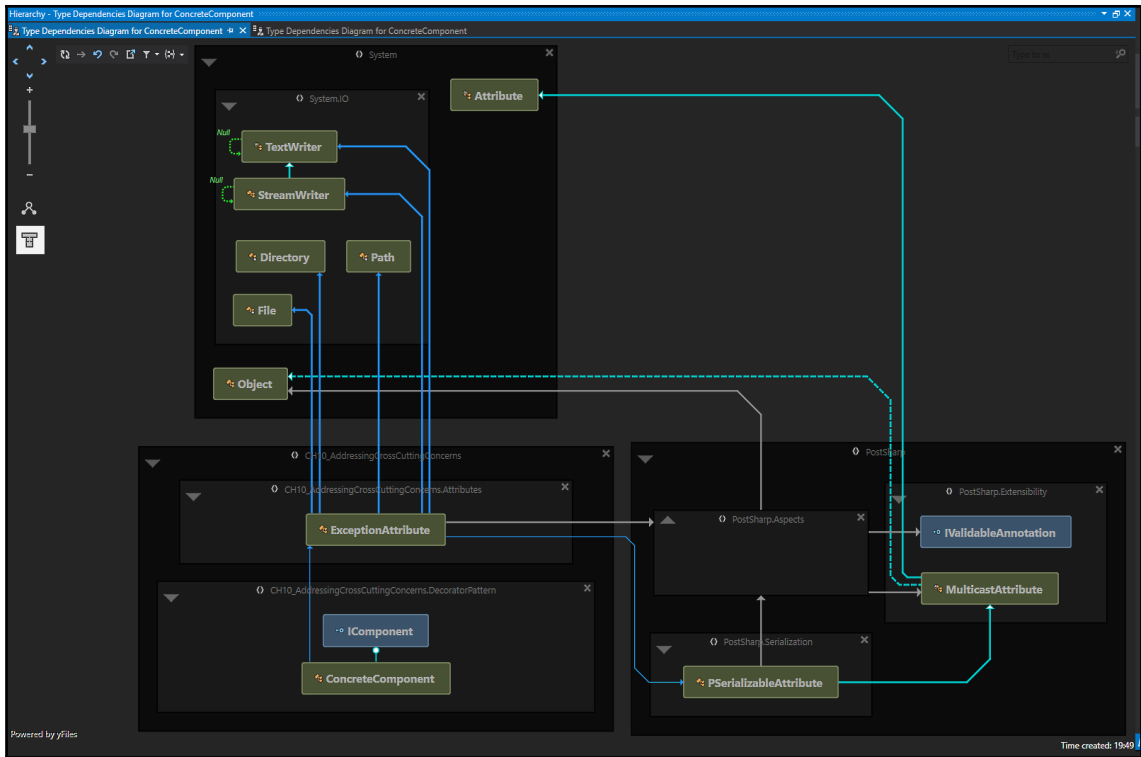


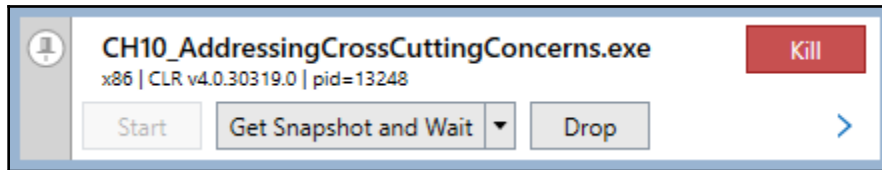
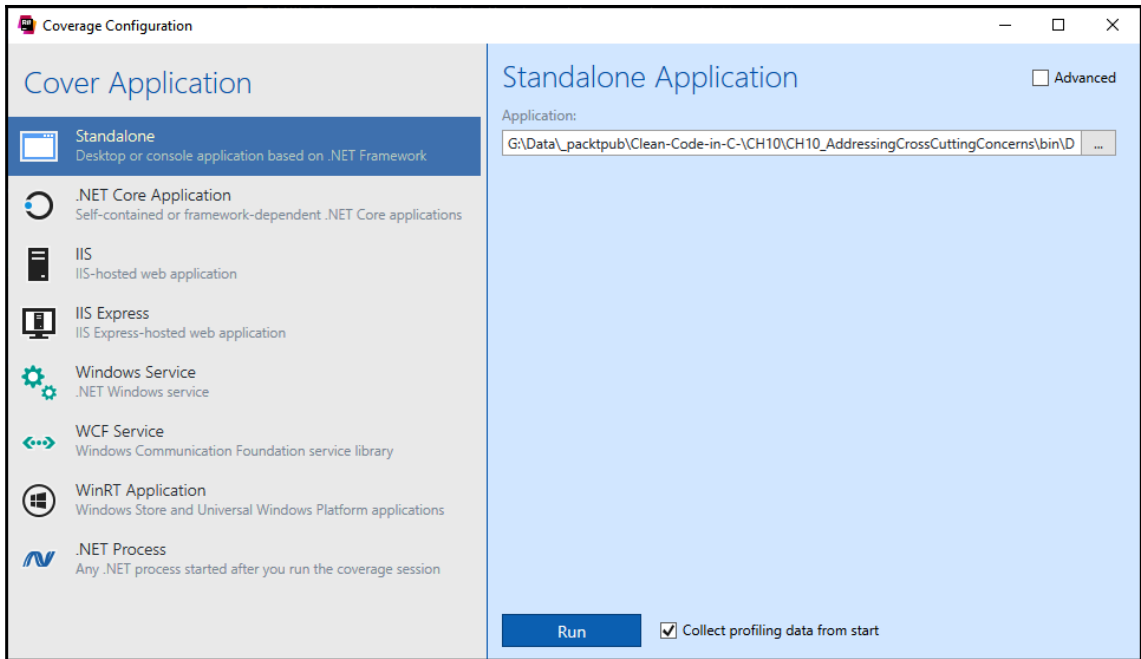






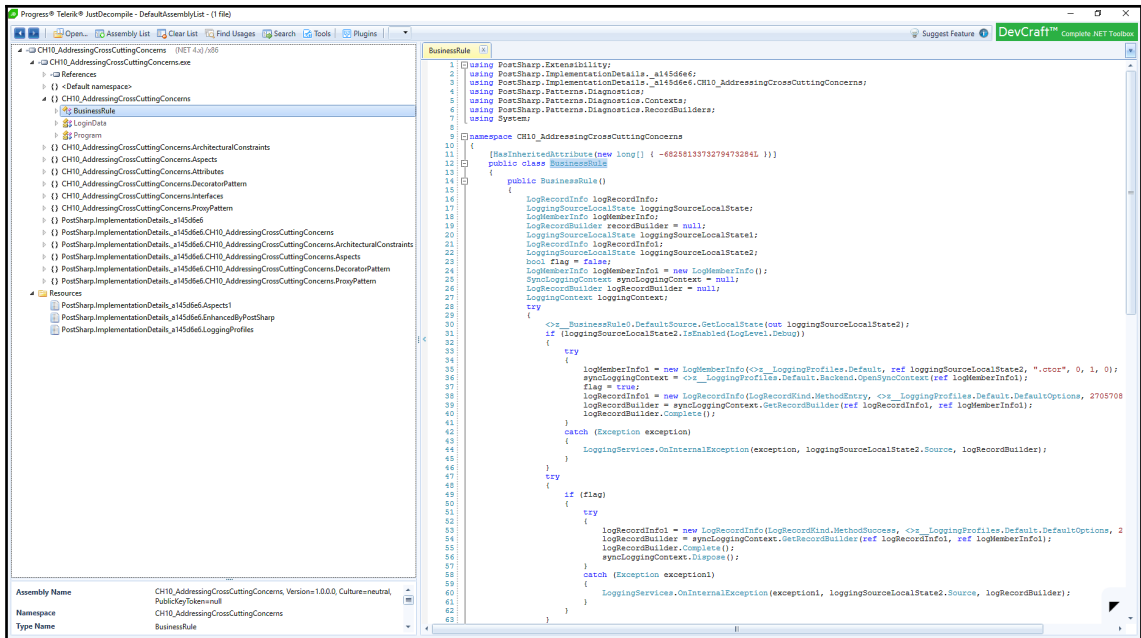






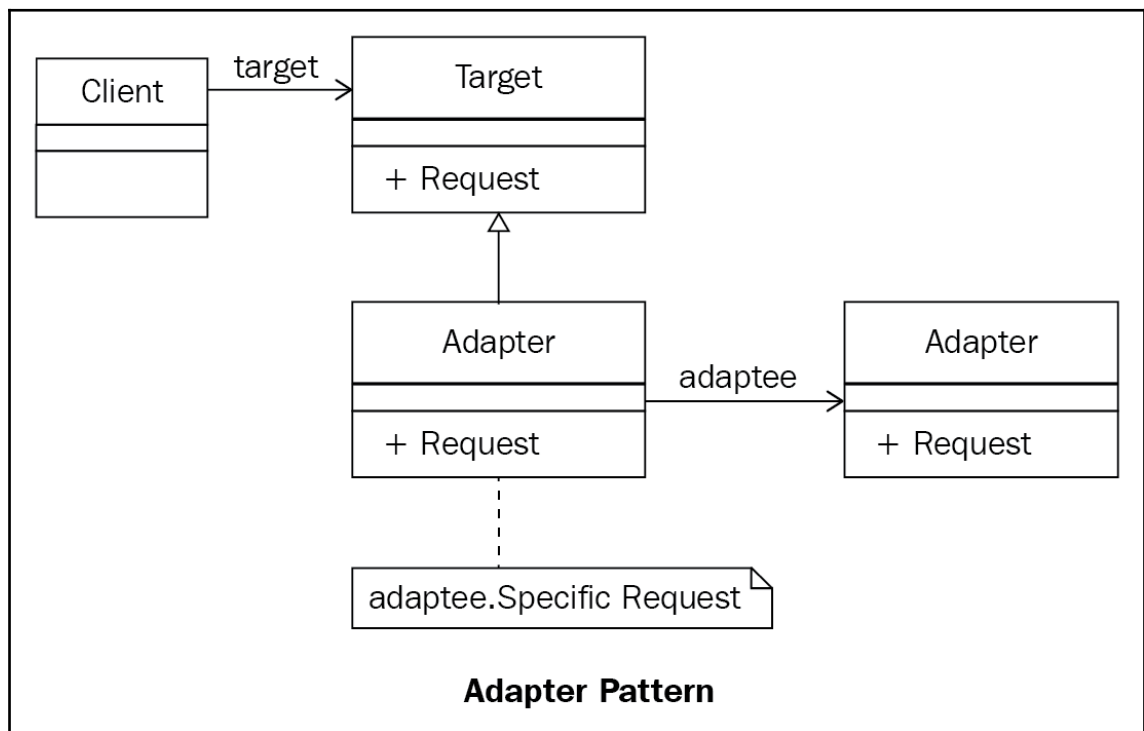
```
G:\Data\_packtpub\Clean-Code-in-C-\CH10\CH10_AddressingCrossCuttingConcerns\bin\Debug\CH10_AddressingCrossCuttingConcerns.exe
Starting.
Debug | Trace | ConcreteDecorator..ctor({CH10_AddressingCrossCuttingConcerns.DecoratorPattern.ConcreteComponent}) |
Succeeded.
Audit: [Member Name: .ctor, Operation: ConcreteDecorator..ctor({CH10_AddressingCrossCuttingConcerns.DecoratorPattern.ConcreteComponent}), Time: 15/05/2020 20:12:51]
Debug | Trace | ConcreteDecorator.Operation() | Starting.
Operation: try block.
Debug | Trace | Decorator.Operation() | Starting.
Debug | Trace | ConcreteComponent.Operation() | Starting.
Oops! The method or operation is not implemented.
Audit: [Member Name: Operation, Operation: ConcreteComponent.Operation(), Time: 15/05/2020 20:12:51]
Warning | Trace | ConcreteComponent.Operation() | Failed: exception = {System.NotImplementedException}.
System.NotImplementedException: The method or operation is not implemented.
at CH10_AddressingCrossCuttingConcerns.DecoratorPattern.ConcreteComponent.Operation() in G:\Data\_packtpub\Clean-Code-in-C-\CH10\CH10_AddressingCrossCuttingConcerns\DecoratorPattern\ConcreteComponent.cs:line 14
Warning | Trace | Decorator.Operation() | Failed: exception = {System.NotImplementedException}.
System.NotImplementedException: The method or operation is not implemented.
at CH10_AddressingCrossCuttingConcerns.DecoratorPattern.ConcreteComponent.Operation() in G:\Data\_packtpub\Clean-Code-in-C-\CH10\CH10_AddressingCrossCuttingConcerns\DecoratorPattern\ConcreteComponent.cs:line 14
at CH10_AddressingCrossCuttingConcerns.DecoratorPattern.Decorator.Operation() in G:\Data\_packtpub\Clean-Code-in-C-\CH10\CH10_AddressingCrossCuttingConcerns\DecoratorPattern\Decorator.cs:line 20
Audit: [Member Name: Operation, Operation: Decorator.Operation(), Time: 15/05/2020 20:12:51]
Operation: catch block.
The method or operation is not implemented.
Debug | Trace | ConcreteDecorator.Operation() | Succeeded.
Audit: [Member Name: Operation, Operation: ConcreteDecorator.Operation(), Time: 15/05/2020 20:12:51]
Audit: [Member Name: DecoratorPatternExample, Operation: Program.DecoratorPatternExample(), Time: 15/05/2020 20:12:51]
```

Coverage Results Browser - Untitled-0		
Untitled-0		
Coverage Tree Hot Spots		
Type to search		
Symbol	Coverage (%) ▲	Uncovered/Total Stmts.
▲ FilterMethodArgumentsAspect	0%	24/24
* FilterMethodArgumentsAspect(MethodBase)	0%	4/4
* SetFilter(ParameterInfo,FilterAttribute)	0%	7/7
* OnInvoke(MethodInterceptionArgs)	0%	13/13
* Serializer		0/0
* GlobalAspects		0/0
▲ () Attributes	15%	71/84
▲ InstrumentationAttribute	0%	6/6
* OnEntry(MethodExecutionArgs)	0%	3/3
* OnExit(MethodExecutionArgs)	0%	3/3
* Serializer		0/0
▶ ApplyFiltersAttribute	0%	14/14
▶ ReverseAttribute	0%	14/14
▶ FilterAttribute	0%	37/37
▲ ExceptionAttribute	100%	0/13
* OnException(MethodExecutionArgs)	100%	0/3
* OnExit(MethodExecutionArgs)	100%	0/10
* Serializer		0/0
▶ Program	33%	31/46
▲ () DecoratorPattern	87%	3/23
▲ ConcreteComponent	50%	1/2
* Operation()	50%	1/2
▶ Decorator	86%	1/7
▲ ConcreteDecorator	93%	1/14
* Operation()	91%	1/11
* ConcreteDecorator(IComponent)	100%	0/3
* BusinessRule		0/0



Chapter 13: Refactoring C# Code – Identifying Code Smells

```
E:\_Book\Source Code\Clean-Code-in-C-\CH13\CH13_CodeRefactori...
The sum of the integers 1, 2, 3, 4, 5, 6, 7, 8, 9 squared is 285.
The sum of the integers 1, 2, 3, 4, 5, 6, 7, 8, 9 squared is 285.
Press any key to exit.
```



```
E:\_Book\Source Code\Clean...
AdapteeOperation() has just executed.
Press any key to exit.
```

Chapter 14: Refactoring C# Code – Implementing Design Patterns

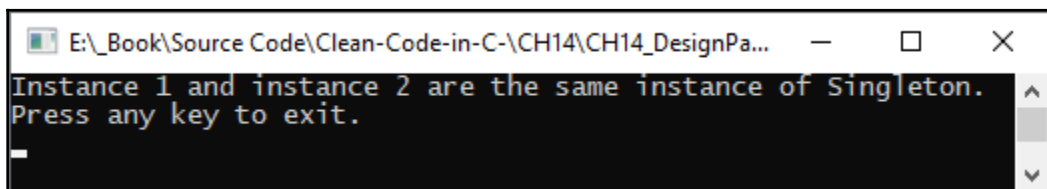
Singleton Design Pattern

Singleton

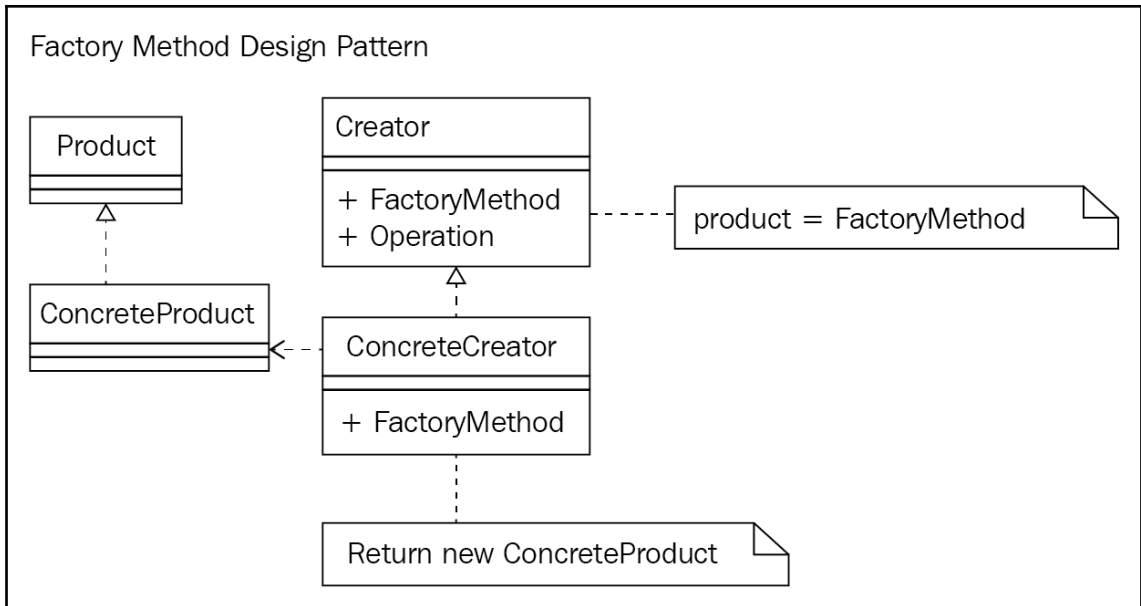
- Instance : Singleton

- Singleton()

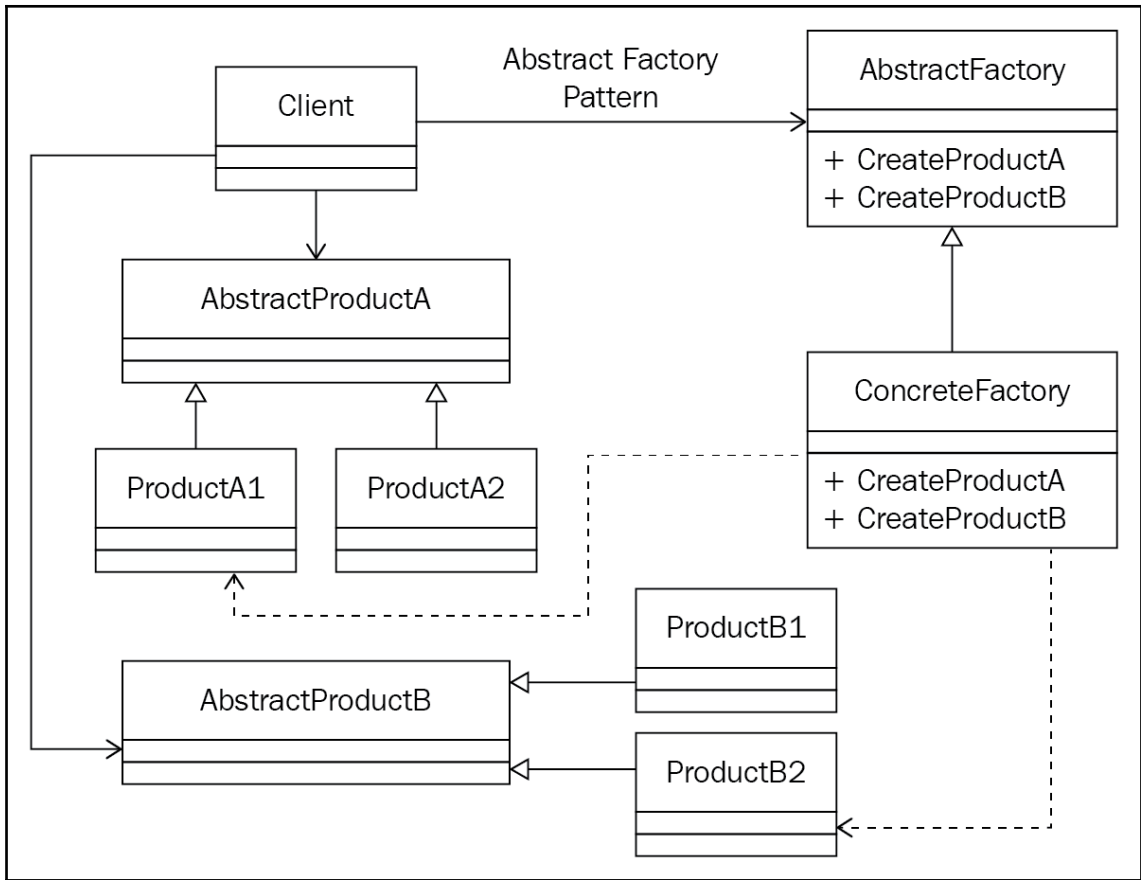
+ Instance() : Singleton



```
E:\_Book\Source Code\Clean-Code-in-C-\CH14\CH14_DesignPa...
Instance 1 and instance 2 are the same instance of Singleton.
Press any key to exit.
_
```

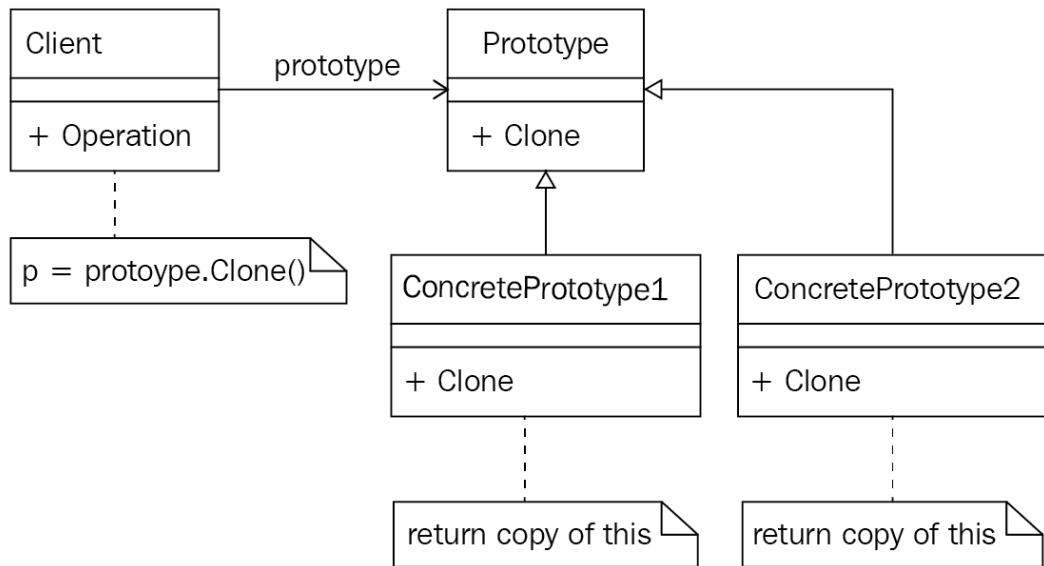


```
E:\_Book\Source...
Product Type: ConcreteProduct
Press any key to exit.
```



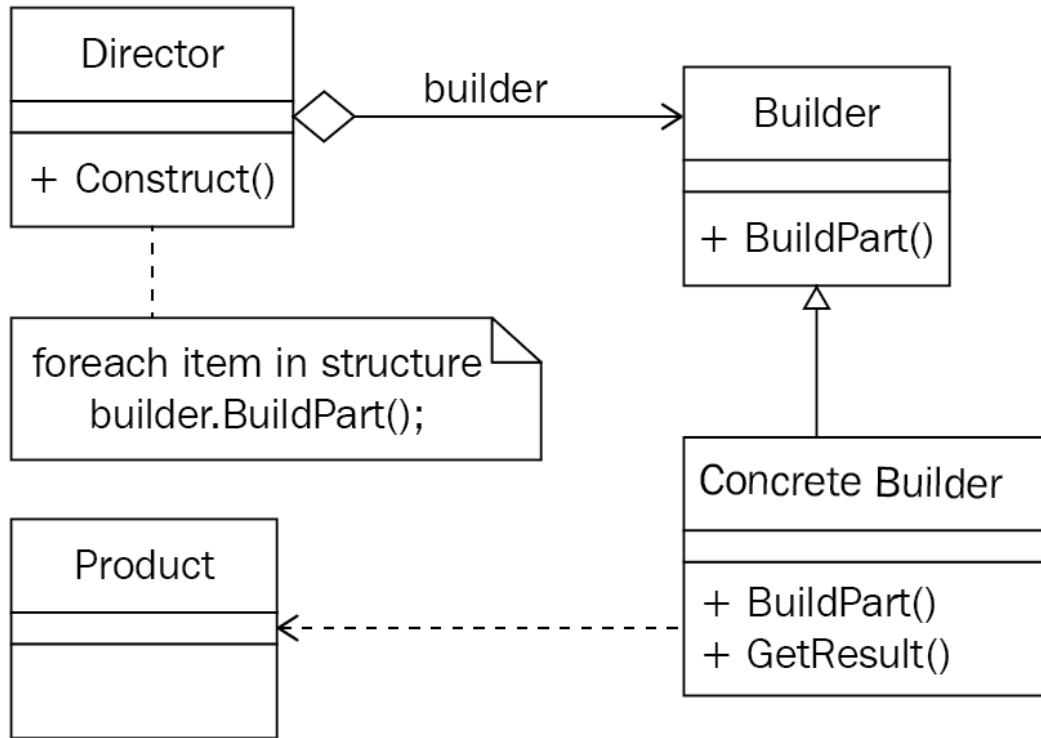
```
E:\_Book\Sour...
ProductA.Operation(ProductB)
ProductB.Operation(ProductA)
Press any key to exit.
```

Prototype Design Pattern



```
E:\B...
Clone Id: Clone 1
Press any key to exit.
```

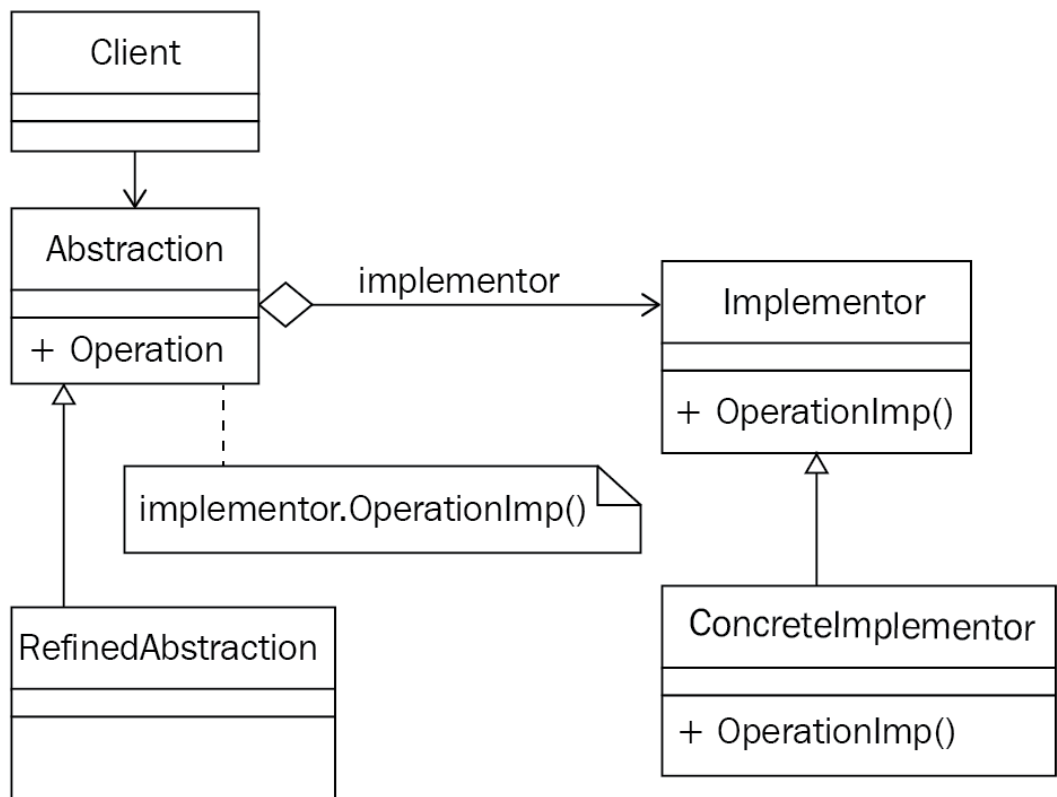
Builder Design Pattern



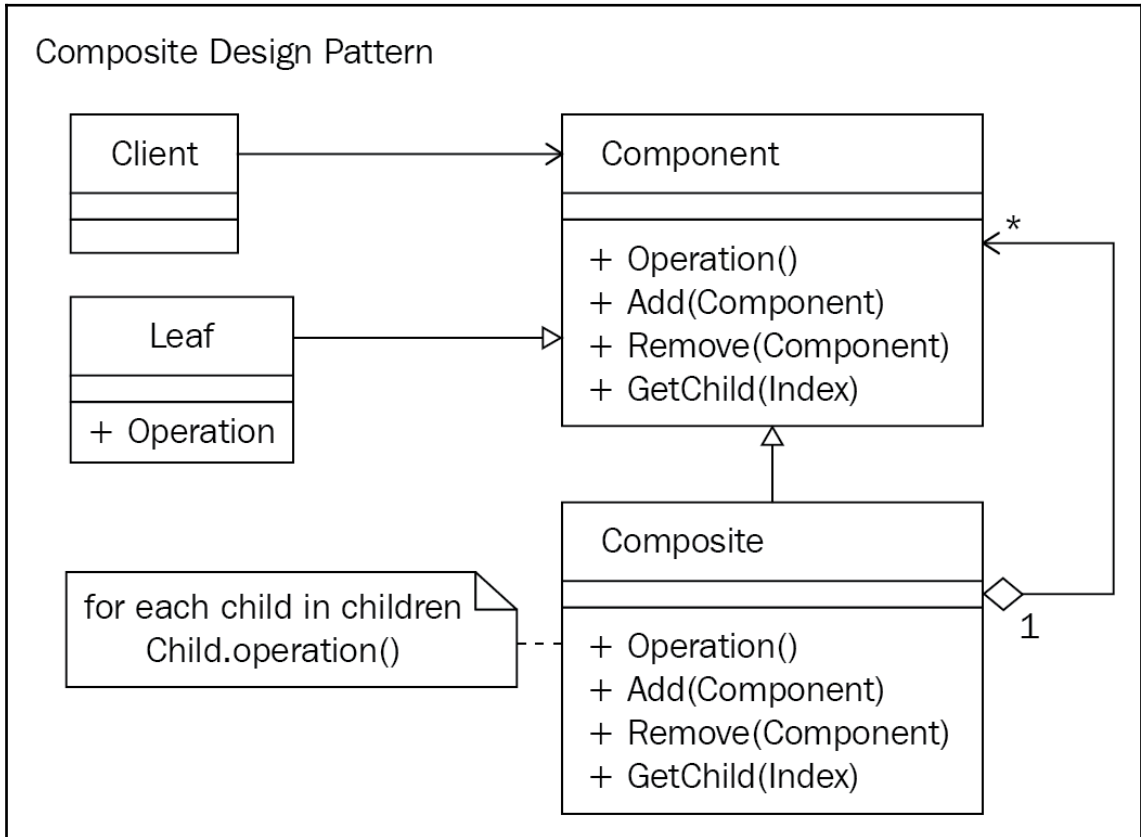
```
E:\B...  -  □  ×
Parts Listing:
- Section 1
- Section 2
Press any key to exit.
_
```

```
E:\_Book\Source Code\Clean-Code-in-C-\...
Duration (Ticks) Using Plus Operator: 63909137
Duration (Ticks) Using StringBuilder: 12317071
That's a time difference of 51592066 ticks.
51592066 ticks = 5.1592066 seconds.
Press any key to exit.
```

Builder Design Pattern

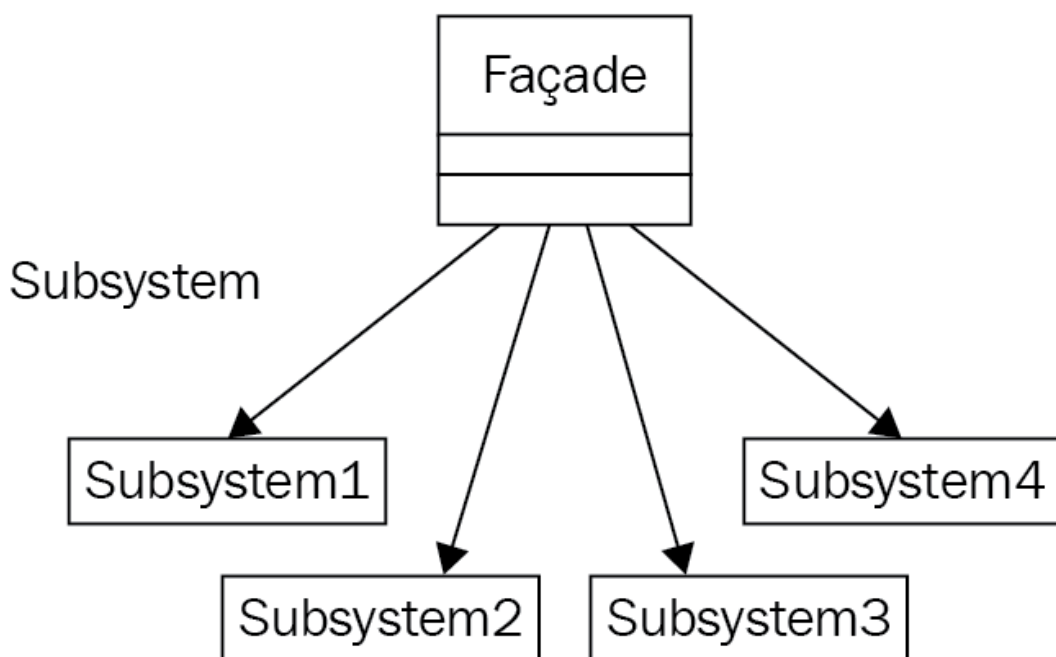


```
E:\Book\Sou...  -  □  ×  
Concrete operation executed.  
Press any key to exit.
```

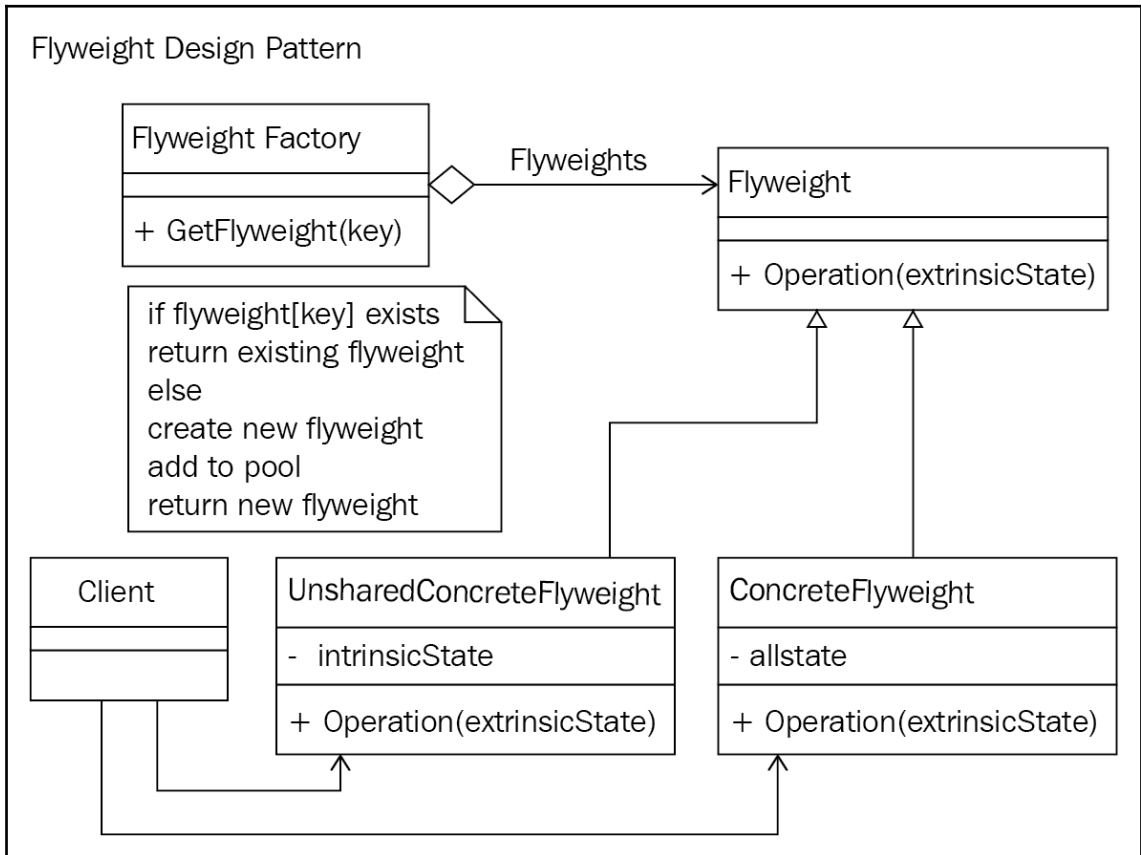


```
E:\_Book\Source Code\Clean-Code...
Composite Name: Classification of Animals
Composite Name: - Invertebrates
Leaf Name: -- With Jointed-Legs
Leaf Name: -- Without Legs
Composite Name: - Vertebrates
Leaf Name: -- Warm-Blooded
Leaf Name: -- Cold-Blooded
Press any key to exit.
```

Façade Design Pattern



```
E:\_Book...
SubsystemOne.PrintName()
SubsystemTwo.PrintName()
Press any key to exit.
```



```
E:\_Book\Source Code\Clean-Code-in-C-\CH14\CH14_DesignPatte...
ConcreteFlyweight: Arbitrary state can be anything you require!
ConcreteFlyweight: Arbitrary state can be anything you require!
ConcreteFlyweight: Arbitrary state can be anything you require!
Press any key to exit.
```