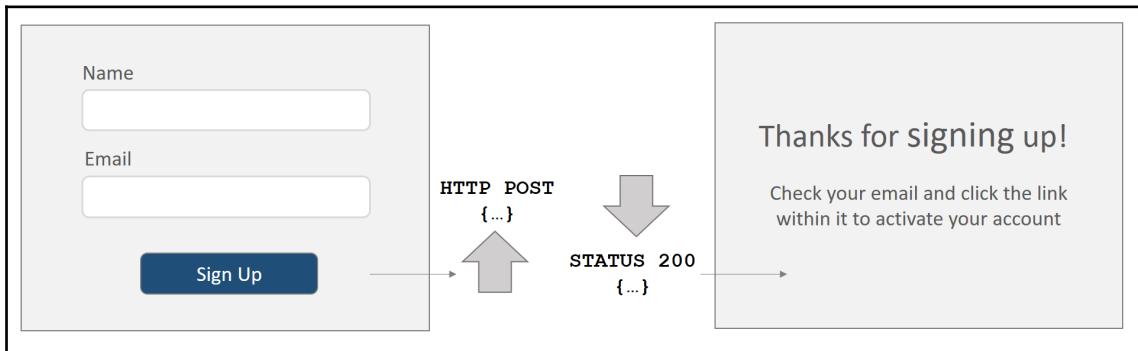


Chapter 1: Understanding the ASP.NET Core React Template



Visual Studio 2019

X

Open recent



Clone or checkout code

Get code from an online code repository like GitHub or Azure DevOps



Open a project or solution

Open a local Visual Studio project or .sln file



Open a local folder

Navigate and edit code within any folder



Create a new project

Choose a project template with code scaffolding to get started

[Continue without code](#)

Create a new project

Recent project templates

Show all

Search for project templates 🔍

Language ▼ Platform ▼ Project type ▼ X

 Console App (.NET Core) A project for creating a command-line application that can run on .NET Core on Windows, Linux and MacOS. C# Linux MacOS Windows Console
 Console App (.NET Framework) A project for creating a command-line application C# Windows Console
 Class Library (.NET Core) A project for creating a class library that targets .NET Core. C# Windows Linux MacOS Library
 ASP.NET Core Web Application Project templates for creating ASP.NET Core applications for Windows, Linux and MacOS using .NET Core or .NET Framework. Create Razor Pages, MVC, Web API, and Single Page (SPA) Applications. C# Windows Linux MacOS Web
 ASP.NET Web Application (.NET Framework) Project templates for creating ASP.NET applications. You can create ASP.NET Web Forms, MVC, or Web API applications and add many other features in ASP.NET. C# Windows Web

Back Next

Configure your new project

ASP.NET Core Web Application

C# Windows Linux MacOS Web

Project name

WebApplication1

Location

C:\code\



Solution name ⓘ

WebApplication1

Place solution and project in the same directory

Back

Create

Create a new ASP.NET Core Web Application

.NET Core ASP.NET Core 3.0

A project template for creating a gRPC ASP.NET Core service.

Blazor (server-side)
A project template for creating a Blazor application that runs server-side inside an ASP.NET Core application. This template can be used for web applications with rich dynamic user interfaces (UIs).

Razor Class Library
A project template for creating a Razor class library.

Angular
A project template for creating an ASP.NET Core application with Angular.

React.js
A project template for creating an ASP.NET Core application with Reactjs.

React.js and Redux
A project template for creating an ASP.NET Core application with Reactjs and Redux.

Authentication
No Authentication
[Change](#)

Advanced
 Configure for HTTPS
 Enable Docker Support
(Requires Docker Desktop)
Linux

Get additional project templates

Back Create

WebApplication1

Home Counter Fetch data

Hello, world!

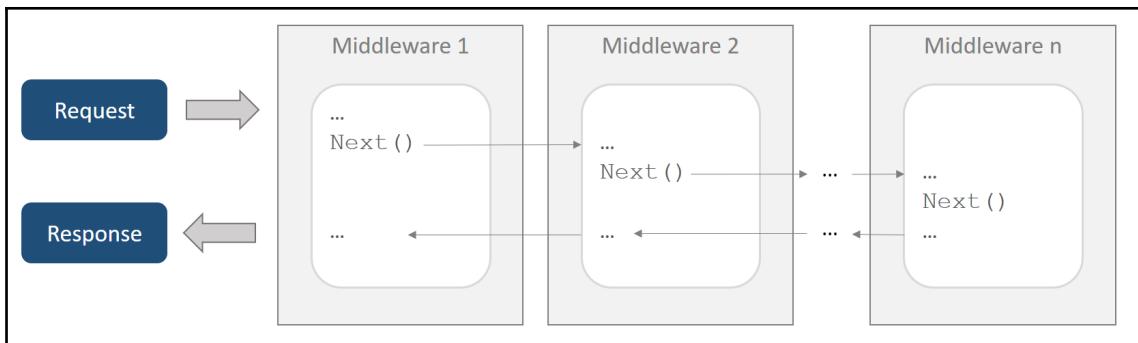
Welcome to your new single-page application, built with:

- **ASP.NET Core** and **C#** for cross-platform server-side code
- **React** for client-side code
- **Bootstrap** for layout and styling

To help you get started, we have also set up:

- **Client-side navigation.** For example, click *Counter* then *Back* to return here.
- **Development server integration.** In development mode, the development server from `create-react-app` runs in the background automatically, so your client-side resources are dynamically built on demand and the page refreshes when you modify any file.
- **Efficient production builds.** In production mode, development-time features are disabled, and your `dotnet publish` configuration produces minified, efficiently bundled JavaScript files.

The `clientApp` subdirectory is a standard React application based on the `create-react-app` template. If you open a command prompt in that directory, you can run `npm` commands such as `npm test` or `npm install`.



A screenshot of the Chrome DevTools Network tab. The tab is active, and the main list shows a single request for "weatherforecast". The request details panel on the right is expanded, showing the following information:

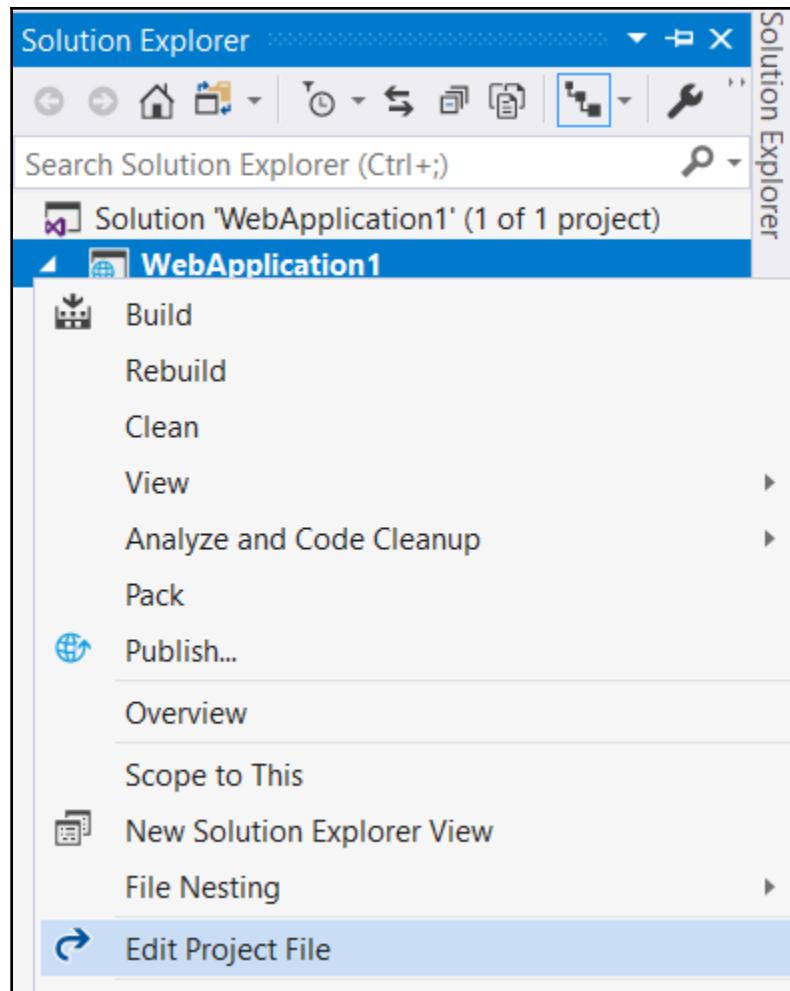
- Name:** weatherforecast
- General**
 - Request URL: <https://localhost:44339/weatherforecast>
 - Request Method: GET
 - Status Code: 200
 - Remote Address: [::1]:44339
 - Referrer Policy: no-referrer-when-downgrade
- Response Headers (5)**
- Request Headers (2)**

At the bottom of the Network tab, it says "1 requests | 553 B transferred | 498 B resources".

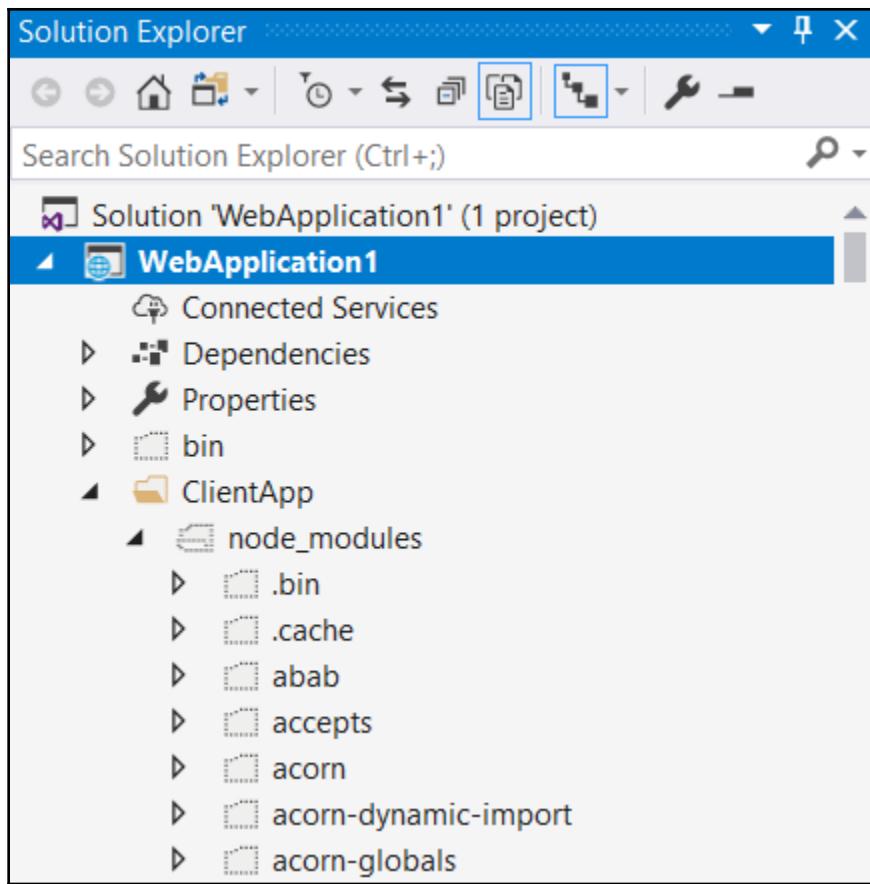
Weather forecast

This component demonstrates fetching data from the server.

Date	Temp. (C)	Temp. (F)	Summary
2019-07-28T09:53:01.1336185+01:00	42	107	Freezing
2019-07-29T09:53:01.1336185+01:00	-1	31	Cool
2019-07-30T09:53:01.1336185+01:00	42	107	Hot
2019-07-31T09:53:01.1336185+01:00	31	87	Sweltering
2019-08-01T09:53:01.1336185+01:00	36	96	Warm



```
Output
Show output from: Build
1>----- Build started: Project: WebApplication1, Configuration: Debug Any CPU -----
1>WebApplication1 -> C:\code\WebApplication1\WebApplication1\bin\Debug\netcoreapp2.2\WebApplication1.dll
1>WebApplication1 -> C:\code\WebApplication1\WebApplication1\bin\Debug\netcoreapp2.2\WebApplication1.Views.dll
1>10.13.0
1>Restoring dependencies using 'npm'. This may take several minutes...
```



Pick a publish target

- App Service
- App Service Linux
- Azure Virtual Machines
- IIS, FTP, etc
- Folder

Folder or File Share

Publish your app to a folder or file share

Choose a folder

bin\Release\netcoreapp3.0\publish\

[Browse...](#)

[Advanced...](#)

[Import Profile...](#)

[Publish](#) ▾

[Cancel](#)



[Publish immediately](#)

[Create profile](#)

WebApplication

Hello, world!

Welcome to your new single-page application, built with:

The screenshot shows the 'Elements' tab of a browser's developer tools. The page content is displayed as a tree of HTML elements. At the top level is a `<html>` tag. Inside it is a `<body>` tag containing a `<noscript>` block with the message 'You need to enable JavaScript to run this app.' Below the `<noscript>` is a `<div id="root">` element, which is highlighted with a blue selection bar. Inside the `<div id="root">` are several other components: a header, a container div with a class of "container", and some comments indicating the file is a template and build instructions. At the bottom of the `<body>` tag is a `<script>` element with a source attribute pointing to a static JavaScript bundle.

```
<!doctype html>
<html lang="en">
  <head>...</head>
  <body>
    <noscript>
      You need to enable JavaScript to run this app.
    </noscript>
    .. <div id="root"> == $0
      <div>
        <!-->
        <header>...</header>
        <div class="container">...</div>
      </div>
    </div>
    <!-->
    This HTML file is a template.
    If you open it directly in the browser, you will see an empty page.

    You can add webfonts, meta tags, or analytics to this file.
    The build step will place the bundled scripts into the <body> tag.

    To begin the development, run `npm start` or `yarn start`.
    To create a production bundle, use `npm run build` or `yarn build`.

    -->
    <script type="text/javascript" src="/static/js/bundle.js"></script>
  </body>
</html>
```

Hello, React!

Welcome to your new single-page application, built with:

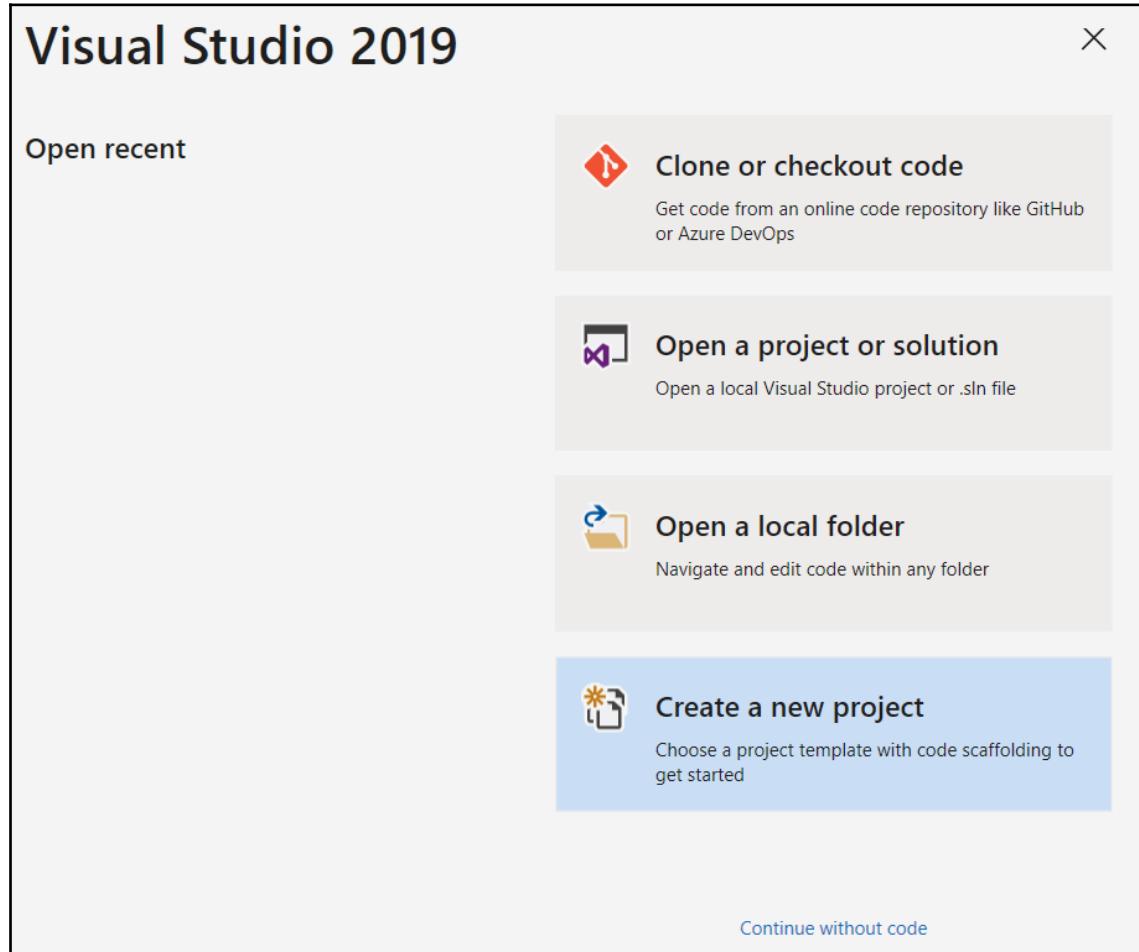
- [ASP.NET Core](#) and [C#](#) for cross-platform server-side code
- [React](#) for client-side code
- [Bootstrap](#) for layout and styling

Weather forecast

This component demonstrates fetching data from the server.

Date	Temp. (C)	Temp. (F)	Summary
2019-07-28T09:53:01.1336185+01:00	42	107	Freezing
2019-07-29T09:53:01.1336185+01:00	-1	31	Cool
2019-07-30T09:53:01.1336185+01:00	42	107	Hot
2019-07-31T09:53:01.1336185+01:00	31	87	Sweltering
2019-08-01T09:53:01.1336185+01:00	36	96	Warm

Chapter 2: Creating Decoupled React and ASP.NET Core Apps



Create a new project

Recent project templates

Language Platform Project type

Show all

Console App (.NET Core)

A project for creating a command-line application that can run on .NET Core on Windows, Linux and MacOS.

C# Windows MacOS Windows Console

Console App (.NET Framework)

A project for creating a command-line application

C# Windows Console

Class Library (.NET Core)

A project for creating a class library that targets .NET Core.

C# Windows Linux MacOS Library

ASP.NET Core Web Application

Project templates for creating ASP.NET Core applications for Windows, Linux and macOS using .NET Core or .NET Framework. Create Razor Pages, MVC, Web API, and Single Page (SPA) Applications.

C# Windows Linux MacOS Web

ASP.NET Web Application (.NET Framework)

Project templates for creating ASP.NET applications. You can create ASP.NET Web Forms, MVC, or Web API applications and add many other features in ASP.NET.

C# Windows Web

Back

Next

X

Configure your new project

ASP.NET Core Web Application

C#

Windows

Linux

MacOS

Web

Project name

QandA

Location

C:\code\QandA\backend

...

Solution name ⓘ

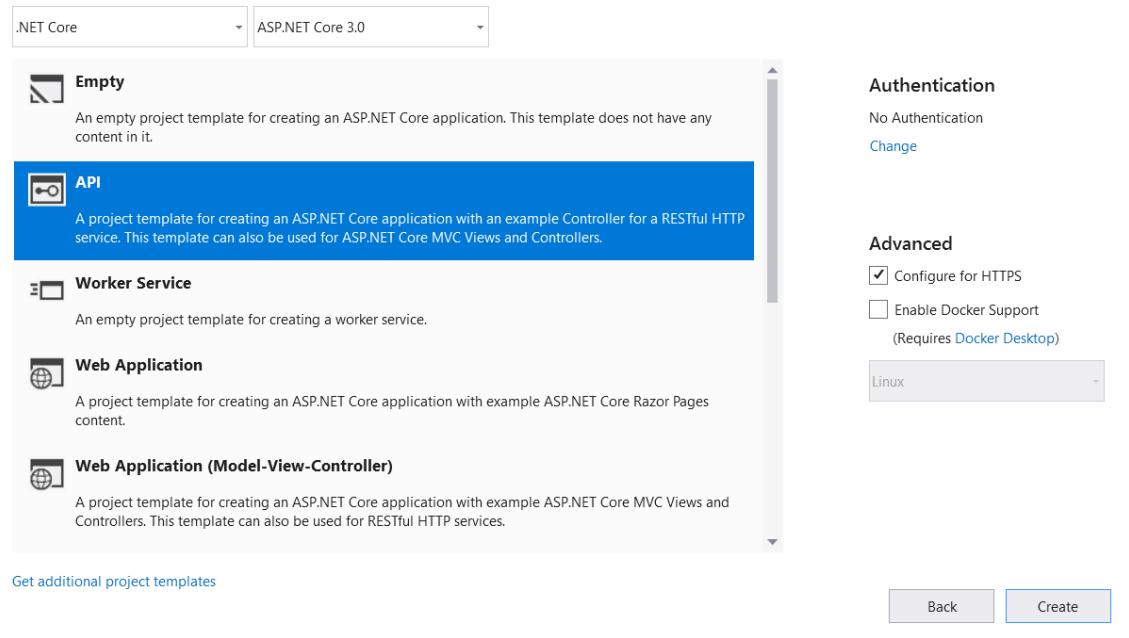
QandA

Place solution and project in the same directory

Back

Create

Create a new ASP.NET Core Web Application

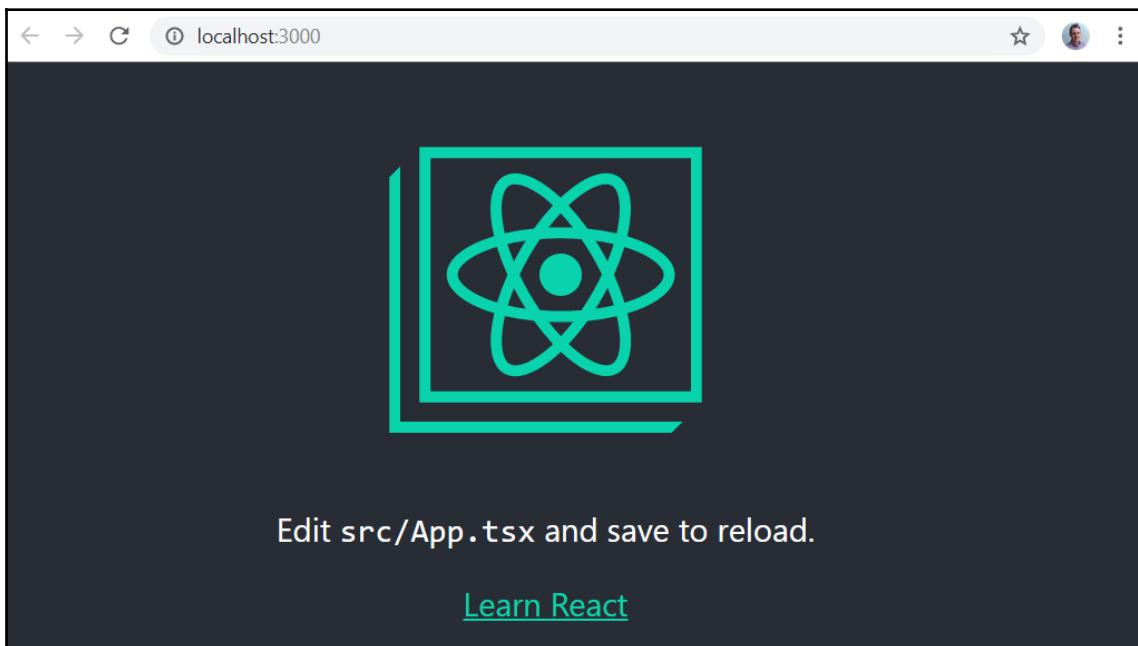


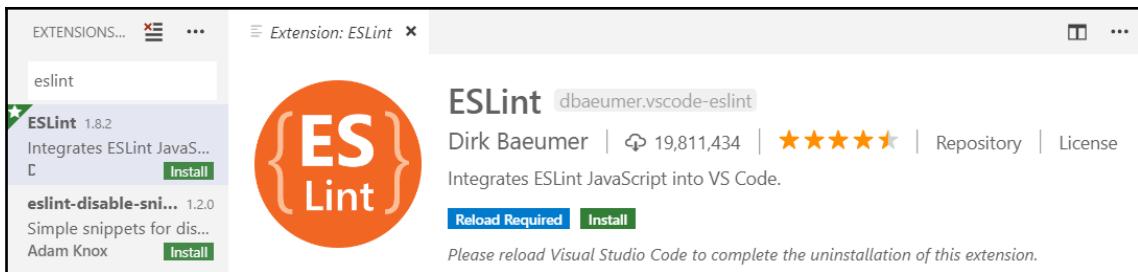
```
function sayHello (firstName: string, lastName: string) {  
  return "Hello " + firstName + " " + surname;  
};
```

A code editor window showing a TypeScript function definition. The variable 'surname' is highlighted in blue, and a tooltip box appears with the text 'Cannot find name 'surname''. Below the tooltip, the word 'any' is visible.

```
Property 'userName' is missing in type '{}' but required in
type 'IProps'. ts(2741)
• Header.tsx(4, 3): 'userName' is declared here.

class App {
  public
    return (alias) const Header: React.FunctionComponent<IProps>
      <div>
        <Header />
      </div>
    );
  }
}
```





A screenshot of VS Code showing an "App.tsx" file. The code contains several ESLint errors:

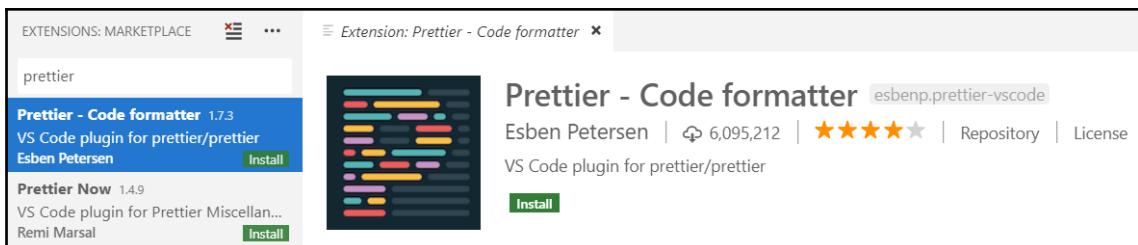
```
1 import R const unused: "something"
2 import l 'unused' is declared but its value is never read. ts(6133)
3 import '
4      'unused' is assigned a value but never used. eslint(@typescript-eslint/no-unused-vars)
5 const Ap Quick Fix... Peek Problem
6   | const unused = 'something';
7   | return (
```

The "Quick Fix..." and "Peek Problem" options are highlighted.

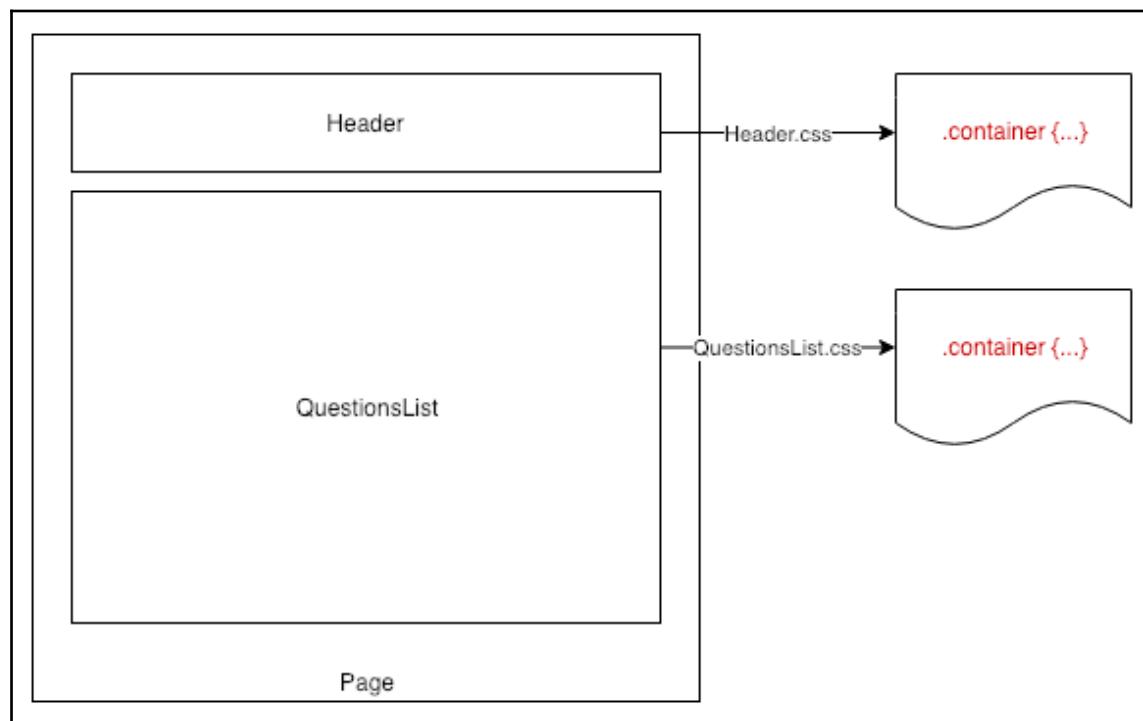
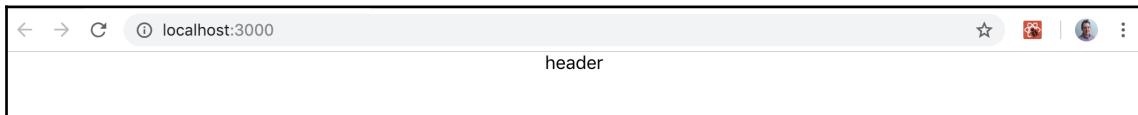
A screenshot of VS Code showing an "App.tsx" file. The code contains an ESLint error:

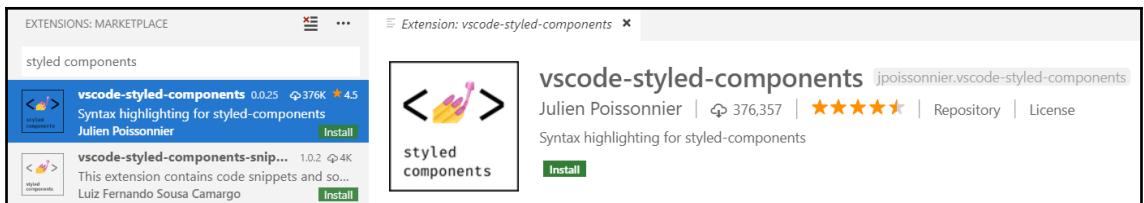
```
1 import React from 'react';
2 import logo from './logo.svg';
3 import './App.css';
4
5 co Unexpected 'debugger' statement. eslint(no-debugger)
6   | Quick Fix... Peek Problem
7   | debugger;
```

The "Quick Fix..." and "Peek Problem" options are highlighted.



Chapter 3: Getting Started with React and TypeScript





This screenshot shows the developer tools interface in a browser. The tabs at the top are Console, Elements, Audits, Sources, Network, Memory, Performance, Application, Security, React, and a more options menu. The Network tab is active. On the right side, there's a sidebar with tabs for Styles, Computed, Event Listeners, and DOM Breakpoints. The Styles tab is selected. A CSS rule for '.css-5mg3e5-App' is shown:

```
.css-5mg3e5-App {  
    font-family: 'Segoe UI', 'Helvetica Neue', sans-serif;  
    font-size: 16px;  
    color: #5c5a5a;  
}
```

```
</style>  
</head>  
▼<body>  
  <noscript>You need to enable JavaScript to run this app.</noscript>  
  ▼<div id="root">  
    ... ▼<div class="css-5mg3e5-App"> == $0  
      ▶<div>...</div>  
      ▶<div>  
        ▶<div>...</div>  
      </div>  
    </div>  
</body>  
</html>
```

This screenshot shows a Q & A page. At the top left is a 'Q & A' logo. To its right is a search bar with the placeholder 'Search...'. On the far right is a 'Sign In' button with a user icon. Below the search bar is an 'Ask a question' button.

This screenshot shows the same Q & A page. At the top left is a 'Q & A' logo. To its right is a search bar with the placeholder 'Search...'. On the far right is a 'Sign In' button with a user icon. Below the search bar, there's a section titled 'UNANSWERED QUESTIONS' and an 'Ask a question' button.

Q & A

[Sign In](#)

UNANSWERED QUESTIONS

[Ask a question](#)

Which state management tool should I use?

Asked by Bob on 21/09/2019 09:22:22

```
(alias) const Question: FunctionComponent<Props>
import Question

Property 'showContent' is missing in type '{ data:
QuestionData; }' but required in type 'Props'. ts(2741)
Question.tsx(9, 3): 'showContent' is declared here.

Quick Fix... Peek Problem
<Question data={question} />
```

UNANSWERED QUESTIONS

[Ask a question](#)

Which state management tool should I use?

There seem to be a fair few state management tools...

Asked by Bob on 21/09/2019 09:22:22

UNANSWERED QUESTIONS

[Ask a question](#)

Which state management tool should I use?

```
<Page>
  <div
    css={css}
    display: flex;
    align-items: center;
    justify-content: space-between;
  >
    <PageTitle>Unanswered Questions</PageTitle>
    <PrimaryButton>Ask a question</PrimaryButton>
  </div>
  <QuestionList data={getUnansweredQuestions()} />
</Page>
```

Q & A Sign In

UNANSWERED QUESTIONS [Ask a question](#)

Console Elements Audits Sources Network Memory Performance Application > ⚡ 1 :

first rendered [HomePage.tsx:12](#)

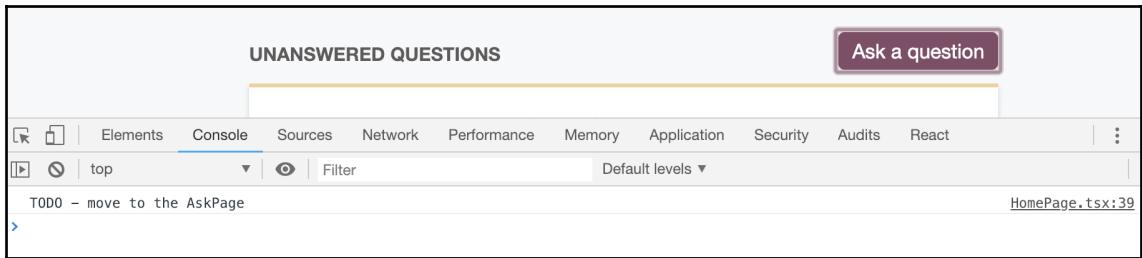
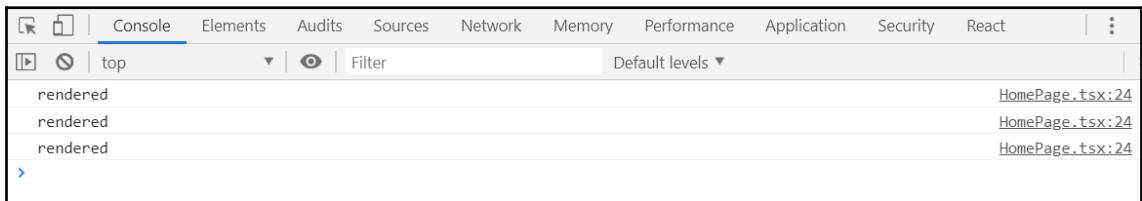
⚠ ./src/HomePage.tsx [webpackHotDevClient.js:120](#)

Line 5: 'QuestionList' is defined but never used @typescript-eslint/no-unused-vars
Line 6: 'getUnansweredQuestions' is defined but never used @typescript-eslint/no-unused-vars

```
[ts] 'await' expression is only allowed within an async function.
[1308]
useEffect(() => {
  const questions = await getUnansweredQuestions();
});
```

```
[ts]
Argument of type '() => Promise<void>' is not assignable to parameter of type 'EffectCallback'.
  Type 'Promise<void>' is not assignable to type 'void | (() => void)'.
    Type 'Promise<void>' is not assignable to type '() => void'.
    Type 'Promise<void>' provides no match for the signature '(): void'. [2345]
function(): Promise<void>
useEffect(async () => {
  const questions = await getUnansweredQuestions();
});

```



Q & A Sign In

UNANSWERED QUESTIONS Ask a question

Elements Console Sources Network Performance Memory Application Security Audits React

top Default levels ▾

```
r  
re  
rea  
react  
>
```

Header.tsx:64
Header.tsx:64
Header.tsx:64
Header.tsx:64
Header.tsx:64

UNANSWERED QUESTIONS Ask a question

Why should I learn TypeScript?
TypeScript seems to be getting popular so I wonder...
Asked by Bob on 21/09/2019 09:22:22

Elements Console Sources Network Performance Memory Application Security Audits React

top Default levels ▾

```
Rendering QuestionList ▶ (2) [{}], [{}]  
TODO - move to the AskPage  
Rendering QuestionList ▶ (2) [{}], [{}]  
>
```

QuestionList.tsx:31
HomePage.tsx:41
QuestionList.tsx:31

Elements Console Sources Network Performance Memory Application Security Audits React

top Default levels ▾

```
first rendered  
Rendering QuestionList ▶ (2) [{}], [{}]  
③ TODO - move to the AskPage  
>
```

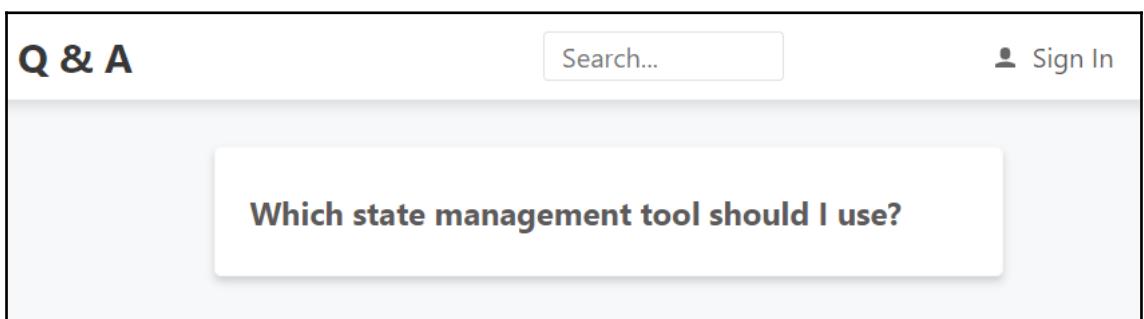
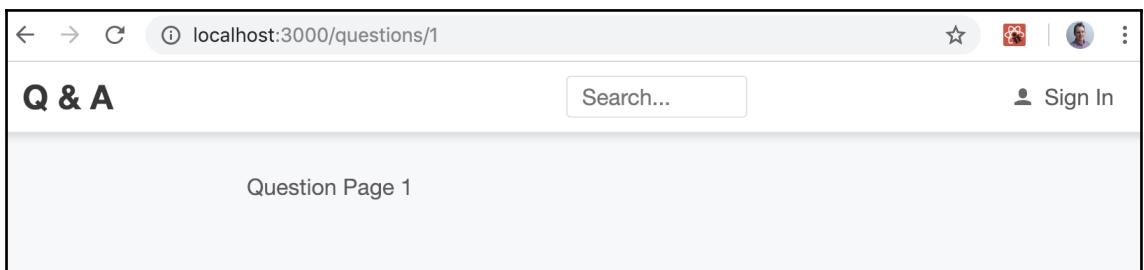
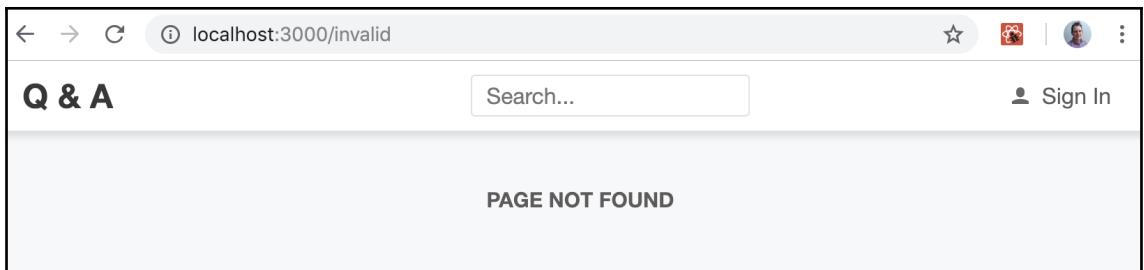
HomePage.tsx:36
QuestionList.tsx:31
HomePage.tsx:41

Chapter 4: Routing with React Router

The screenshot shows a web browser window with the URL `localhost:3000/search`. The page has a header with "Q & A", a search bar, and a "Sign In" button. Below the header, there is a section titled "UNANSWERED QUESTIONS" containing a single question: "Which state management tool should I use?". The question text is followed by a note: "There seem to be a fair few state management tools...". At the bottom of this section, it says "Asked by Bob on 21/09/2019 09:22:22". The entire content area is labeled "SEARCH RESULTS" at the bottom.

This screenshot shows the same web browser window at `localhost:3000/search`, but the "SEARCH RESULTS" section is completely empty, indicating no search results found.

This screenshot shows the web browser at `localhost:3000/invalid`. Similar to the previous screens, the "SEARCH RESULTS" section is empty.



```
49 ...     {question !== null && (
50       ...       <p
51         ...         css={css
52           ...           margin-top: 0px;
53           ...           background-color: white;
54           ...
55         ...
56         ...           {question.content}
57       ...
58       ...         <span>2nd element</span>
59     ...
59 )}
```

PROBLEMS 3 OUTPUT DEBUG CONSOLE TERMINAL 1: node + □ ✎ ⌂ ⌄

Failed to compile.

./src/QuestionPage.tsx
Line 59: Parsing error: JSX expressions must have one parent element

Q & A Search... Sign In

Why should I learn TypeScript?

TypeScript seems to be getting popular so I wondered whether it is worth my time learning it? What benefits does it give over JavaScript?

Asked by Bob on 21/09/2019 09:22:22

Q & A

[Sign In](#)

Why should I learn TypeScript?

TypeScript seems to be getting popular so I wondered whether it is worth my time learning it? What benefits does it give over JavaScript?

Asked by Bob on 21/09/2019 09:22:22

To catch problems earlier speeding up your developments

Answered by Jane on 21/09/2019 09:22:22

So, that you can use the JavaScript features of tomorrow, today

Answered by Fred on 21/09/2019 09:22:22

A screenshot of a web browser window showing search results. The address bar says "localhost:3000/search?criteria=type". The page title is "Q & A". There is a search bar and a "Sign In" link. The main content area is titled "SEARCH RESULTS" and shows a single result for "for 'type'".

Why should I learn TypeScript?

TypeScript seems to be getting popular so I wonder...

Asked by Bob on 21/09/2019 09:22:22

A screenshot of a web browser window showing an error message. The address bar says "localhost:3000/ask". The error message is displayed in red text:

Error: A React component suspended while rendering, but no fallback UI was specified.

Add a <Suspense fallback=> component higher in the tree to provide a loading indicator or placeholder to display.

Q & A [Sign In](#)

ASK A QUESTION

Elements Console Sources **Network** Performance Memory Application Security Audits React

View: Group by frame Preserve log Disable cache Offline Slow 3G

Filter Hide data URLs **All** XHR JS CSS Img Media Font Doc WS Manifest Other

Name	Status	Type	Initiator	Size	Time	Waterfall
0.chunk.js	304	script	bootstrap:850	178 B	2.01 s	

Network Memory Performance Application Security React

frame Preserve log Disable cache Offline No throttling ▾

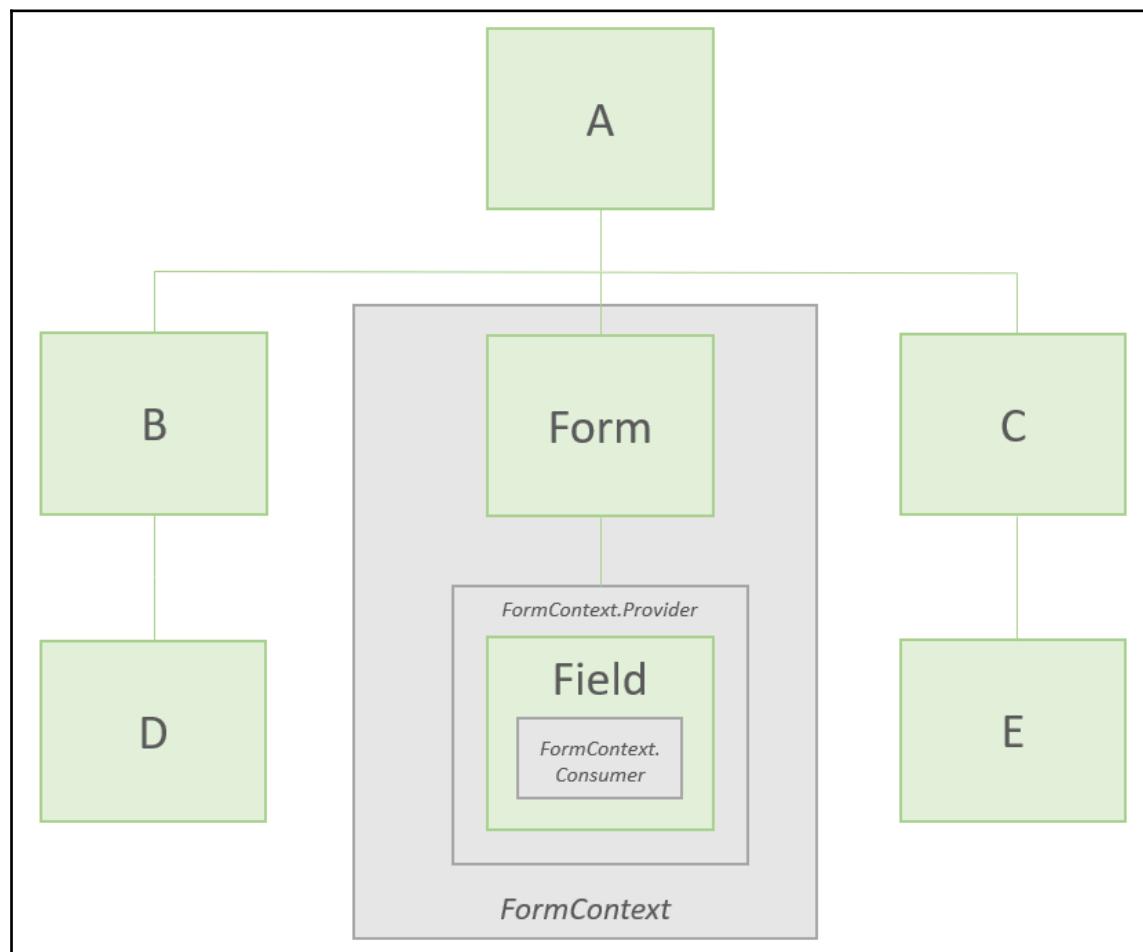
HR JS CSS Img Media Font Doc WS Manifest Oth

- Disabled**
- No throttling
- Presets**
- Fast 3G
- Slow 3G**
- Offline
- Custom**
- Add...

Q & A [Sign In](#)

Loading...

Chapter 5: Working with Forms



ASK A QUESTION

Title

Content

Submit Your Question

Which state management tool should I use?

There seem to be a fair few state management tools around for React - React, Unstated, ... Which one should I use?

Asked by Bob on 25/05/2019 15:10:53

Your Answer

Submit Your Answer

ASK A QUESTION

Title

This must be populated

Content

Some content

This must be at least 50 characters

Submit Your Question

Your Answer

Some answer

This must be at least 50 characters

Submit Your Answer

A screenshot of a web browser window displaying a search results page. The address bar shows the URL `localhost:3000/search?criteria=typescript`. The page title is "Q & A". A search bar contains the query "typescript". On the right, there is a "Sign In" button. The main content area is titled "SEARCH RESULTS" and displays the query "for 'typescript'". Below this, a card contains the question "Why should I learn TypeScript?", the answer "TypeScript seems to be getting popular so I wonder...", and the timestamp "Asked by Bob on 30/01/2019 20:25:33".

A screenshot of a web browser window displaying a Q&A application. The URL in the address bar is `localhost:3000/ask`. The page has a header with "Q & A" on the left, a search bar in the center, and a "Sign In" button on the right. Below the header, there is a "ASK A QUESTION" section. This section contains fields for "Title" (containing "Cascading dropdown") and "Content" (containing "How do you implement a cascading dropdown in React?"). At the bottom of this section is a "Submit Your Question" button. Below the button, a message states "Your question was successfully submitted". The browser interface includes standard navigation buttons (back, forward, refresh) and a toolbar with icons for star, refresh, and other functions.

A screenshot of a web-based Q&A application. At the top, the URL bar shows 'localhost:3000/questions/2'. The page title is 'Q & A'. On the right, there are icons for search, sign in, and more. The main content area features a question titled 'Which state management tool should I use?'. Below the question is a brief description: 'There seem to be a fair few state management tools around for React - React, Unstated, ... Which one should I use?'. It is timestamped 'Asked by Bob on 30/01/2019 20:38:46'. A central box contains a text area labeled 'Your Answer' with the text: 'It depends on your requirements - I'd start with local component state until that becomes messy'. Below this is a 'Submit Your Answer' button. A success message 'Your answer was successfully submitted' is displayed at the bottom of the box.

Which state management tool should I use?

There seem to be a fair few state management tools around for React - React, Unstated, ... Which one should I use?

Asked by Bob on 30/01/2019 20:38:46

Your Answer

It depends on your requirements - I'd start with local component state until that becomes messy

Submit Your Answer

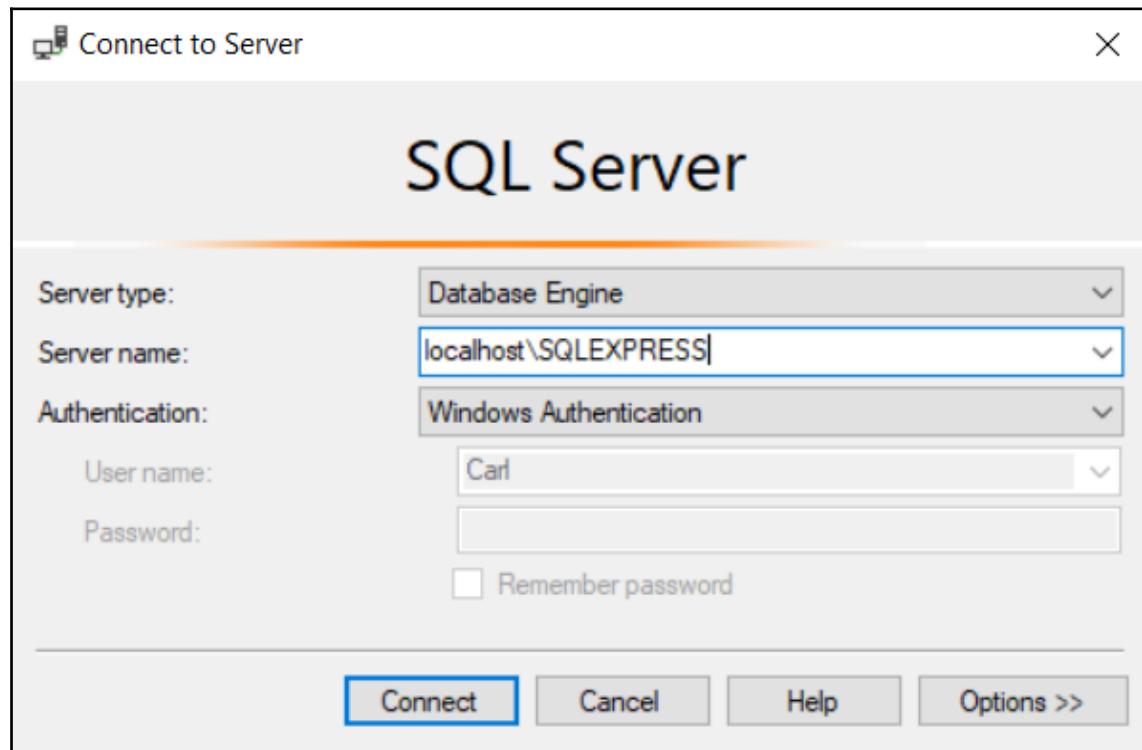
Your answer was successfully submitted

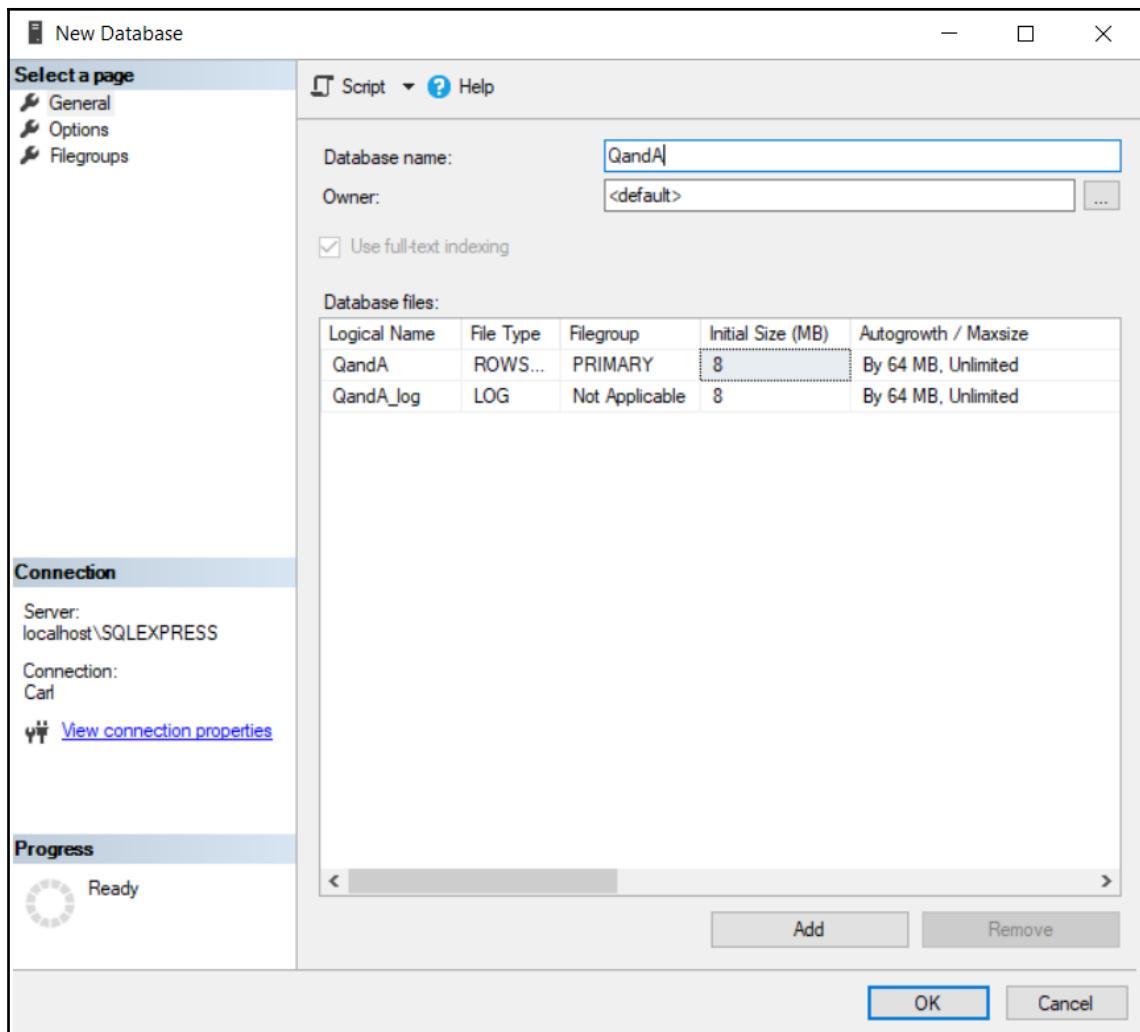
Chapter 6: Managing State with Redux

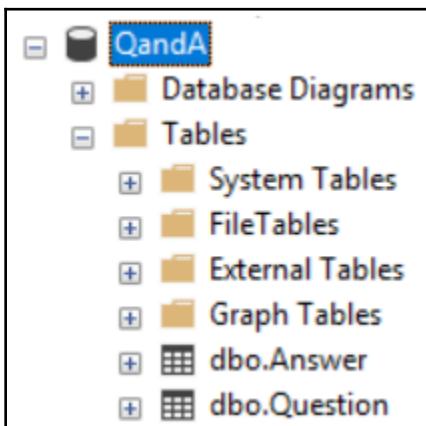
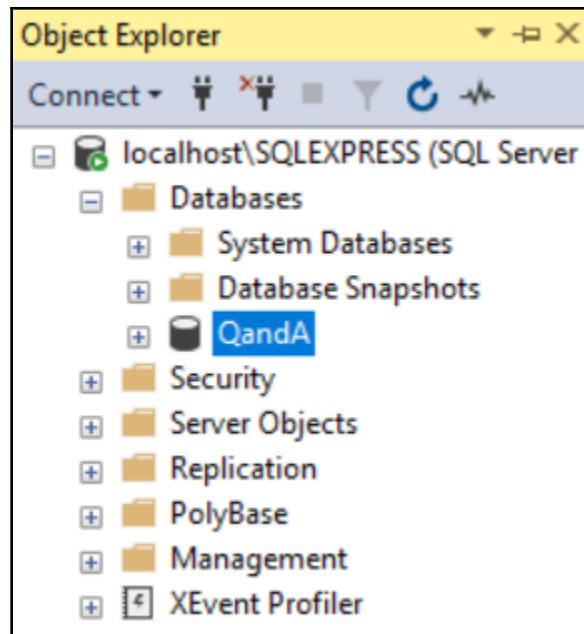
```
case "GotUnansweredQuestions": {
  return {
    ...state,
    unanswered: action.,
    loading: false
  };
}
```

questions (property) GotUnansweredQuestionsAction... ⓘ
type

Chapter 7: Interacting with the Database with Dapper







	QuestionId	Title	Content	UserId	UserName	Created
▶	1	Why should I le...	TypeScript see...	1	bob.test@test.com	2019-05-18 1...
	2	Which state ma...	There seem to ...	2	jane.test@test.com	2019-05-18 1...
*	NULL	NULL	NULL	NULL	NULL	NULL

Programmability

- Stored Procedures
 - System Stored Procedures
 - dbo.Answer_Delete
 - dbo.Answer_Get_ByQuestionId
 - dbo.Answer_Post
 - dbo.Answer_Put
 - dbo.Question_AddForLoadTest
 - dbo.Question_Delete
 - dbo.Question_Exists
 - dbo.Question_GetMany
 - dbo.Question_GetMany_BySearch
 - dbo.Question_GetMany_BySearch_WithPaging
 - dbo.Question_GetMany_WithAnswers
 - dbo.Question_GetSingle
 - dbo.Question_GetUnanswered
 - dbo.Question_Post
 - dbo.Question_Put

Results						
		Messages				
	QuestionId	Title	Content	UserId	UserName	Created
1	1	Why should I learn TypeScript?	TypeScript seems to be getting popular so I wond...	1	bob.test@test.com	2019-05-18 14:32:00.0000000

NuGet - Solution

Browse Installed Updates Consolidate

Dapper Include prerelease

Package source: nuget.org

Dapper by Sam Saffron,Marc Gravell,Nick Craver, **14.9M** downloads v1.50.7
A high performance Micro-ORM supporting SQL Server, MySQL, Sqlite, SqICE, Firebird etc..

Abp.Dapper by Abp.Dapper, **19.5K** downloads v4.2.0
Abp.Dapper

Dapper.Extension by m98proxy, **64.5K** downloads v1.0.0.1
CRUD extension methods for Dapper

Dapper.Accelr8.Repo by Mallory,Kristen, **1.96K** downloads v1.0.13
This repository sets the base for the the Dapper.Accelr8 readers and writers into a repository / unit of work pattern. It does force you to at least provide a minimalistic service locator pattern.

Dapper-Async by Sam Saffron,Marc Gravell,Brandon Kaid, **140K** downloads v1.3.0
Dapper QueryAsync methods

Manage Packages for Solution

Dapper

Versions - 0

Project	Version
<input checked="" type="checkbox"/>	QandA

Installed: not installed

Version: Latest stable 1.50.7

This screenshot shows the NuGet package manager interface. The search bar at the top contains 'Dapper'. On the left, there are tabs for 'Browse', 'Installed', 'Updates', and 'Consolidate'. Below the search bar is a checkbox for 'Include prerelease'. The right side displays a list of packages related to 'Dapper', including 'Dapper' (v1.50.7), 'Abp.Dapper' (v4.2.0), 'Dapper.Extension' (v1.0.0.1), 'Dapper.Accelr8.Repo' (v1.0.13), and 'Dapper-Async' (v1.3.0). Each package entry includes its name, version, download count, and a brief description. To the right of the list is a 'Manage Packages for Solution' panel for 'Dapper'. It shows the 'Versions - 0' section with a table where 'Project' and 'QandA' are listed under 'Version'. Buttons for 'Uninstall' and 'Install' are present, along with a dropdown for 'Version' set to 'Latest stable 1.50.7'.

NuGet - Solution

Browse Installed Updates Consolidate

sqlclient Include prerelease

Package source: nuget.org

.NET System.Data.SqlClient by Microsoft, **62.7M** downloads v4.8.0-preview3.19551.4
Provides the data provider for SQL Server. These classes provide access to versions of SQL Server and encapsulate database-specific protocol...
Prerelease

.NET runtime.native.System.Data.SqlClient.sni by Microsoft, 3 v4.7.0-preview3.19551.4
Internal implementation package not meant for direct consumption.
Please do not reference directly.
Prerelease

.NET runtime.win7-x64.runtime.native.System.Data.SqlClient.sni by Microsoft, v4.3.0
Internal implementation package not meant for direct consumption. Please do not reference directly.

.NET runtime.win7-x86.runtime.native.System.Data.SqlClient.sni by Microsoft, v4.3.0
Internal implementation package not meant for direct consumption. Please do not reference directly.

.NET Microsoft.Data.SqlClient by Microsoft, **1.3M** downloads v1.1.0

Manage Packages for Solution

System.Data.SqlClient

Versions - 0

Project	Version
<input checked="" type="checkbox"/>	WebApplication

Installed: not installed

Version: Latest stable 4.7.0

This screenshot shows the NuGet package manager interface. The search bar at the top contains 'sqlclient'. On the left, there are tabs for 'Browse', 'Installed', 'Updates', and 'Consolidate'. Below the search bar is a checkbox for 'Include prerelease'. The right side displays a list of packages related to 'sqlclient', including '.NET System.Data.SqlClient' (v4.8.0-preview3.19551.4), '.NET runtime.native.System.Data.SqlClient.sni' (v4.7.0-preview3.19551.4), '.NET runtime.win7-x64.runtime.native.System.Data.SqlClient.sni' (v4.3.0), '.NET runtime.win7-x86.runtime.native.System.Data.SqlClient.sni' (v4.3.0), and 'Microsoft.Data.SqlClient' (v1.1.0). Each package entry includes its name, version, download count, and a brief description. To the right of the list is a 'Manage Packages for Solution' panel for 'System.Data.SqlClient'. It shows the 'Versions - 0' section with a table where 'Project' and 'WebApplication' are listed under 'Version'. Buttons for 'Uninstall' and 'Install' are present, along with a dropdown for 'Version' set to 'Latest stable 4.7.0'.

The screenshot shows the Visual Studio IDE. The left pane displays the code for `DataRepository.cs` in the `QandA` project. The code defines a class `DataRepository` with a constructor and a private field `_context`. The right pane shows the `Solution Explorer` with the project structure:

- Solution 'QandA' (1 project)**
- QandA**
 - Connected Services
 - Dependencies
 - Properties
 - Controllers
 - Data
 - DataRepository.cs**
 - appsettings.json
 - Program.cs
 - Startup.cs

The screenshot shows the Visual Studio IDE with code completion open. The code being edited is:

```
7 {
8     public class DataRepository : IDataRepository
9     {
10 }
11 }
```

The code completion dropdown shows two options: **Implement interface** and **Implement interface explicitly**. The **Implement interface** option is selected, and the implementation of the `IDataRepository` interface is shown:

```
...
using System.Threading.Tasks;
using QandA.Models;

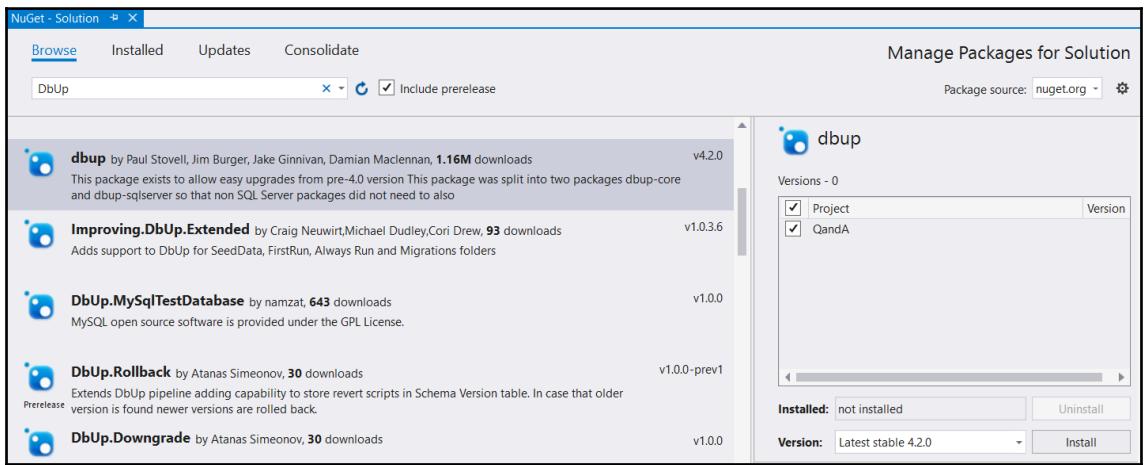
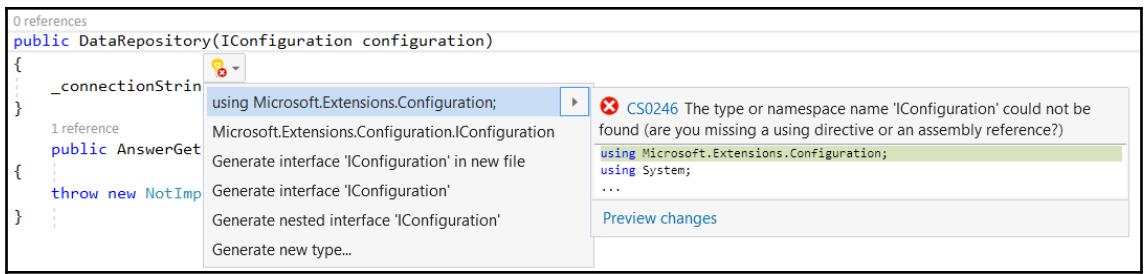
namespace QandA.Data
{
    public class DataRepository : IDataRepository
    public class DataRepository : IDataRepository
    {
        public void DeleteQuestion(int questionId)
        {
            throw new NotImplementedException();
        }

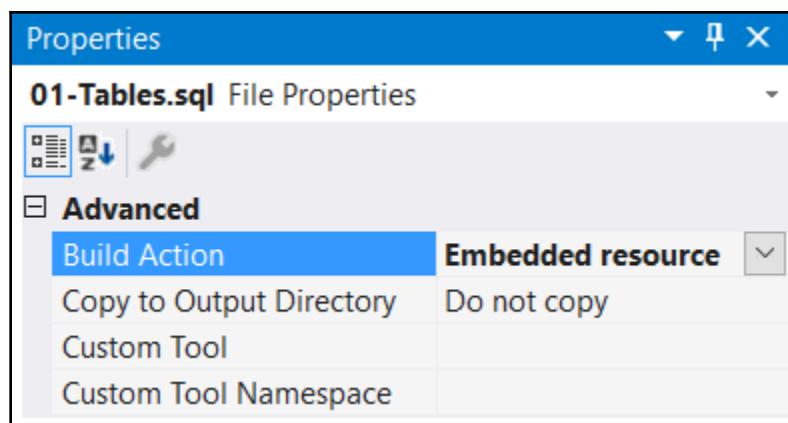
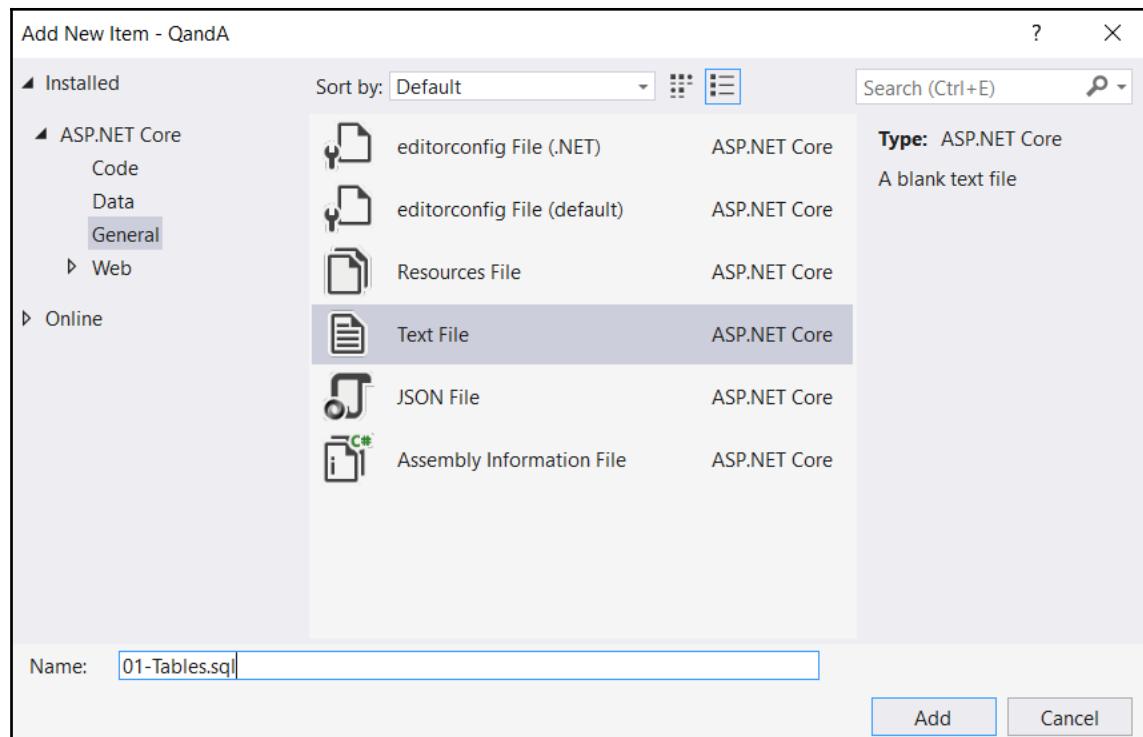
        public AnswerGetResponse GetAnswer(int answerId)
        {
            throw new NotImplementedException();
        }

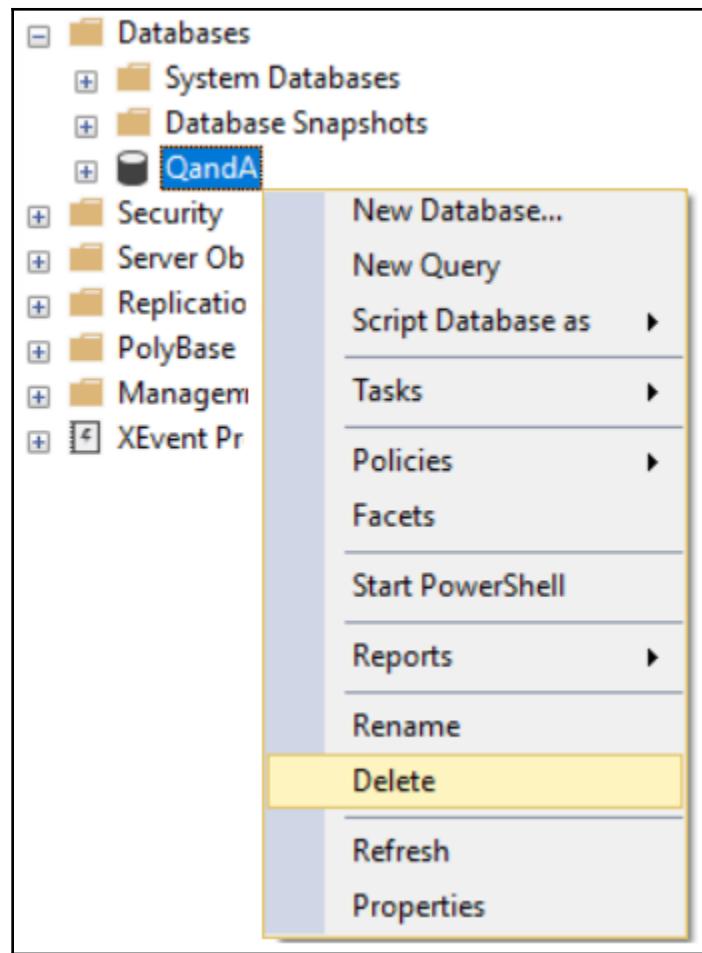
        public QuestionGetSingleResponse GetQuestion(int questionId)
        {
            throw new NotImplementedException();
        }

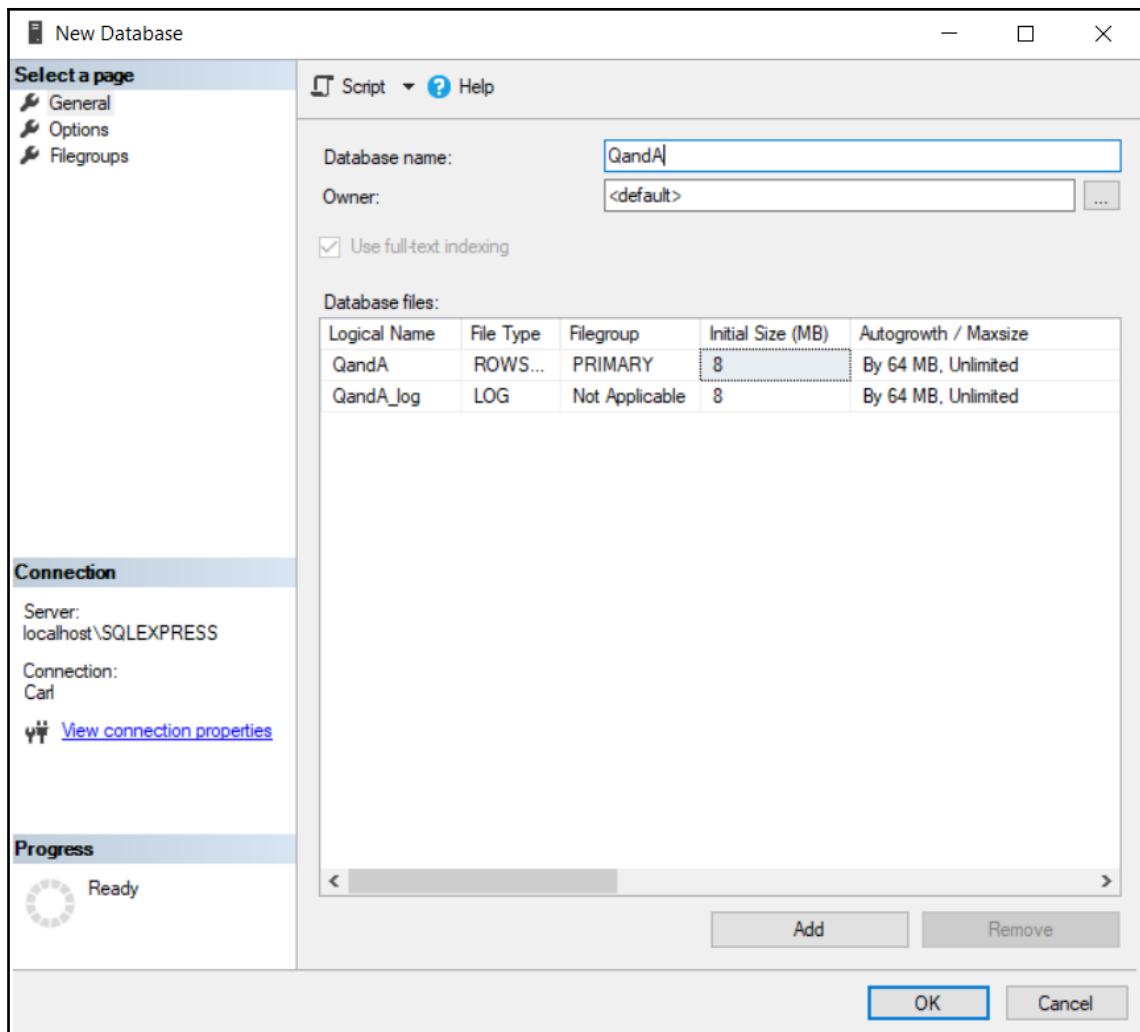
        public IEnumerable<QuestionGetManyResponse> GetQuestions()
        {
            throw new NotImplementedException();
        }

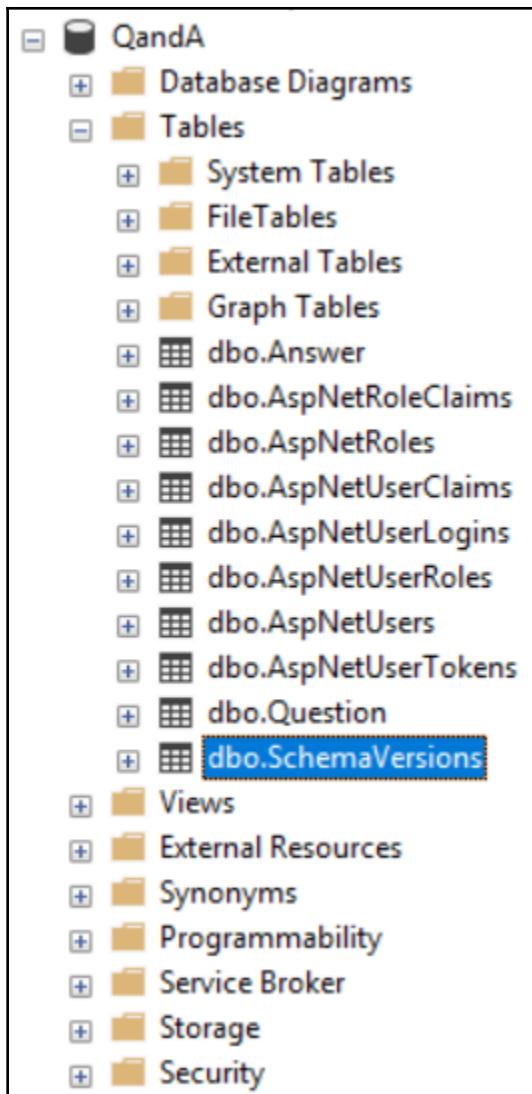
        public IEnumerable<QuestionGetManyResponse> GetQuestionsBySearch(string search)
        {
            throw new NotImplementedException();
        }
    }
}
```





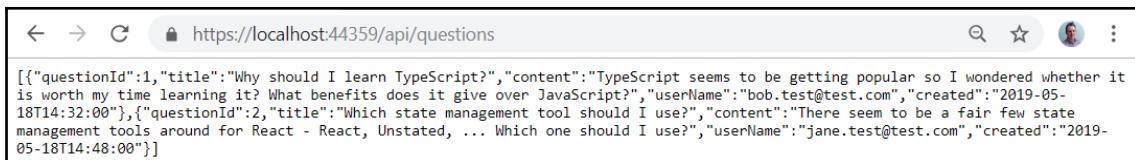
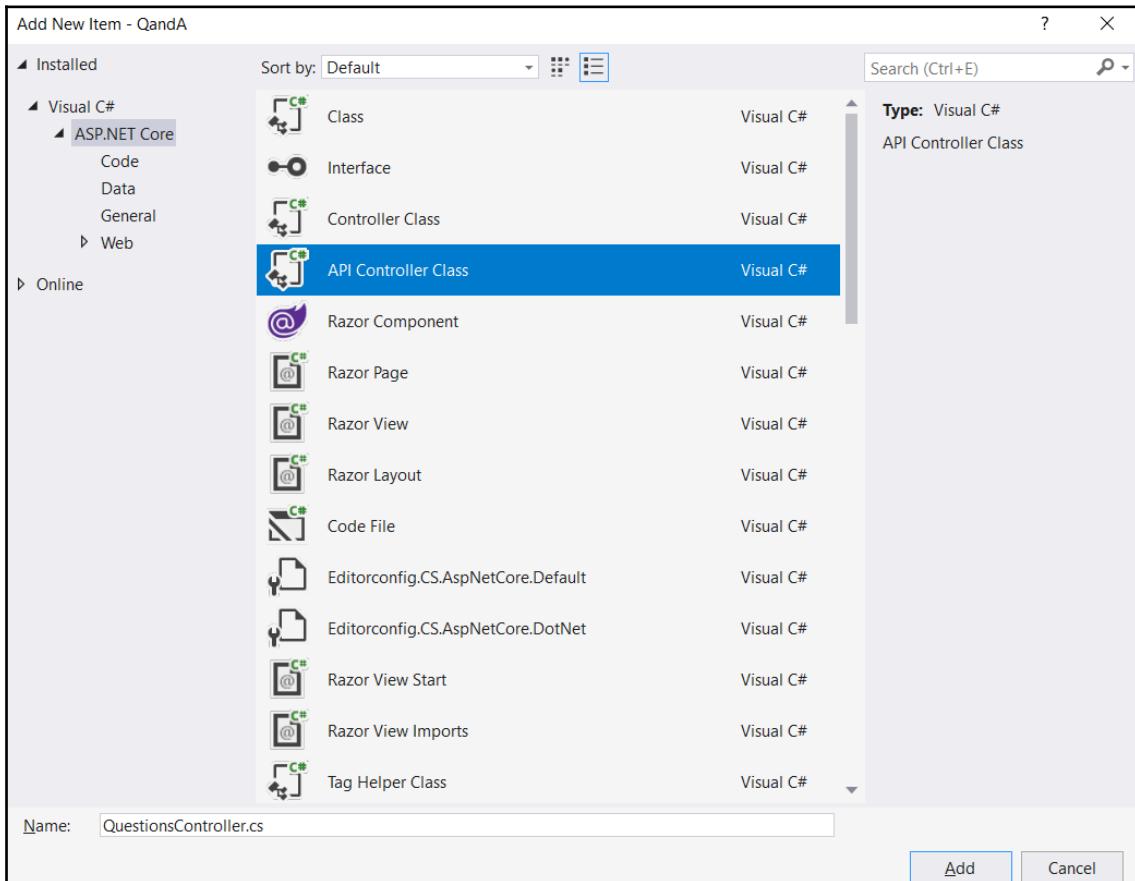


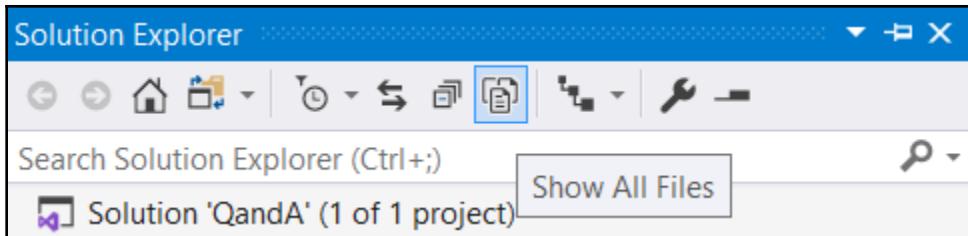




	Id	ScriptName	Applied
	1	QandA.SQLScripts.01-Tables.sql	2019-02-1...
	2	QandA.SQLScripts.02-Sprocs.sql	2019-02-1...
**	NULL	NULL	NULL

Chapter 8: Creating REST API Endpoints





```
public IEnumerable<QuestionGetManyResponse> GetQuestions(string search)
{
    var questions = _dataRepository.GetQuestions();
    return questions;
}
```

```
public IEnumerable<QuestionGetManyResponse> GetQuestions(string search)
{
    var questions = _dataRepository.GetQuestions(); ≤ 6,711ms elapsed
    return questions;
}
```

← → ⌂ https://localhost:44359/api/questions?search=type

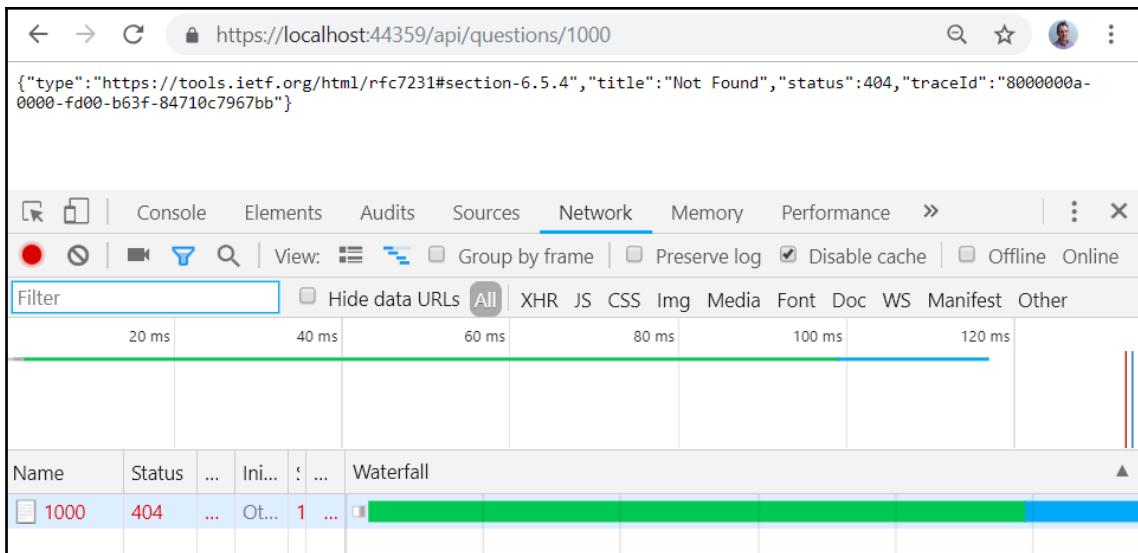
```
[{"questionId":1,"title":"Why should I learn TypeScript?","content":"TypeScript seems to be getting popular so I wondered whether it is worth my time learning it? What benefits does it give over JavaScript?","userName":"bob.test@test.com","created":"2019-05-18T14:32:00"}]
```

← → ⌂ https://localhost:44359/api/questions/unanswered

```
[{"questionId":2,"title":"Which state management tool should I use?","content":"There seem to be a fair few state management tools around for React - React, Unstated, ... Which one should I use?","userName":"jane.test@test.com","created":"2019-05-18T14:48:00"}]
```

← → ⌂ https://localhost:44359/api/questions/1

```
{"questionId":1,"title":"Why should I learn TypeScript?","content":"TypeScript seems to be getting popular so I wondered whether it is worth my time learning it? What benefits does it give over JavaScript?","userId":1,"userName":"bob.test@test.com","created":"2019-05-18T14:32:00","answers":[{"answerId":1,"content":"To catch problems earlier speeding up your developments","userName":"jane.test@test.com","created":"2019-05-18T14:40:00"}, {"answerId":2,"content":"So, that you can use the JavaScript features of tomorrow, today","userName":"fred.test@test.com","created":"2019-05-18T16:18:00"}]}
```



The screenshot shows the "Headers" tab of the Postman interface. There is one header entry:

KEY	VALUE	DESCRIPTION	Bulk Edit	Presets
<input checked="" type="checkbox"/> Content-Type	application/json			

https://localhost:44359/api/questions

POST https://localhost:44359/api/questions Send Save

Params Authorization Headers (1) Body Pre-request Script Tests Cookies Code Comments (0)

Body (radio buttons: none, form-data, x-www-form-urlencoded, raw, binary) JSON (application/json) Beautify

```
1 {  
2   "title": "Accessing HttpContext in a service class",  
3   "content": "How do you access HttpContext in a class outside of a controller?",  
4   "userId": "1",  
5   "userName": "bob.test@test.com",  
6   "created": "2019-05-18T17:39:00"  
7 }
```

Body Cookies (3) Headers (7) Test Results Status: 201 Created Time: 332 ms Size: 548 B Download

Pretty Raw Preview JSON (radio buttons: Pretty, Raw, Preview, JSON) Search

```
1 {  
2   "questionId": 3,  
3   "title": "Accessing HttpContext in a service class",  
4   "content": "How do you access HttpContext in a class outside of a controller?",  
5   "userId": "1",  
6   "userName": "bob.test@test.com",  
7   "created": "2019-05-18T17:39:00",  
8   "answers": []  
9 }
```

Body Cookies (3) Headers (7) Test Results Status: 201 Created Time: 332 ms Size: 548 B Download

Transfer-Encoding → chunked
Content-Type → application/json; charset=utf-8
Location → https://localhost:44359/api/Questions/3
Server → Microsoft-IIS/10.0

https://localhost:44359/api/questions

PUT https://localhost:44359/api/questions/3 Send Save

Params Authorization Headers (1) Body Pre-request Script Tests Cookies Code Comments (0)

none form-data x-www-form-urlencoded raw binary JSON (application/json) Beautify

```
1 [ {  
2   "content": "How do you access HttpContext in a class outside of a controller? Any help would be appreciated"  
3 } ]
```

Body Cookies (3) Headers (6) Test Results Status: 200 OK Time: 368 ms Size: 522 B Download

Pretty Raw Preview JSON  

```
1 {  
2   "questionId": 3,  
3   "title": "Accessing HttpContext in a class",  
4   "content": "How do you access HttpContext in a class outside of a controller? Any help would be appreciated",  
5   "userId": "1",  
6   "userName": "bob.test@test.com",  
7   "created": "2019-05-18T17:39:00",  
8   "answers": []  
9 }
```

DELETE https://localhost:44359/api/questions/3 Send Save

Params Authorization Headers (1) Body Pre-request Script Tests Cookies Code Comments (0)

none form-data x-www-form-urlencoded raw binary JSON (application/json) Beautify

```
1 [ ]
```

Body Cookies (3) Headers (5) Test Results Status: 204 No Content Time: 206 ms Size: 232 B

https://localhost:44359/api/questions/answer

POST https://localhost:44359/api/questions/answer

Body (JSON application/json)

```

1 {
2   "questionId": 1,
3   "content": "To improve the development experience",
4   "userId": 3,
5   "userName": "fred.test@test.com",
6   "created": "2019-05-23T13:07:00"
7 }
  
```

Status: 200 OK Time: 280 ms Size: 407 B

Body (Pretty) JSON

```

1 {
2   "answerId": 3,
3   "content": "To improve the development experience",
4   "userName": "fred.test@test.com",
5   "created": "2019-05-23T13:07:00"
6 }
  
```

POST https://localhost:44359/api/questions/answer

Body (JSON application/json)

```

1 {
2   "questionId": 1,
3   "userId": 3,
4   "created": "2019-05-23T13:07:00"
5 }
  
```

```

104           connection.Open();
105           connection.Execute(@"EXEC dbo.Question_Delete @QuestionId");
106       }
107   }
108
109  public AnswerGetResponse PostAnswer(AnswerPostRequest answer)
110  {
111      using (var connection = new SqlConnection(_connectionString))
112      {
113          connection.Open();
114          return connection.QueryFirst<AnswerGetResponse>("EXEC dbo.Answer_Post @QuestionId = @QuestionId, @Content = @Content", answer);
115      }
116  }
117 }
118
119
  
```

Exception User-Unhandled

System.Data.SqlClient.SqlException: 'Cannot insert the value NULL into column 'Content', table 'QandA.dbo.Answer'; column does not allow nulls. INSERT fails.
The statement has been terminated.'

[View Details](#) | [Copy Details](#)

[Exception Settings](#)

The screenshot shows a POST request to `https://localhost:44359/api/questions`. The request body is a JSON object:

```
1 {  
2   "content": "some content without a title",  
3   "userId": "3",  
4   "created": "2019-05-23T13:07:00"  
5 }
```

The response status is 400 Bad Request, with the following error message:

```
1 {  
2   "title": "One or more validation errors occurred.",  
3   "status": 400,  
4   "traceId": "|fc29c209-48b550e00253593c.",  
5   "errors": {  
6     "Title": [  
7       "The Title field is required."  
8     ]  
9   }  
10 }
```

POST https://localhost:44359/api/questions

Send Save

Params Authorization Headers (9) Body Pre-request Script Tests Cookies Code Comments (0)

Body (none) form-data x-www-form-urlencoded raw binary GraphQL BETA JSON (application/json) Beautify

```
1 {  
2   "title": "a title",  
3   "userId": "3",  
4   "created": "2019-05-23T13:07:00"  
5 }
```

Body Cookies (3) Headers (5) Test Results Status: 400 Bad Request Time: 35ms Size: 373 B Save Response

Pretty Raw Preview JSON

```
1 {  
2   "title": "One or more validation errors occurred.",  
3   "status": 400,  
4   "traceId": "|df55d79e-4396af56b76882d4.",  
5   "errors": {  
6     "Content": [  
7       "Please include some content for the question"  
8     ]  
9   }  
10 }
```

PUT https://localhost:44359/api/questions/3

Send Save

Params Authorization Headers (10) Body Pre-request Script Tests Cookies Code Comments (0)

Body (none) form-data x-www-form-urlencoded raw binary JSON (application/json) Beautify

```
1 {  
2   "title": "A very  
very very very very very very very very very very very very very very very very big title"  
3 }
```

Body Cookies (3) Headers (6) Test Results Status: 400 Bad Request Time: 3798 ms Size: 590 B Save Download

Pretty Raw Preview JSON

```
1 {  
2   "errors": {  
3     "Title": [  
4       "The field Title must be a string with a maximum length of 100."  
5     ]  
6   },  
7   "title": "One or more validation errors occurred.",  
8   "status": 400,  
9   "traceId": "|ffc8c212-4270a37ec0e98a92."  
10 }
```

POST https://localhost:44359/api/questions

Params Authorization Headers (1) Body **JSON (application/json)** Cookies Code Comments (0)

none form-data x-www-form-urlencoded raw binary Beautify

```
1 {  
2   "title": "What is NullReferenceException?",  
3   "content": "I'm getting a NullReferenceException in my code. What is this and how do I fix this?"  
4 }
```

Body Cookies (3) Headers (7) Test Results Status: 201 Created Time: 205 ms Size: 563 B Download

Pretty Raw Preview JSON

```
1 {  
2   "questionId": 4,  
3   "title": "What is NullReferenceException?",  
4   "content": "I'm getting a NullReferenceException in my code. What is this and how do I fix this?",  
5   "userId": "1",  
6   "userName": "bob.test@test.com",  
7   "created": "2019-05-25T09:15:38.3833333",  
8   "answers": []  
9 }
```

POST https://localhost:44359/api/questions/answer

Params Authorization Headers (1) Body **JSON (application/json)** Pre-request Script Tests Cookies Code Comments (0)

none form-data x-www-form-urlencoded raw binary Beautify

```
1 {  
2   "questionId": 4,  
3   "content": "This occurs when a method or property of an object is being referenced that is null"  
4 }
```

Body Cookies (3) Headers (6) Test Results Status: 200 OK Time: 303 ms Size: 455 B Download

Pretty Raw Preview JSON

```
1 {  
2   "answerId": 5,  
3   "content": "This occurs when a method or property of an object is being referenced that is null",  
4   "userName": "bob.test@test.com",  
5   "created": "2019-05-25T09:15:38.3833333",  
6 }
```

Chapter 9: Creating a Real-Time API with SignalR

```
0 references
public async Task UnsubscribeQuestion(int questionId)
{
    await Groups.RemoveFromGroupAsync(Context.ConnectionId, $"Question-{questionId}");
    await Clients.Caller.SendAsync("Message", "Successfully unsubscribed");
    Clients.
}
    ↴ AllExcept<>
    ↴ Caller
    ↴ Client
    ↴ Clients
    ↴ Clients<>
    ↴ Equals
    ↴ GetHashCode
    ↴ GetType
    ↴ Group
    ↴ IClientProxy IHubClients<IClientProxy>.Group(string groupName)
    ↴ ↵ ↴ ↴
```

Which state management tool should I use?
There seem to be a fair few state management tools around for React - React, Unstated, ... Which one should I use?

Elements	Audits	Sources	Network	Memory	Performance	Application	Security	React
▼	↻	Filter	Default levels ▾					
✖ OPTIONS https://localhost:44359/questionshub/negotiate 405 (Method Not Allowed)								
✖ Access to XMLHttpRequest at 'https://localhost:44359/questionshub/negotiate' from origin 'http://localhost:3000' has been blocked by CORS policy: Response to preflight request doesn't pass access control check: No 'Access-Control-Allow-Origin' header is present on the requested resource.								
⚠ Warning: Error from HTTP request. 0: .								
✖ Error: Failed to complete negotiation with the server: Error								
✖ Error: Failed to start the connection: Error								
Error at new HttpError (_errors.js:44) at XMLHttpRequest.onerror (xhrHttpClient.js:104)								

Which state management tool should I use?

There seem to be a fair few state management tools around for React - React, Unstated, ... Which one should I use?

The screenshot shows the browser's developer tools Network tab. At the top, there are tabs for Elements, Audits, Sources, Network, Memory, Performance, Application, Security, and React. Below the tabs, there is a dropdown menu with options like '▼' and 'Filter', and a 'Default levels ▾' button. The main area displays network information: 'Information: WebSocket connected to ws://localhost:44359/questionshub?id=_id_gHrMcnmgcyFIpa9Sgg.' followed by two messages: 'Message Successfully connected' and 'Message Sucessfully subscribed'. A blue arrow icon is visible on the left side.

The screenshot shows the Postman API client interface. At the top, it says 'POST https://localhost:44359/api/questions/answer' with 'Send' and 'Save' buttons. Below the URL, there are tabs for Params, Authorization, Headers (1), Body (selected), Pre-request Script, Tests, Cookies, Code, and Comments (0). Under 'Body', the type is set to 'raw' and 'JSON (application/json)' is selected. The body content is a JSON object:

```
1 {  
2   "questionId": 2,  
3   "content": "xstate is worth looking at"  
4 }
```

At the bottom, there are tabs for Body, Cookies (3), Headers (6), and Test Results. The status bar shows 'Status: 200 OK Time: 445 ms Size: 395 B' and a 'Download' button. Below the status bar, there are tabs for Pretty, Raw, Preview, and JSON (selected). The JSON response is displayed as:

```
1 {  
2   "answerId": 4,  
3   "content": "xstate is worth looking at",  
4   "userName": "bob.test@test.com",  
5   "created": "2019-05-19T15:41:20.39"  
6 }
```

TypeError: question.created.toLocaleDateString is not a function

QuestionPage
C:/Users/carl.rippon/OneDrive/Documents/books/ASP.NET Core and TypeScript/repo-refactor/Chapter09/frontend-test/src/QuestionPage.tsx:138

```
135 | >
136 |   {question.content}
137 | </p>
> 138 | <div
139 | ^  css={css}
140 |   font-size: 12px;
141 |   font-style: italic;
```

Which state management tool should I use?

There seem to be a fair few state management tools around for React - React, Unstated, ... Which one should I use?

Asked by jane.test@test.com on 18/05/2019 14:48:00

xstate is worth looking at

Answered by bob.test@test.com on 19/05/2019 15:41:20

xstate is worth looking at

Answered by bob.test@test.com on 19/05/2019 15:56:46

Elements Audits Sources Network Memory Performance Application Security React

▼ | ⚙ | Filter

Default levels ▾

Information: WebSocket connected to <wss://localhost:44359/questionshub?id=xjeIgg3MAvUROBlugo6GTg>.

Message Successfully connected

Message Successfully subscribed

ReceiveQuestion

▶ {questionId: 2, title: "Which state management tool should I use?", content: "There seem to be a fair few state management tools...ct - React, Unstated, ... Which", erName: "jane.test@test.com", created: "2019-05-18T14:48:00", ...}

Chapter 10: Improving Performance and Scalability

The screenshot shows the Postman interface with a successful API call. The URL is `https://localhost:44359/api/questions?includeanswers=true`. The response body is a JSON object representing a question with its answers.

```
1  {
2    "questionId": 1,
3    "title": "Why should I learn TypeScript?",
4    "content": "TypeScript seems to be getting popular so I wondered whether it is worth my time learning it? What benefits does it give over JavaScript?",
5    "userName": "bob.test@test.com",
6    "created": "2019-05-18T14:32:00",
7    "answers": [
8      {
9        "answerId": 1,
10       "content": "To catch problems earlier speeding up your developments",
11       "userName": "jane.test@test.com",
12       "created": "2019-05-18T14:40:00"
13     },
14     {
15       "answerId": 2,
16       "content": "So, that you can use the JavaScript features of tomorrow, today",
17       "userName": "fred.test@test.com",
18       "created": "2019-05-18T16:18:00"
19     }
20   ],
```

The screenshot shows the SoapUI interface with a successful API call. The URL is `https://localhost:44359/api/questions?includeanswers=true`. The request includes a header `Accept-Encoding: gzip,deflate`.

Time: 30 secs Threads: 5

Session Results

New Edit Delete Test All Capture Save Edit

Verb Name or Url
GET https://localhost:44359/api/questions?includeanswers=true

Output Preview Request Session Options

Request Headers

GET https://localhost:44359/api/questions?includeanswers=true HTTP/1.1

Accept-Encoding: gzip,deflate
User-Agent: West Wind HTTP .NET Client
Host: localhost:44359
Connection: Keep-Alive

Http Response Headers

HTTP/1.1 200 OK

Transfer-Encoding: chunked
X-SourceFiles: =UTF-8B7Qzpcy29kZVxfdgVtcFxjaDEwLWJ1aWxkXFhbmRBXGFwaVxxdVzdG1vbN=?
Content-Type: application/json; charset=utf-8
Date: Wed, 06 Mar 2019 04:02:43 GMT
Server: Microsoft-IIS/10.0
X-Powered-By: ASP.NET

Http Response Body

Raw Response Formatted json Viewer

```
[ { "questionId": 1, "title": "Why should I learn TypeScript?", "content": "TypeScript seems to be getting popular so I wondered whether it is worth my time learning it? What benefits does it give over JavaScript?", "userName": "bob.test@test.com", "created": "2019-05-18T14:32:00", "answers": [ { "answerId": 1, "content": "To catch problems earlier speeding up your developments", } ] } ]
```

File Session Help

Open Session Start Stop Export Results Charts

Time: 30 secs Threads: 5

Time: 30 secs Threads: 5

Session Results

New Edit Delete Test All Capture Save Edit

Verb Name or Url
GET https://localhost:44359/api/questions?includeanswers=true

Output Preview Request Session Options

```
200 - GET https://localhost:44359/api/questions?includeanswers=true (269ms)
200 - GET https://localhost:44359/api/questions?includeanswers=true (412ms)
200 - GET https://localhost:44359/api/questions?includeanswers=true (426ms)
200 - GET https://localhost:44359/api/questions?includeanswers=true (829ms)
200 - GET https://localhost:44359/api/questions?includeanswers=true (393ms)
200 - GET https://localhost:44359/api/questions?includeanswers=true (585ms)
200 - GET https://localhost:44359/api/questions?includeanswers=true (1.920ms)
```

Test Results

Total Requests: 284

Failed: 0

Threads: 5

Total Time: 30.00 secs

Req/Sec: 9.47

Avg Time: 533.12 ms

Min Time: 220.00 ms

Max Time: 4,308.00 ms

Url Summary

✓ GET https://localhost:44359/api/questions?includeanswers=true

✓ Success: 284

✗ Failed: 0

avg: 533ms min: 220ms max: 4,308ms

EXEC dbo.Question_GetMany_WithAnswers											
109 %		Results Messages									
	QuestionId	Title	Content	UserName	Created	QuestionId	AnswerId	Content	Username	Created	
1	1	Why should I learn Typ...	TypeScript seems to be gettin...	bob.test@test.com	2019-0...	1	1	To catch problems earlier sp...	bob.test@test.com	2019-0...	
2	1	Why should I learn Typ...	TypeScript seems to be gettin...	bob.test@test.com	2019-0...	1	2	So, that you can use the Ja...	bob.test@test.com	2019-0...	
3	1	Why should I learn Typ...	TypeScript seems to be gettin...	bob.test@test.com	2019-0...	1	3	To improve the developmen...	bob.test@test.com	2019-0...	
4	1	Why should I learn Typ...	TypeScript seems to be gettin...	bob.test@test.com	2019-0...	1	24	an answer	bob.test@test.com	2019-0...	
5	1	Why should I learn Typ...	TypeScript seems to be gettin...	bob.test@test.com	2019-0...	1	25	an answer	bob.test@test.com	2019-0...	
6	1	Why should I learn Typ...	TypeScript seems to be gettin...	bob.test@test.com	2019-0...	1	26	an answer	bob.test@test.com	2019-0...	
7	1	Why should I learn Typ...	TypeScript seems to be gettin...	bob.test@test.com	2019-0...	1	30	an answer	bob.test@test.com	2019-0...	
8	2	Which state managem...	There seem to be a fair few st...	jane.test@test.com	2019-0...	2	18	xstate is worth looking at	jane.test@test.com	2019-0...	

Test Results

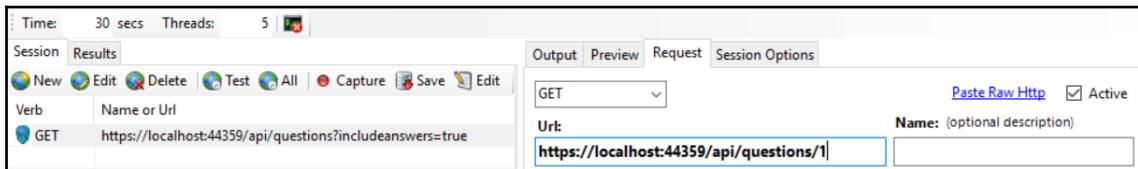
Total Requests: 398
Failed: 0
Threads: 5
Total Time: 30.00 secs
Req/Sec: 13.27

Avg Time: 379.42 ms
Min Time: 160.00 ms
Max Time: 3,801.00 ms

Url Summary

✓ GET https://localhost:44359/api/questions?includeanswers=true

✓ Success: 398 ✗ Failed: 0 avg: 379ms min: 160ms max: 3,801ms



The screenshot shows a web-based application for managing network requests. At the top, there are fields for 'Time: 30 secs' and 'Threads: 5'. Below this is a toolbar with buttons for 'Session' and 'Results', and icons for New, Edit, Delete, Test, All, Capture, Save, and Edit. A 'Session Options' tab is selected. On the left, under 'Verb', 'GET' is selected. In the 'Name or Url' field, the URL 'https://localhost:44359/api/questions?includeanswers=true' is entered. On the right, there are dropdowns for 'Output' (set to 'Raw'), 'Preview', and 'Request'. The 'Request' tab is active, showing 'Method: GET' and 'Url: https://localhost:44359/api/questions/1'. There is also a checkbox for 'Active' and a 'Name: (optional description)' field.

Test Results

Total Requests: 309

Failed: 0

Threads: 5

Total Time: 30.00 secs

Req/Sec: 10.30

Avg Time: 491.82 ms

Min Time: 204.00 ms

Max Time: 4,005.00 ms

Url Summary

✓ GET https://localhost:44359/api/questions/1

✓ Success: 309

✗ Failed: 0

avg: 492ms min: 204ms max: 4,005ms

☒ Test Results

Total Requests: 420

Failed: 0

Threads: 5

Total Time: 30.00 secs

Req/Sec: 14.00

Avg Time: 355.25 ms

Min Time: 133.00 ms

Max Time: 5,163.00 ms

≡ Url Summary

✓ GET https://localhost:44359/api/questions/1

✓ Success: 420

✗ Failed: 0

avg: 355ms min: 133ms max: 5,163ms

☒ Http Response Body

Raw Response

Formatted json

Viewer

Invalid or partial JSON data cannot be formatted (try setting MaxResponseSize option to 0).
[{"questionId":1,"title":"Why should I learn TypeScript?","content":"TypeScript seems to be getting popular so I wondered whether it is worth my time learning it? What benefits does it give over JavaScript?","userName":"bob.test@test.com","created":"2019-05-18T14:32:00","answers":null}, {"questionId":2,"title":"Which state management tool should I use?","content":"There seem to be fair few state management tools around for React - React, Unstated, ... Which one should I use?","userName":"jane.test@test.com","created":"2019-05-18T14:48:00","answers":null}, {"questionId":36753,"title":"Question 1","content":"Content 1","userName":"bob.test@test.com","created":"2019-03-06T18:08:01.7833333","answers":null}, {"questionId":36754,"title":"Question 2","content":

Output	Preview	Request	Session Options
Authentication			
Username			
Password			
Header Replacement			
ReplaceQueryStringValuePairs			
ReplaceDomain			
ReplaceCookieValue			
ReplaceAuthorization			
Minimize Memory			
CaptureMinimalResponseData			False
MaxResponseSize			0
Performance			
NoProgressEvents			False
DelayTimeMs			0
NoContentDecompression			False
Test Operation			
RandomizeRequests			False
RequestTimeoutMs			15000
WarmupSeconds			2
IgnoreCertificateErrors			False
TrackPerSessionCookies			True
User Interface			
ReloadTemplates			False
FormattedPreviewTheme			visualstudio

Test Results

Total Requests: 282

Failed: 0

Threads: 5

Total Time: 30.00 secs

Req/Sec: 9.40

Avg Time: 532.92 ms

Min Time: 301.00 ms

Max Time: 981.00 ms

Url Summary

✓ GET https://localhost:44359/api/questions?search=question

✓ Success: 282

✗ Failed: 0

avg: 533ms min: 301ms max: 981ms

Test Results

Total Requests: 459

Failed: 0

Threads: 5

Total Time: 30.00 secs

Req/Sec: 15.30

Avg Time: 332.59 ms

Min Time: 162.00 ms

Max Time: 1,588.00 ms

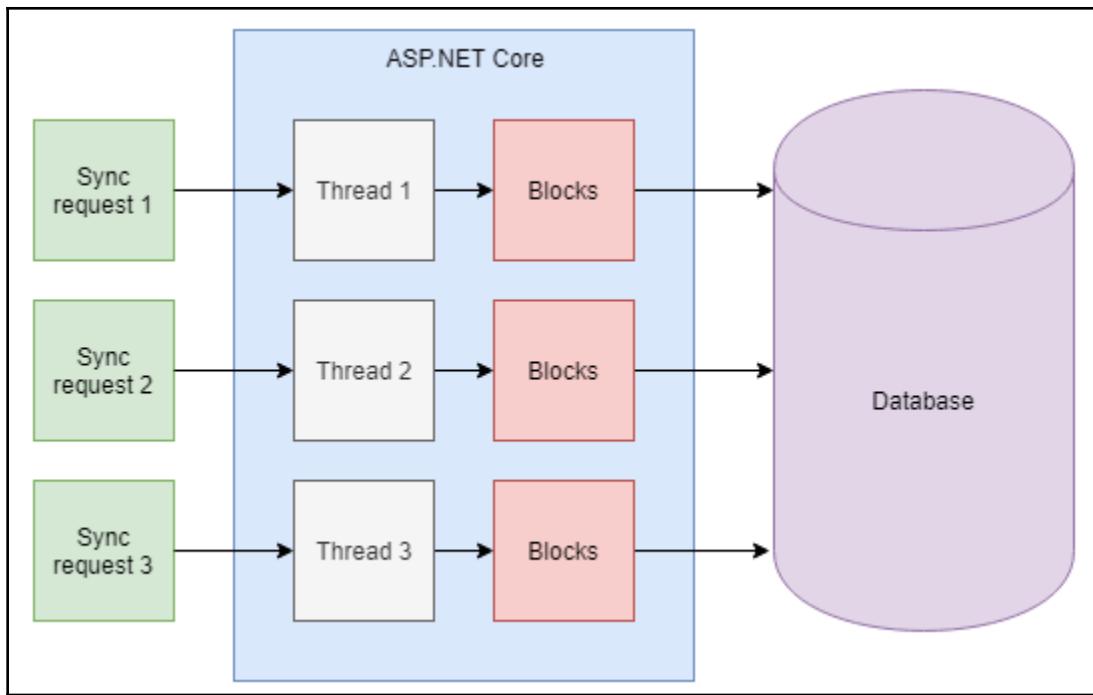
Url Summary

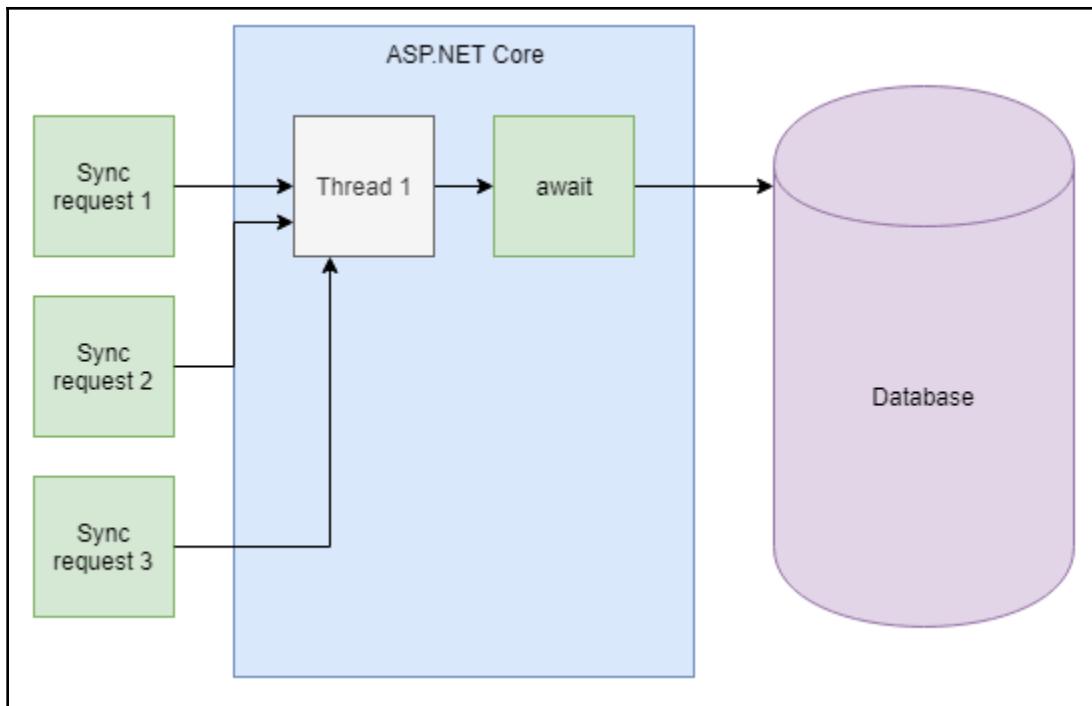
✓ GET <https://localhost:44359/api/questions?search=question&page=1&pagesize=20>

✓ Success: 459

✗ Failed: 0

avg: 333ms min: 162ms max: 1,588ms





248 requests, 1 failed | 43 of 62 secs | 5 request/sec

	ID	Managed ID	Category	Name	Location
Process ID: 16992 (46 threads)					
▼	30984	1	Worker Thread	<No Name>	▼ System.Private.CoreLib.dll!System.Threading.Monitor.Wait
▼	30676	0	Worker Thread	Worker Thread	<not available>
▼	32468	4	Worker Thread	Worker Thread	<not available>
▼	29780	7	Worker Thread	Worker Thread	▼ System.Private.CoreLib.dll!System.Threading.ManualResetEventSlim.Wait
▼	26324	8	Worker Thread	Console logger queue processing thread	▼ System.Console.dll!System.ConsolePal.GetBufferInfo
▼	14372	9	Worker Thread	Worker Thread	<not available>
▼	35540	10	Worker Thread	Worker Thread	▼ System.Private.CoreLib.dll!System.Diagnostics.Debugger.NotifyOfCrossThreadDependencySlow
▼	36100	11	Worker Thread	<No Name>	<not available>
▼	4236	18	Worker Thread	Worker Thread	▼ System.Data.SqlClient.dll!System.Data.SqlClient.TdsParserStateObjectNative.ReadSyncOverAsync
▼	31172	15	Worker Thread	Worker Thread	▼ System.Private.CoreLib.dll!System.Threading.ManualResetEventSlim.Wait

	ID	Managed ID	Category	Name	Location
Process ID: 11048 (3 threads)					
▼	10040	1	Worker Thread	<No Name>	▼ System.Private.CoreLib.dll!System.Threading.Monitor.Wait
▼	0	0	Unknown Thread		<not available>
▼	15460	0	Worker Thread	Worker Thread	<not available>

Test Results

Total Requests: 453

Failed: 0

Threads: 5

Total Time: 30.00 secs

Req/Sec: 15.10

Avg Time: 337.59 ms

Min Time: 141.00 ms

Max Time: 3,687.00 ms

Url Summary

✓ GET <https://localhost:44359/api/questions/1>

✓ Success: 453

✗ Failed: 0

avg: 338ms min: 141ms max: 3,687ms

Test Results

Total Requests: 687

Failed: 0

Threads: 5

Total Time: 30.00 secs

Req/Sec: 22.90

Avg Time: 218.92 ms

Min Time: 71.00 ms

Max Time: 7,648.00 ms

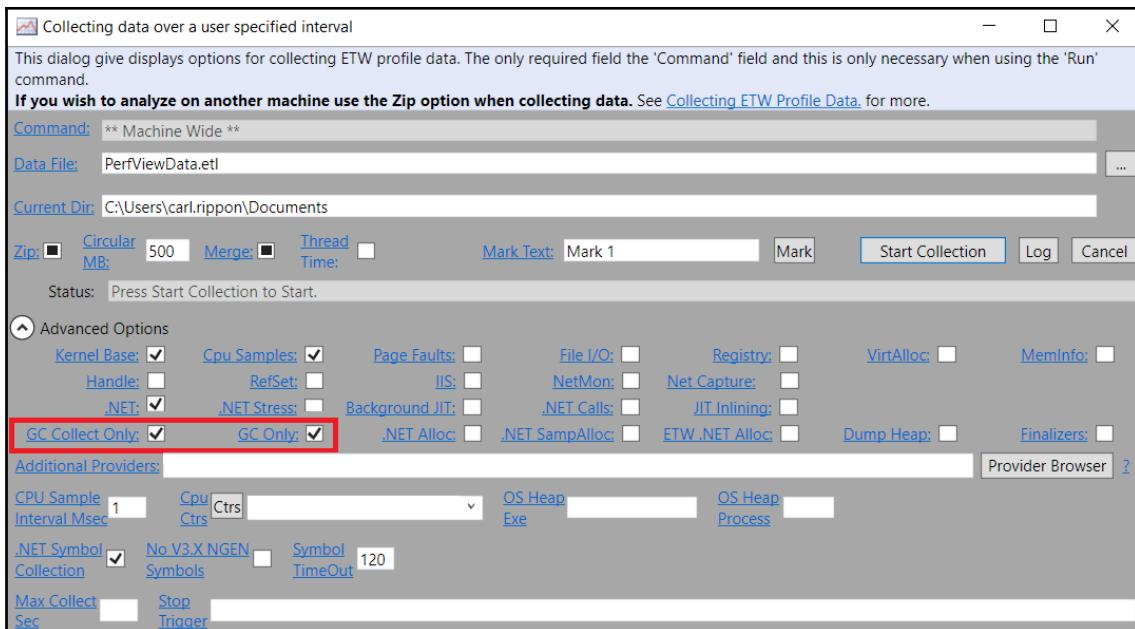
Url Summary

✓ GET https://localhost:44359/api/questions/1

✓ Success: 687

✗ Failed: 0

avg: 219ms min: 71ms max: 7,648ms



The screenshot shows the Postman application interface. On the left, the 'Results' tab is selected, displaying a list of 20 POST requests to the '/api/questions/' endpoint. Each request is shown with its status code (200 OK), timestamp, and the URL. The right side of the interface is divided into two sections: 'Request Headers' and 'Request Content'. The 'Request Headers' section shows standard headers like Content-Type, User-Agent, and Accept. The 'Request Content' section displays the JSON response for one of the requests, which includes a title ('a long question') and a detailed content block about Lorem Ipsum.

Time: 60 secs Threads: 5

Session Results

New Edit Delete Test All Capture Save Edit

Verb Name or Url

POST https://localhost:44359/api/questions/

Output Preview Request Session Options

Request Headers

POST <https://localhost:44359/api/questions/> HTTP/1.1

Content-Type: application/json

Postman-Token: f683a718-553a-421d-bffc-ded1ba065db8

User-Agent: PostmanRuntime/7.6.1

Accept: */*

cookie: .AspNetCore.Cookies=CfdJ8HTFDbvnlw5Hq8Go_JFbIbwmdk95ZhpqSxE91y70

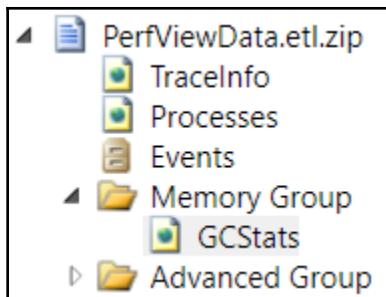
accept-encoding: gzip, deflate

Connection: close

Request Content

Raw Request Formatted json

"title": "a long question",
"content": "Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's standard dummy text ever since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type specimen book. It has survived not only five centuries, but also the leap into electronic typesetting, remaining essentially unchanged. It was popularised in the 1960s with the release of Letraset sheets containing Lorem Ipsum passages, and more recently with desktop publishing software like Aldus PageMaker including versions of Lorem Ipsum. Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's standard dummy



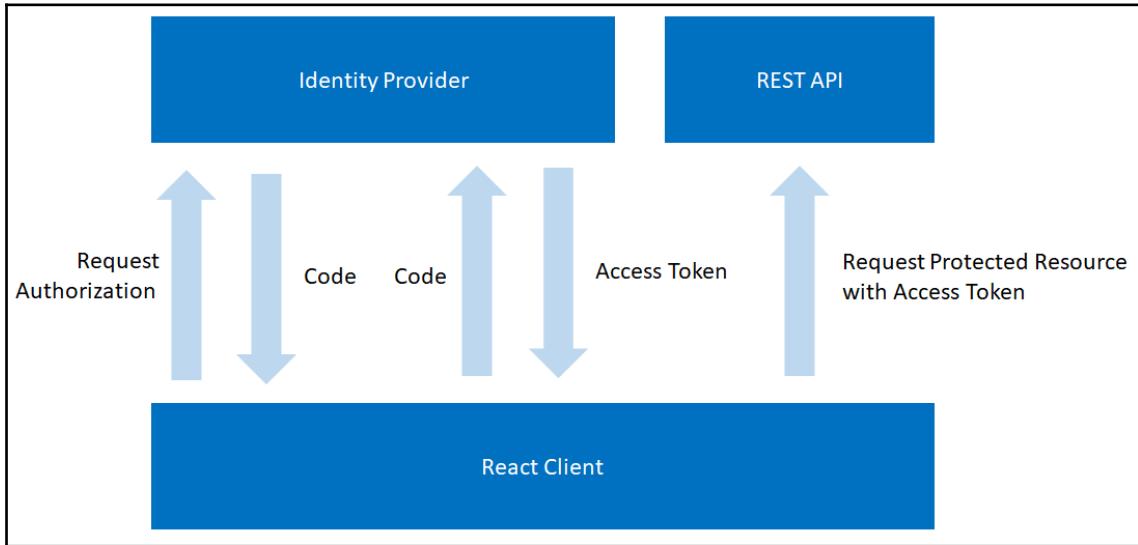
GCStats

- [Process 41532: iisexpress applicationhost.config /site:QandA /apppool:QandA_AppPool](#)
- [Process 16356: devenv](#)
- [Process 5532: StackifyTracerService](#)
- [Process 14852: WebSurge](#)

GC Rollup By Generation											
All times are in msec.											
Gen	Count	Max Pause	Max Peak MB	Max Alloc MB/sec	Total Pause	Total Alloc MB	Alloc MB/MSec GC	Survived MB/MSec GC	Mean Pause	Induced	
ALL	1	39.8	462.9	0.000	39.8	0.0	0.0	∞	39.8	0	
0	0	0.0	0.0	0.000	0.0	0.0	NaN	NaN	NaN	0	
1	0	0.0	0.0	0.000	0.0	0.0	NaN	NaN	NaN	0	
2	1	39.8	462.9	0.000	39.8	0.0	∞	∞	39.8	0	

GC Rollup By Generation											
All times are in msec.											
Gen	Count	Max Pause	Max Peak MB	Max Alloc MB/sec	Total Pause	Total Alloc MB	Alloc MB/MSec GC	Survived MB/MSec GC	Mean Pause	Induced	
ALL	68	85.3	239.9	176.847	1,102.3	1,621.6	1.5	∞	16.2	0	
0	2	6.3	86.8	56.876	11.4	60.5	0.0	∞	5.7	0	
1	1	3.9	106.8	124.772	3.9	61.4	0.0	∞	3.9	0	
2	65	85.3	239.9	176.847	1,087.0	1,499.7	0.7	∞	16.7	0	

Chapter 11: Securing the Backend





JUUT

Debugger Libraries Introduction Ask Get a T-shirt!

Crafted by  Auth0

ALGORITHM RS256

Encoded PASTE A TOKEN HERE

```
eyJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiIsImtpZCI6Ik9EVTNsak16TRaQk9UVTfNRVUyU1R0Q1JESTRSVEZHTVRjMk16WkdNemd6UmtFd01qZEJNQSJ9eyJpc3Mi0iJodHRwczovL2Rldi05NTlhcjd4NC5hdXRoMC5jb20vIiwic3ViIjoiYXV0aDB8NWQwYTM0NTI1ZGQwODAwY2EyZDUyZjk4IiwiYXVkIjpbImh0dHBzOi8vcWFuZGEtYmFja2VuZC5henVyZXdlYnNpdGVzLm5ldCIsImh0dHBzOi8vZGV2LTk10WFyN3g0LmF1dGgwLmNvbS91c2VyaW5mbjJdLCJpYXQi0jE1NjExNzMyNDUsImV4cCI6MTU2MTE4MDQ0NSwiYXpwIjoiZH1ZRWFH3FxS1Zy0U8xN01oUTdKcE90V0kxS29Vb3kiLCJzY29wZSI6Im9wZW5pZCBwcm9maWx1IGVtYWlsIFFhbmrBQVBJIIn0.CeGRAc82x7Sw1Z_ YAEI1QsRulmos6gCtSA1QgHWS- SZiaNKCrmo02wrS8K9q0TV1a2gSXi2rLcEn5apYHq- gXEK42KfRz5PeH05PKRZ0Blq76LYFOuRMMIhgqtX
```

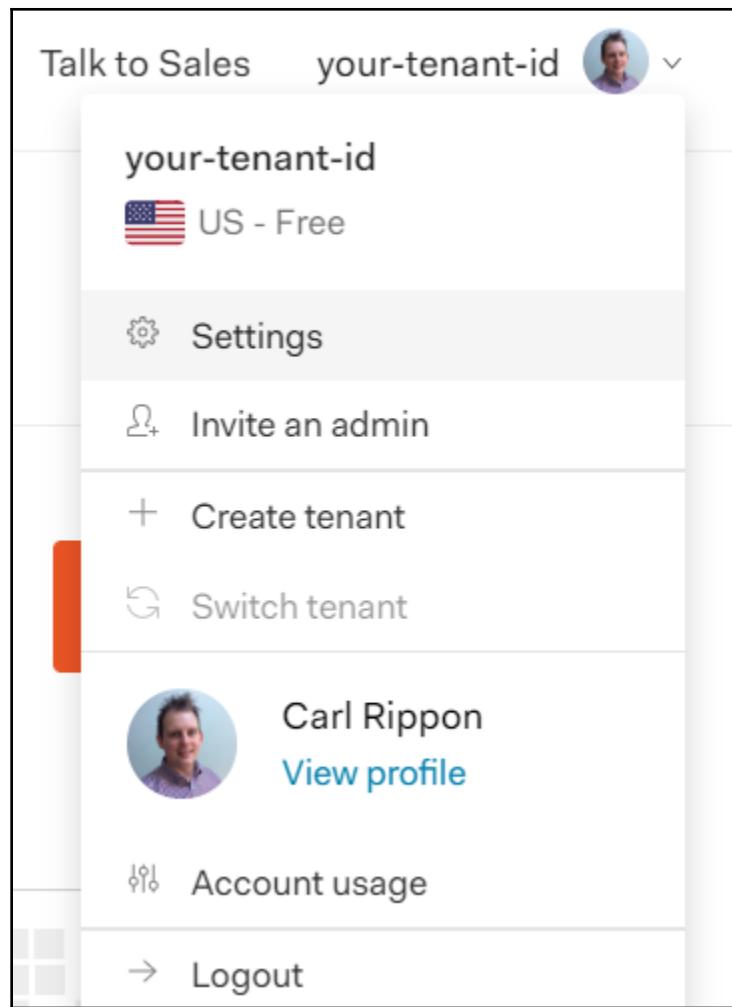
Decoded EDIT THE PAYLOAD AND SECRET

HEADER: ALGORITHM & TOKEN TYPE

```
{ "typ": "JWT", "alg": "RS256", "kid": "ODU3RjMzMzMDZBOTU1MEU2RTNBTDI4RTFGMTc2MzZGMzgzkEwMjdBMA" }
```

PAYOUT: DATA

```
{ "iss": "https://your-tenant-id.auth0.com/", "sub": "auth0|user-id", "aud": [ "https://qanda", ], "iat": 1561173245, "exp": 1561180445, "azp": "your-client-id", "scope": "openid profile email QandAAPI" }
```



API Authorization Settings

Default Audience

API Audience to use by default for [API Authorization flows](#).

Auth0

Dashboard Applications APIs SSO Integration Connections Universal Login Users & Roles Rules Hooks Multifactor Auth Emails

Thank you for what you're doing.

Create application

You can change the application name later in the application settings.

Choose an application type

Native
Mobile, desktop, CLI and smart device apps running natively.
e.g.: iOS, Electron, Apple TV apps

Single Page Web Applications
A JavaScript front-end app that uses an API.
e.g.: AngularJS + NodeJS

Regular Web Applications
Traditional web app using redirects.
e.g.: Java, ASP.NET

Machine to Machine Applications
CLIs, daemons or services running on your backend.
e.g.: Shell script

X

DRAFT

APPLICATION

CREATE CANCEL

Auth0

Search for users or applications

Help & Support Documentation

New API

X

Name

QandA

A friendly name for the API.

Identifier

https://qanda

A logical identifier for this API. We recommend using a URL but note that this doesn't have to be a publicly available URL, Auth0 will not call your API at all. **This field cannot be modified.**

Signing Algorithm

RS256

Algorithm to sign the tokens with. When selecting RS256 the token will be signed with Auth0's private key.

CREATE CANCEL

The screenshot shows the 'New API' creation dialog in the Auth0 interface. It includes fields for 'Name' (QandA), 'Identifier' (https://qanda), and 'Signing Algorithm' (RS256). The 'Identifier' field has a note stating it cannot be modified. At the bottom are 'CREATE' and 'CANCEL' buttons.

your-tenant-id  ▾

POST http://localhost:17525/api/questions Send Save

Params Authorization Headers (9) Body ● Pre-request Script Tests Cookies Code Comments (0)

Body none form-data x-www-form-urlencoded raw binary JSON (application/json) Beautify

```
1 [ {  
2   "title": "Accessing HttpContext in a service class",  
3   "content": "How do you access HttpContext in a class outside of a controller?"  
4 }]
```

Body Cookies (3) Headers (6) Test Results Status: 401 Unauthorized Time: 70 ms Size: 372 B

Pretty Raw Preview Auto ⚡

Reponse COPY TOKEN

```
{  
  "access_token": "eyJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiIsImtpZCI6Ik9EVTSak16TURaQk9UVTFNRVUyUlR0Q1JESTRSVE  
  "token_type": "Bearer"  
}
```

POST https://localhost:44359/api/questions Send Save

Params Authorization Headers (10) Body ● Pre-request Script Tests Cookies Code Comments (0)

Headers (2)

KEY	VALUE	DESCRIPTION	...	Bulk Edit	Presets
Content-Type	application/json				
Authorization	bearer eyJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1N...				

POST https://localhost:44359/api/questions

Send Save

Params Authorization Headers (10) **Body** Pre-request Script Tests Cookies Code Comments (0)

none form-data x-www-form-urlencoded raw binary GraphQL **BETA** JSON (application/json) Beautify

```
1 [{}]
2   "title": "Accessing HttpContext in a service class",
3   "content": "How do you access HttpContext in a class outside of a controller?"
4 }
```

Body Cookies (3) Headers (7) Test Results Status: 201 Created Time: 2251 ms Size: 669 B Download

Pretty Raw Preview JSON  

```
1 { 
2   "questionId": 7,
3   "title": "Accessing HttpContext in a service class",
4   "content": "How do you access HttpContext in a class outside of a controller?",
5   "userId": "1",
6   "userName": "bob.test@test.com",
7   "created": "2019-06-22T07:40:38.2333333",
8   "answers": []
9 }
```

Chapter 12: Interacting with RESTful APIs

← → 1 of 2 errors on the page X

TypeError: data.created.toLocaleDateString is not a function

Question
C:/code/_temp/proof-read/frontend/src/Question.tsx:48

```
45 |       : data.content}
46 |     </div>
47 |   )}
> 48 | <div
49 |   ^ css={css`
50 |     font-size: 12px;
51 |     font-style: italic;
```

Q & A Sign Out Sign In Sign Up

UNANSWERED QUESTIONS Ask a question

Accessing HttpContext in a service class

How do you access HttpContext in a class outside o...

Asked by bob.test@test.com on 25/05/2019 15:38:40

Accessing HttpContext in a service class

How do you access HttpContext in a class outside of a controller?

Asked by bob.test@test.com on 25/05/2019 15:38:40

Your Answer**Submit Your Answer**[Delete question](#)**SEARCH RESULTS**

for "type"

Why should I learn TypeScript?

TypeScript seems to be getting popular so I wonder...

Asked by bob.test@test.com on 18/05/2019 14:32:00

your-tenant-id



▼

Applications

+ CREATE APPLICATION

Setup a mobile, web or IoT application to use Auth0 for Authentication. [Learn more](#)

Dashboard Applications APIs SSO Integrations Connections Universal Login Users & Roles Rules

 Q and A SINGLE PAGE APPLICATION	Client ID dyYEaG3qqJVr9017MhQ7Jp0tWI1					
--	--	---	---	---	---	---

Create user

X

Email

carl.rippon@googlemail.com

Password

Repeat Password

*****|

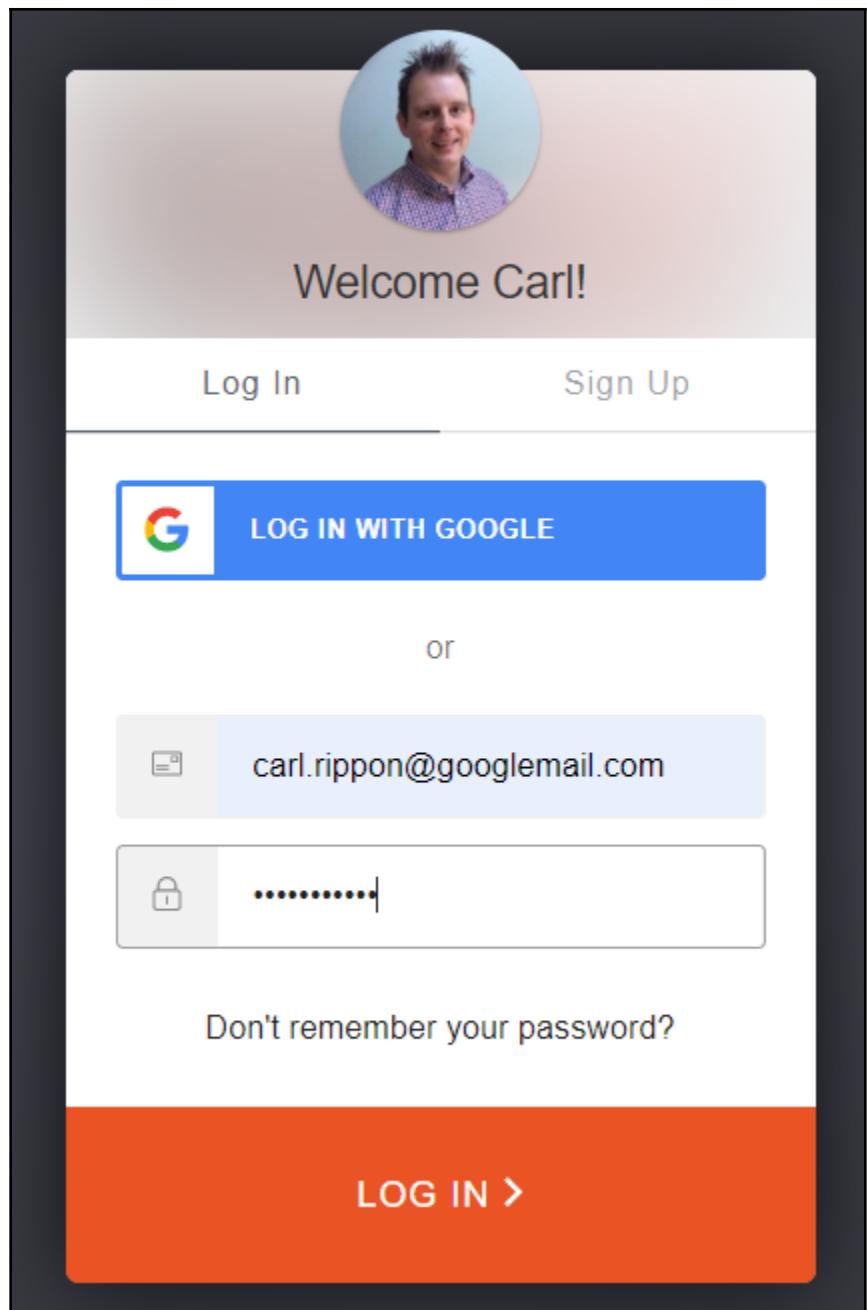
Connection

Username-Password-Authentication

▼

CREATE

CANCEL





Authorize App

Q AND A

Hi carl.rippon@googlemail.com, Q and
A is requesting access to your tenant



Profile: access to your profile and email



← → ⌂ ⓘ localhost:3000/signout-callback

Q & A Search... Sign Out Sign In

SIGN OUT
You successfully signed out!

Q & A Search... Sign In Sign Up

Q & A Search... carl.rippon@googlemail.com Sign In Sign Out

Q & A Search... Sign In Sign Up

UNANSWERED QUESTIONS

Accessing HttpContext in a service class
How do you access HttpContext in a class outside o...
Asked by bob.test@test.com on 25/05/2019 09:15:38

← → ⌂ ⓘ localhost:3000/ask

Q & A Search... Sign In Sign Up

YOU DO NOT HAVE ACCESS TO THIS PAGE

Q & A

carl.rippon@googlemail.com [Sign Out](#)

UNANSWERED QUESTIONS

[Ask a question](#)

Accessing HttpContext in a service class

How do you access HttpContext in a class outside o...

Asked by bob.test@test.com on 25/05/2019 09:15:38

Q & A

[Sign In](#) [Sign Up](#)

Accessing HttpContext in a service class

How do you access HttpContext in a class outside of a controller?

Asked by bob.test@test.com on 25/05/2019 09:15:38

Accessing HttpContext in a service class

How do you access HttpContext in a class outside of a controller?

Asked by bob.test@test.com on 25/05/2019 09:15:38

Your Answer

Submit Your Answer

Submit Your Question

Your question was successfully submitted

Console Elements Audits Sources Network Memory Performance Application Security React

View: Group by frame Preserve log Disable cache Offline No throttling

Filter Hide data URLs All XHR JS CSS Img Media Font Doc WS Manifest Other

10 ms 20 ms 30 ms 40 ms 50 ms 60 ms 70 ms 80 ms 90 ms 100 ms 110 ms 120 ms 130 ms 140 ms 150 ms 160 ms 170 ms 180 ms 190 ms 200 ms 210 ms

Name	Headers	Preview	Response	Timing
<input type="checkbox"/> questions				
<input checked="" type="checkbox"/> questions				

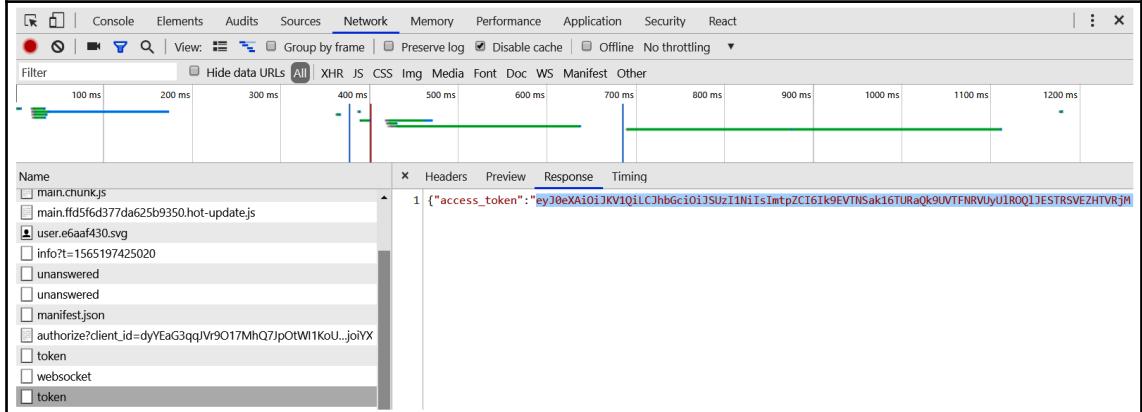
▲ Provisional headers are shown

authorization: bearer eyJhbGciOiJSUzI1NiisImtpC16IKrldwVsB3BtW59IiwidHlwjoiSluIn0.eyJyYi0jEINjazHTEINDysImV4cIGMTU2MDwNTE0NiwiAxNzIjoiawR0cD12xxYf2fae92dDoNxNzlyHsiS1mF1ZC16yJodRRIo18vK9jYxob3N00jE3NT1L131c291cnNcyis1IfhmRQBVB31l0s1MsawUvdF9pZC161f1fhmRB1iwciV1j0jz0kWzE3NjtGZHy00YEEzLTpawNyMhMyYmM2tkwG1Z1iwiXVWaaf90aw11j1oxjTYw2ExwTQ11CpZHA101j3bz2hbkCisInjb3B1j1pb1Imw0ZwSp2CisInByb22pbGU1JCjRW5kQfQS5jdLCbhxi101cHdk119..iIDfifCHLXW6ij20P0LPWB88yOWzAuXufaB0_3X0IMpuua98BByUqzvPM8weFPCwD728ewdcE7nTeEtfhFG619uOcj8tdo1cdm5PG073sjkAxpz2dB1vZRNczkAAfTebeekosKYL2EZhsCo1jf21839qaGUKSz6a-fxamagh1Kz7hu1XwvdeOvwkaat2KEs1F5ktqlVr6vzePfc3LTvRkdspilvREHRRQFfu0K4nr2hzx4K9UPlacn1HzGgqFkxCmQbRK5t9moIGYDxucq3yKbfKJ34hKRVV18kr-1MFckw77u8L2EK4u0J4pxeS5gt1Mj1A

2 requests | 1.3 KB transferred | 260 B resources

Content-Type: application/json

Results		Messages		
QuestionId	Title	Content	UserId	UserName
4	Accessing HttpContext in a service class	How do you access HttpContext in a class outside...	auth0 50a34525dd0800ca2d52f98	carl.rippon@googlemail.com



DELETE
https://localhost:44359/api/questions/2
Send
Save

Params	Authorization	Headers (2)	Body	Pre-request Script	Tests	Cookies	Code	Comments (0)																								
▼ Headers (2) <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>KEY</th> <th>VALUE</th> <th>DESCRIPTION</th> <th>...</th> <th>Bulk Edit</th> <th>Presets</th> </tr> </thead> <tbody> <tr> <td><input checked="" type="checkbox"/> Content-Type</td> <td>application/json</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td><input checked="" type="checkbox"/> Authorization</td> <td>bearer eyJ0eXAiOiJKV1QiLCJhbGciOiJSUz1NiIi... The value is a long JWT token.</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Key</td> <td></td> <td>Description</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>									KEY	VALUE	DESCRIPTION	...	Bulk Edit	Presets	<input checked="" type="checkbox"/> Content-Type	application/json					<input checked="" type="checkbox"/> Authorization	bearer eyJ0eXAiOiJKV1QiLCJhbGciOiJSUz1NiIi... The value is a long JWT token.					Key		Description			
KEY	VALUE	DESCRIPTION	...	Bulk Edit	Presets																											
<input checked="" type="checkbox"/> Content-Type	application/json																															
<input checked="" type="checkbox"/> Authorization	bearer eyJ0eXAiOiJKV1QiLCJhbGciOiJSUz1NiIi... The value is a long JWT token.																															
Key		Description																														

https://localhost:44359/api/questions/2

DELETE https://localhost:44359/api/questions/2 Send Save

Params Authorization Headers (10) Body Pre-request Script Tests Cookies Code Comments (0)

▼ Headers (2)

KEY	VALUE	DESCRIPTION
<input checked="" type="checkbox"/> Content-Type	application/json	
<input checked="" type="checkbox"/> Authorization	bearer eyJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiIsImtpZCI6Ik9EVTN...	
Key	Value	Description

► Temporary Headers (8) ⓘ

Body Cookies (3) Headers (5) Test Results Status: 403 Forbidden Time: 2332 ms Size: 343 B

DELETE https://localhost:44359/api/questions/12 Send Save

Params Authorization Headers (10) Body Pre-request Script Tests Cookies Code Comments (0)

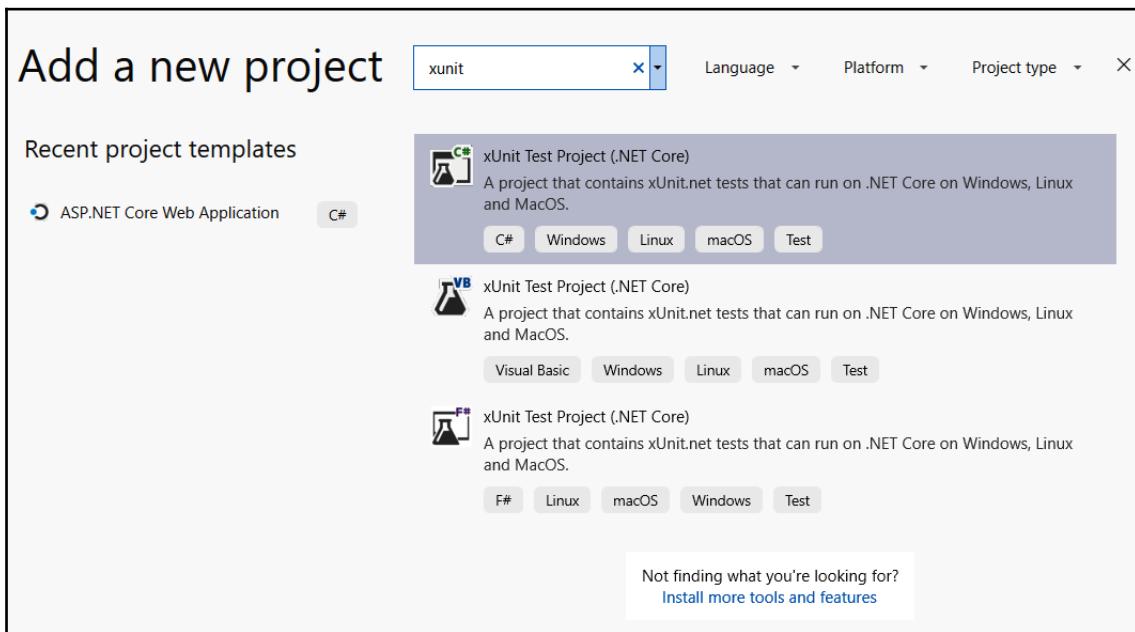
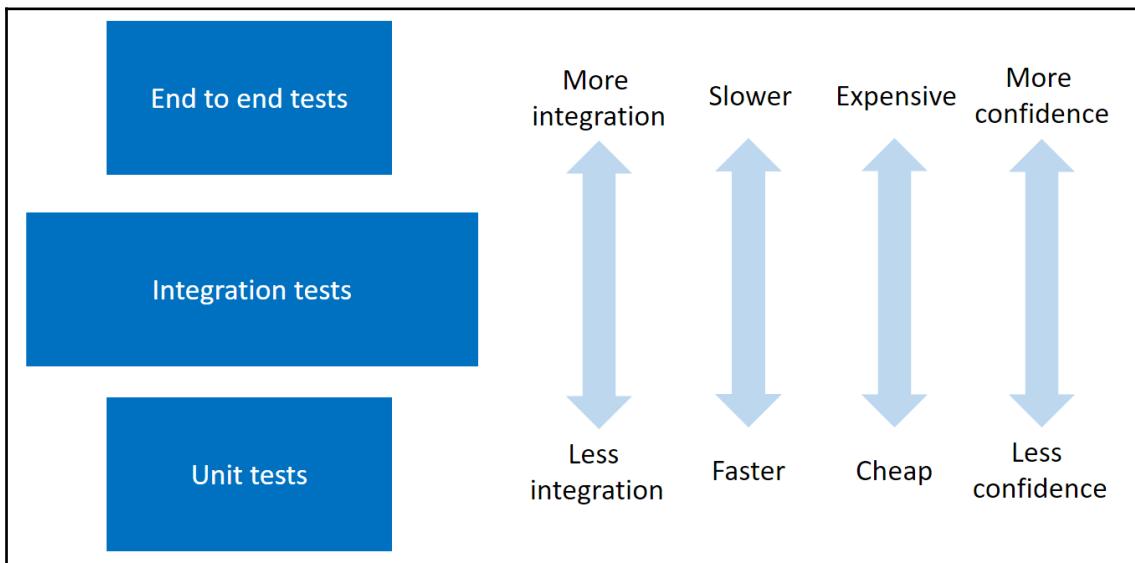
▼ Headers (2)

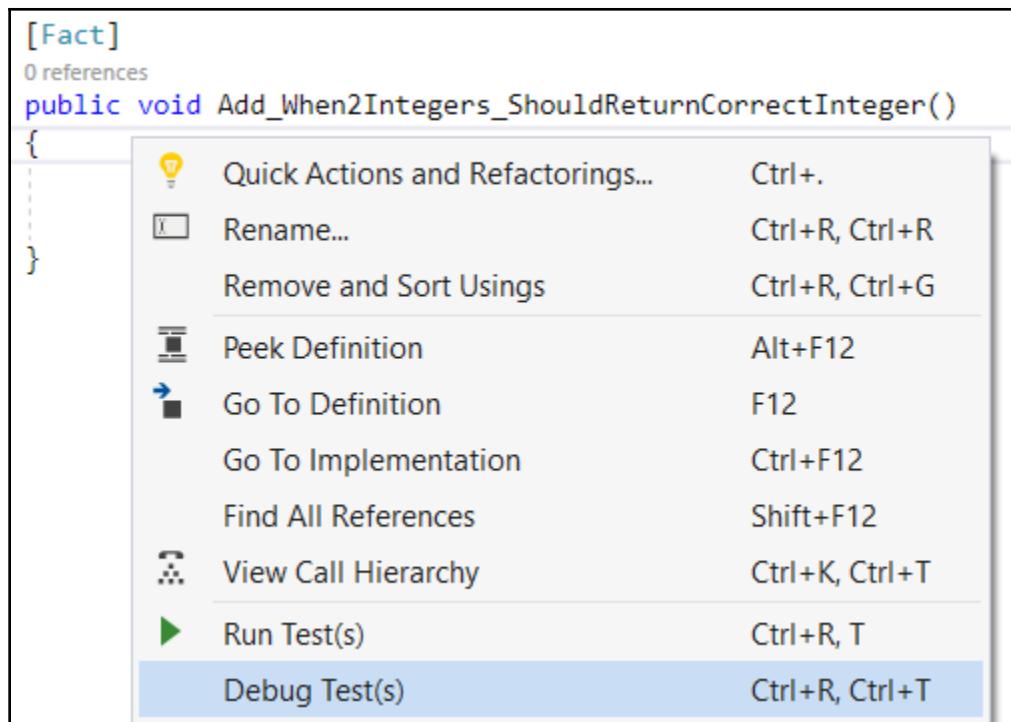
KEY	VALUE	DESCRIPTION
<input checked="" type="checkbox"/> Content-Type	application/json	
<input checked="" type="checkbox"/> Authorization	bearer eyJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiIsImtpZCI6Ik9EVTN...	
Key	Value	Description

► Temporary Headers (8) ⓘ

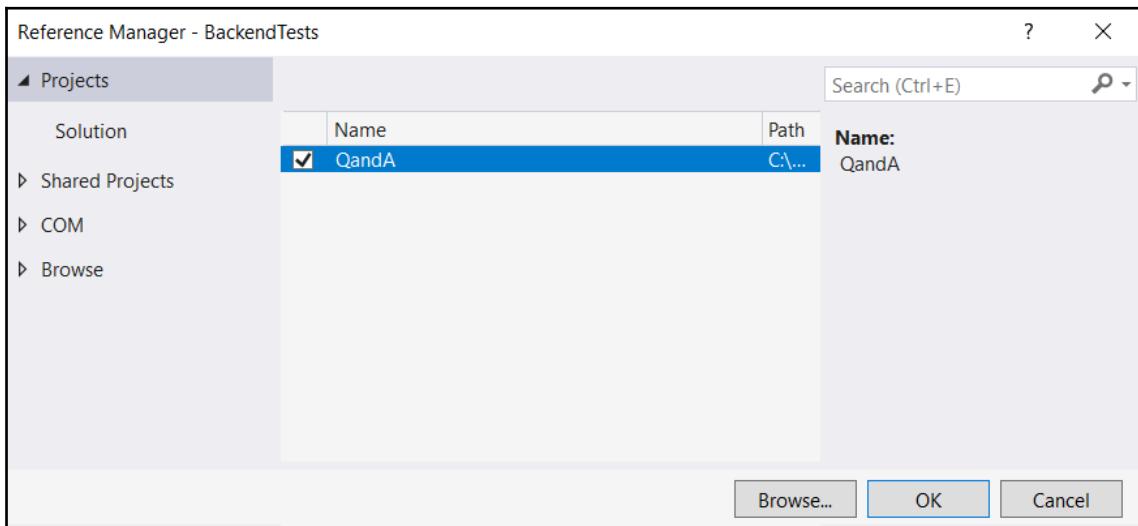
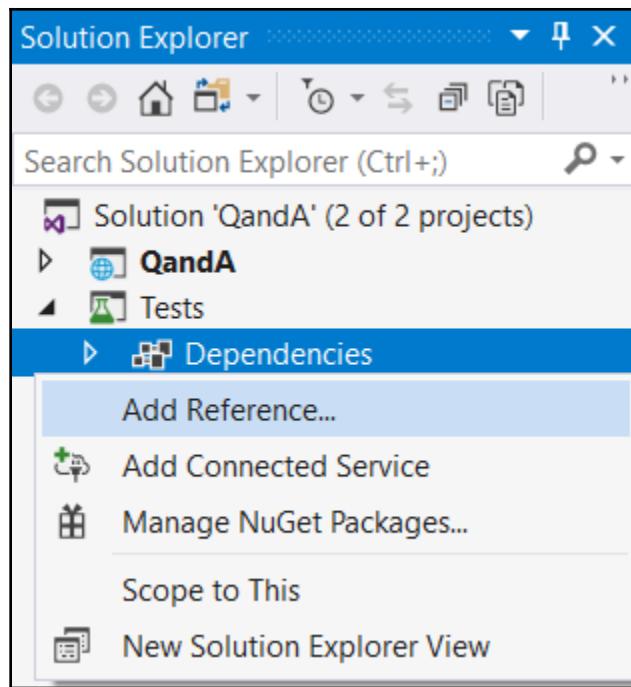
Body Cookies (3) Headers (4) Test Results Status: 204 No Content Time: 121 ms Size: 316 B

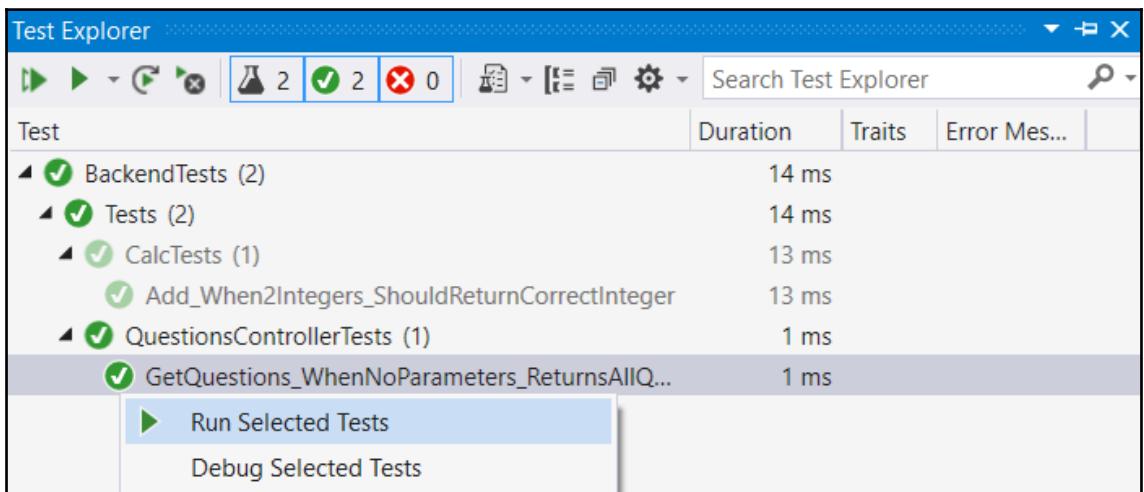
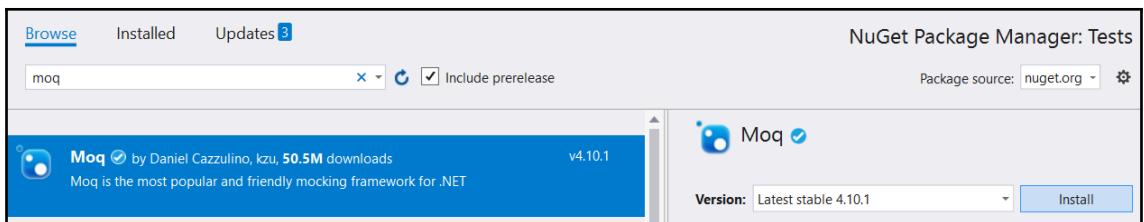
Chapter 13: Adding Automated Tests





Test Explorer			
Test	Duration	Traits	Error Mes...
BackendTests (1)	13 ms		
Tests (1)	13 ms		
CalcTests (1)	13 ms		
Add_When2Integers_ShouldReturnCorrectInteger	13 ms		





```
PASS src/Form.test.ts
PASS src/App.test.tsx

Test Suites: 2 passed, 2 total
Tests:       3 passed, 3 total
Snapshots:   0 total
Time:        3.343s
Ran all test suites.

Watch Usage: Press w to show more. █
```

```
Test Suites: 3 passed, 3 total
Tests:       4 passed, 4 total
Snapshots:   0 total
Time:        5.38s
Ran all test suites.
```

Watch Usage: Press w to show more. 

```
 HomePage.test.tsx ▶ ...
import { React } from 'react';
import { render, cleanup, waitForElement } from '@testing-library/react';
import { (alias) const HomePage: FunctionComponent<RouteComponentProps<{}, StaticContext, any>>
import HomePage
afterEach(cleanup);
test('W
  .const
    .<Br Quick Fix... Peek Problem
    .<HomePage />
    .</BrowserRouter>,
  );
  .const loading = getByText('Loading...');
  .expect(loading).not.toBeNull();
});
```

frontend

Support Docs Log In

</> Tests Runs Settings Chrome 74 ▾

Search... Run all specs

INTEGRATION TESTS

- examples
 - [actions.spec.js](#)
 - [aliasing.spec.js](#)

Tests ✓ 13 ✘ -- ○ -- 19.18 ● ↑ C https://example.cypress.io/commands/actions 1000 x 660 (57%) ⓘ

Actions

- .type() - type into a DOM element
- .focus() - focus on a DOM element
- .blur() - blur off a DOM element
- .clear() - clears an input or textarea element
- .submit() - submit a form
- .click() - click on a DOM element
- .dblclick() - double click on a DOM element
- .check() - check a checkbox or radio element
- .uncheck() - uncheck a checkbox element
- .select() - select an option in a <select> element
- .scrollIntoView() - scroll an element into view
- .trigger() - trigger an event on a DOM element
- cy.scrollTo() - scroll the window or element to a position

```
// (x axis, y axis) in pixels
cy.get('#scrollable-vertical').scrollTo(250, 250)

// or you can scroll to a specific percentage
// of the (width, height) of the element
cy.get('#scrollable-both').scrollTo('75%', '25%')

// control the easing of the scroll (default is 'swing')
cy.get('#scrollable-vertical').scrollTo('center', { easing: 'linear' })

// control the duration of the scroll (in ms)
cy.get('#scrollable-both').scrollTo('center', { duration: 2000 })
```

```
.trigger()
```

To trigger an event on a DOM element, use the `.trigger()` command.

```
cy.get('.trigger-input-range')
  .invoke('val', 25)
  .trigger('change')
  .get('input[type=range]').siblings('p')
  .get('input[type=range]').siblings('p')
  .should('have.text', '25')
```

Tests | 13 ✓ - ✘ -- 19.18 🔍 ⚡ C | https://example.cypress.io/commands/actions 1000 x 660 (57%) ⓘ

Actions

- ✓ .type() - type into a DOM element
- ✓ .focus() - focus on a DOM element
- ✓ .blur() - blur off a DOM element
- ✓ .clear() - clears an input or textarea element
- ✓ .submit() - submit a form
 - BEFORE EACH
 - 1 VISIT https://example.cypress.io/commands/ac...
 - TEST
 - 1 GET .action-form
 - 2 - FIND [type="text"]
 - TYPE HALFOFF
 - 4 GET .action-form
 - 5 - SUBMIT
 - 6 - NEXT
 - ASSERT expected <p> to contain Your form has been submitted!
- ✓ .click() - click on a DOM element

click()
To click a DOM element, use the `.click()` command.

```
cy.get('.action-form').submit()
.next().should('contain', 'Your form has been submitted!')
```

```
// clicking in the center of the element is the default
cy.get('#action-btn').click()

cy.get('#action-canvas').click('top')
cy.get('#action-canvas').click('topLeft')
cy.get('#action-canvas').click('topRight')
cy.get('#action-canvas').click('left')
cy.get('#action-canvas').click('right')
cy.get('#action-canvas').click('bottomLeft')
cy.get('#action-canvas').click('bottom')
cy.get('#action-canvas').click('bottomRight')

// click() accepts a an x and y coordinate
// that controls where the click occurs :
cy.get('#action-canvas')
.click(80, 75)
.click(170, 75)
.click(260, 75)
.click(180, 180)
.click(125, 180)
.click(150, 185)
```

Click to toggle popover
Canvas to Illustrate Click Positions
DOM Snapshot (pinned) [before] [after] X

Migrations

Disable clickjacking protection for Classic Universal Login

If enabled, additional HTTP security headers will not be included in the response to prevent embedding of the Universal Login prompts in an IFRAME.

INTEGRATION TESTS

- ▶ examples
- ◉ qanda.js

Cypress Test Results:

- Tests: ✓ 1 ✘ 0
- Time: 2.91
- Browser: Chrome
- URL: http://localhost:3000/
- Dimensions: 1000 x 660 (100%)

Test Scenario:

- Ask question
- When signed and ask a valid question, the question should succeed...
- BEFORE EACH
 - VISIT http://localhost:3000/
- TEST
 - CONTAINS Q & A
 - (XHR) GET 200 /sockjs-node/info?t=1560587183167

Q & A Application:

Search... Sign In Sign Up

UNANSWERED QUESTIONS

Accessing HttpContext in a service class

How do you access HttpContext in a class outside o...

Asked by bob.test@test.com on 5/25/2019 9:15:38 AM

Cypress Test Results:

- Tests: ✓ 1 ✘ 0
- Time: 7.53
- Browser: Chrome
- URL: http://localhost:3000/
- Dimensions: 1000 x 660 (100%)

Test Scenario:

- Ask question
- When signed and ask a valid question, the question should succeed...
- BEFORE EACH
 - VISIT http://localhost:3000/
- TEST
 - CONTAINS Q & A
 - CONTAINS UNANSWERED QUESTIONS
 - (XHR) GET 200 /sockjs-node/info?t=1560587369362

Cypress Error:

```
CypressError: Timed out retrying: Expected to find content: 'UNANSWERED QUESTIONS' but never did.
```

Q & A Application:

Search...

UNANSWERED QUESTIONS

Accessing HttpContext

How do you access HttpContext

Asked by bob.test@test.com on 5/25/

Cypress Test Results:

- Tests: ✓ 1 ✘ 0
- Time: 7.53
- Browser: Chrome
- URL: http://localhost:3000/signout-callback
- Dimensions: 1000 x 660 (100%)

Test Scenario:

```

14 - SUBMIT
15 CONTAINS Unanswered Questions
(PAGE LOAD) --page loaded--
(NEW URL) http://localhost:3000/signin-callback#access_token=eyJhbGciOiJIUzI1NiJ9.eyJzdWIiOiIxMjM0NTY3ODkwIiwibmFtZSI6IkpvaG4gRG9lIiwiaWF0IjoxNTE2MjM5MDIyfQ.JBwvDqXWzC9LcOOGdV0HkPjKJLc
(XHR) GET 200 /.well-known/jwks.json
(XHR) GET 200 /sockjs-node/info?t=1561436752975
(PAGE LOAD) --page loaded--
(NEW URL) http://localhost:3000/
(XHR) GET 200 /sockjs-node/info?t=1561436752975
(XHR) GET 200 /.well-known/jwks.json
16 CONTAINS Ask a question
17 - CLICK
(NEW URL) http://localhost:3000/ask
18 CONTAINS Ask a Question
19 - GETBYLABELTEXTTitle
20 - TYPE title test
21 - ASSERT expected <input#title.css-kgxq8y> to have value
  title test
22 - GETBYLABELTEXTContent
23 - TYPE Lots and lots and lots and lots and lots of con...
24 - ASSERT expected <textarea#content.css-ekpq87> to have value
  Lots and lots and lots and lots and lots of content test
25 CONTAINS Submit Your Question
26 - CLICK
27 CONTAINS Your question was successfully submitted
28 CONTAINS Sign Out
29 - CLICK
(NEW URL) http://localhost:3000/signout
(PAGE LOAD) --page loaded--
(NEW URL) http://localhost:3000/signout-callback
30 CONTAINS You successfully signed out!
(XHR) GET 200 /sockjs-node/info?t=156143675942

```

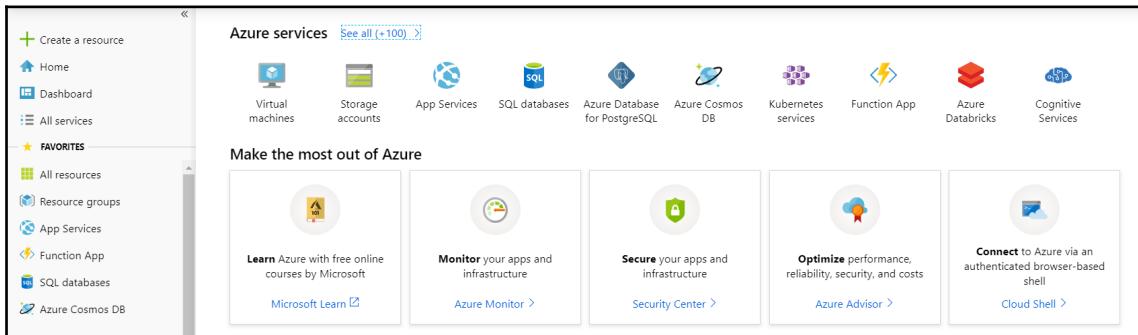
Q & A Application:

Search... Sign In

SIGN OUT

You successfully signed out!

Chapter 14: Configuring and Deploying to Azure



This screenshot shows the 'Resource groups' page in the Azure portal. At the top, it displays the 'Subscriptions: Free Trial' and filtering options for 'Filter by name...', 'All locations', 'All tags', and 'No grouping'. It indicates '0 items' and lists columns for 'NAME', 'SUBSCRIPTION', and 'LOCATION'. A large, empty gray box with a cube icon represents the absence of resource groups. Below this, the message 'No resource groups to display' is shown, followed by a link 'Try changing your filters if you don't see what you're looking for. Learn more' and a prominent blue 'Create resource group' button.

Home > Resource groups > Create a resource group

Create a resource group

Basics Tags Review + Create

Resource group - A container that holds related resources for an Azure solution. The resource group can include all the resources for the solution, or only those resources that you want to manage as a group. You decide how you want to allocate resources to resource groups based on what makes the most sense for your organization. [Learn more](#)

PROJECT DETAILS

* Subscription

* Resource group ✓

RESOURCE DETAILS

* Region

Review + Create **Next : Tags**

Home > Resource groups

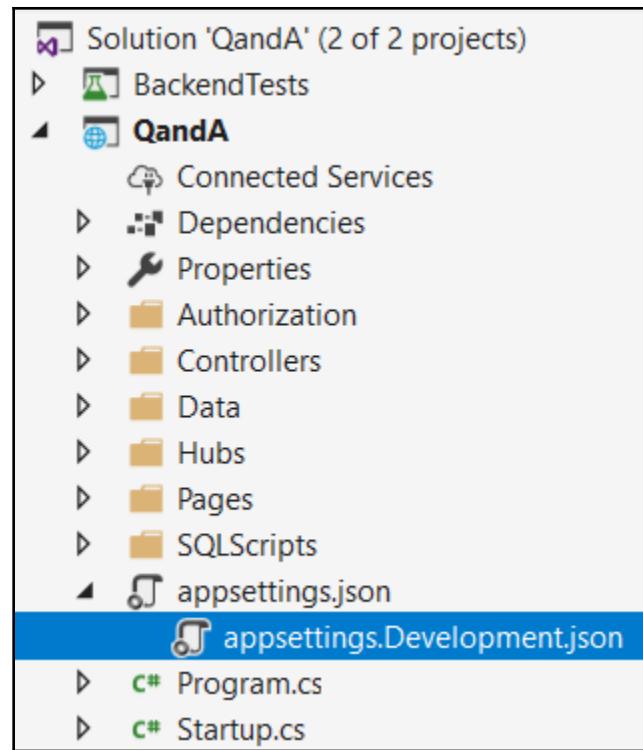
Resource groups

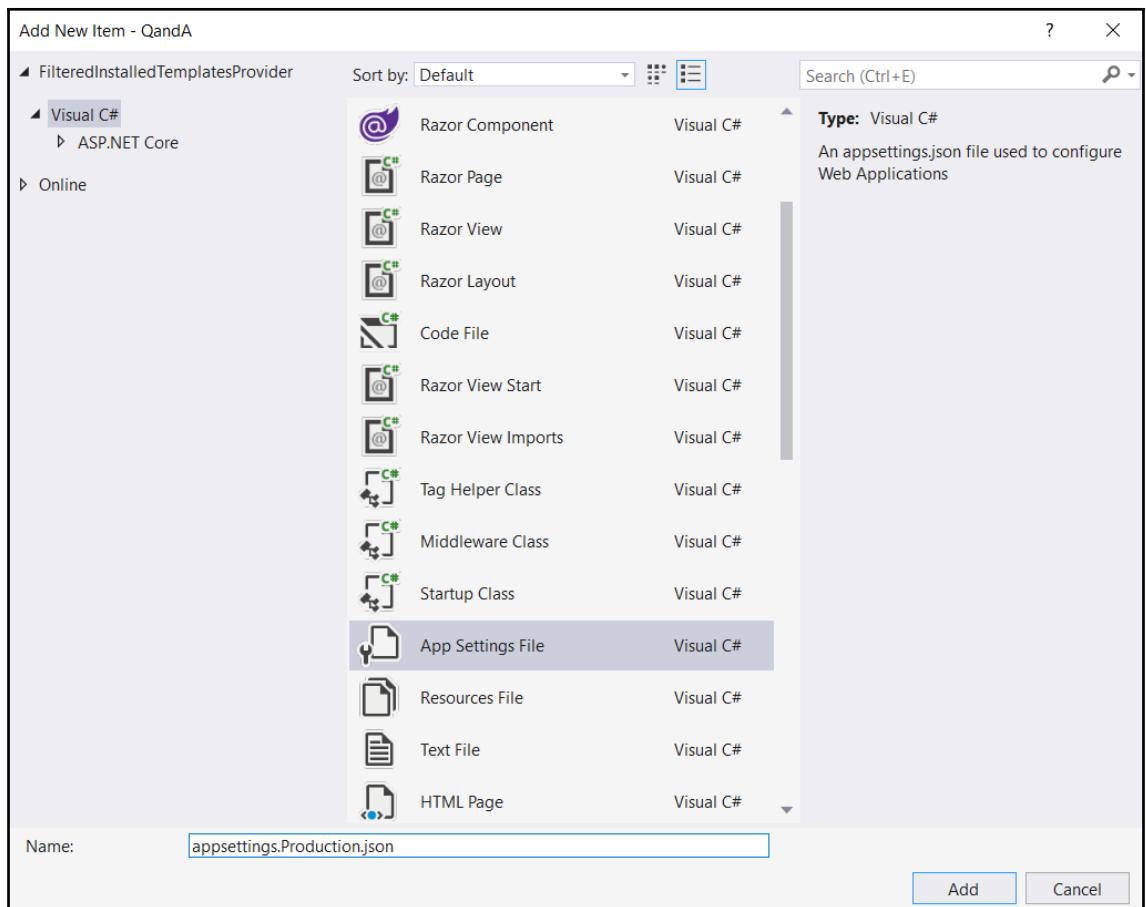
Default Directory

Add **Edit columns** **Refresh** **Assign tags** **Export to CSV**

Subscriptions: Free Trial

<input type="text" value="Filter by name..."/>	All locations	All tags	No grouping
1 items			
NAME ↑	SUBSCRIPTION ↑↓	LOCATION ↑↓	...
<input type="checkbox"/> QandAResources	Free Trial	Central US	<input type="button" value="..."/>





Overview

Connected Services

Publish

Publish

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

Start

Continuous Delivery

Automatically publish your application to Azure with continuous delivery.

[Configure](#)

Pick a publish target

x

-  App Service
-  App Service Linux
-  Azure Virtual Machines
-  IIS, FTP, etc
-  Folder

Azure App Service
Fully managed, and highly scalable cloud environment

Create New
 Select Existing

[Advanced...](#)

Import Profile... Create Profile ▾ Cancel

 Azure App Service

Create new

Name: qanda-backend

Subscription: Free Trial

Resource Group: QandAResources (centralus) [New...](#)

Hosting Plan: Plan* (Central US, S1) [New...](#)

Application Insights: None

 Using Application Insights is recommended for performance management and website analytics

[Export...](#)

 Microsoft account
carl.rippon@googlemail.com

Explore additional Azure services

 Create a storage account

 Create a SQL Database

Clicking the Create button will create the following Azure resources

Hosting Plan - Plan  

App Service - qanda-backend

[Create](#) [Cancel](#)

Your application is making use of SignalR. For environments that need to scale we strongly recommend adding a dependency on Azure SignalR Service.

[More info](#)

Microsoft Visual Studio



We have detected that your app makes use of SignalR, but we have not detected an instance of Azure SignalR Service. For performance and scale we recommend using Azure SignalR Service. If you decide not to, we recommend enabling Web sockets on your Azure App Service as an alternative. Would you like to turn Web sockets on?

Yes

No

← → ⌂ https://qanda-backend.azurewebsites.net/api/questions

```
[{"questionId":1,"title":"Why should I learn TypeScript?","content":"TypeScript seems to be getting popular so I wondered whether it is worth my time learning it? What benefits does it give over JavaScript?","userName":"bob.test@test.com","created":"2019-05-18T14:32:00","answers":null}, {"questionId":2,"title":"Which state management tool should I use?","content":"There seem to be a fair few state management tools around for React - React, Unstated, ... Which one should I use?","userName":"jane.test@test.com","created":"2019-05-18T14:48:00","answers":null}]
```

Home > All resources

All resources

Default Directory

+ Add Edit columns Refresh | Assign tags Delete | Export to CSV Try preview

Subscriptions: Free Trial

Filter by name... All resource groups All types All locations All tags No grouping

4 items Show hidden types

<input type="checkbox"/> NAME ↑↓	TYPE ↑↓	RESOURCE GROUP ↑↓	LOCATION ↑↓	SUBSCRIPTION ↑↓	...
<input type="checkbox"/> Plan	App Service plan	QandAResources	Central US	Free Trial	...
<input type="checkbox"/> qanda-backend	App Service	QandAResources	Central US	Free Trial	...
<input type="checkbox"/> qandadbserver	SQL server	QandAResources	Central US	Free Trial	...
<input type="checkbox"/> qandadb (qandadbserver/qandadb)	SQL database	QandAResources	Central US	Free Trial	...

Overview Publish

Connected Services

Publish

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

qanda-backend - Web Deploy

New Edit Rename Delete

Publish

Search (Ctrl+ /)

Deployment Center

Settings

Configuration

Application settings (Classic)

Authentication / Authorization

Application Insights

Identity

Backups

Custom domains

SSL settings

Networking

Scale up (App Service plan)

Scale out (App Service plan)

Save Discard

General settings Application settings Default documents Path mappings

Application settings

+ New application setting Show Values Advanced Edit

Name	Value	Slot setting	
ASPNETCORE_ENVIRONMENT	Hidden value. Click show values button above		
WEBSITE_NODE_DEFAULT_VERSION	Hidden value. Click show values button above		

Connection strings

+ New connection string Show Values

Name	Value	Type	Slot setting	
DefaultConnection	Hidden value. Click show v...	SQLAzure		

Azure App Service

Azure App Service 0.13.0

An Azure App Service management ex...

Microsoft [Install](#)

Azure Repos 1.149.2

Connect to Azure Repos and work wit...

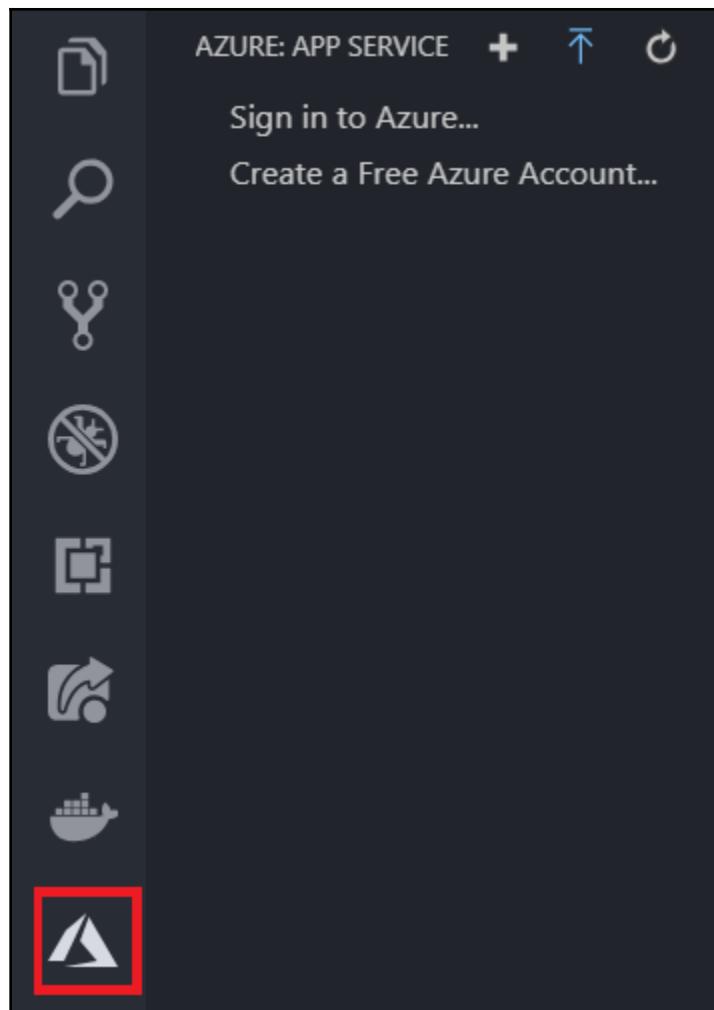
Microsoft [Install](#)

Azure App Service ms-azuretools.vscode-azureappservice [Preview](#)

Microsoft | 391,011 | ★★★★★ | Repository | License

An Azure App Service management extension for Visual Studio Code.

[Install](#)



AZURE: APP SERVICE



- ◀ Free Trial
- ▶ qanda-backend
- ▶ qanda-backend-staging
- ▶ qanda-frontend

[Open in Portal](#)

[Browse Website](#)

Start

Stop

Restart

Delete...

[Deploy to Web App...](#)

[Configure Deployment Source...](#)

[Continuous Delivery \(Preview\)](#)

Start Streaming Logs

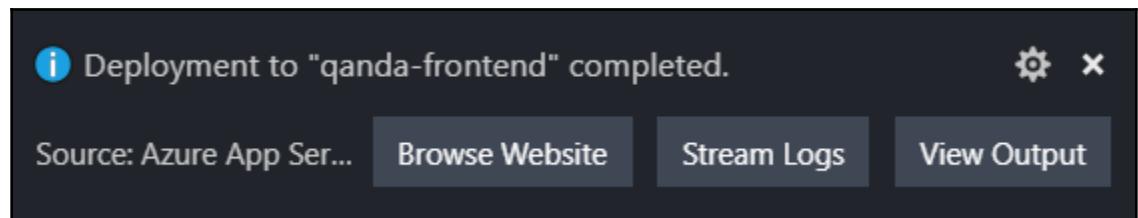
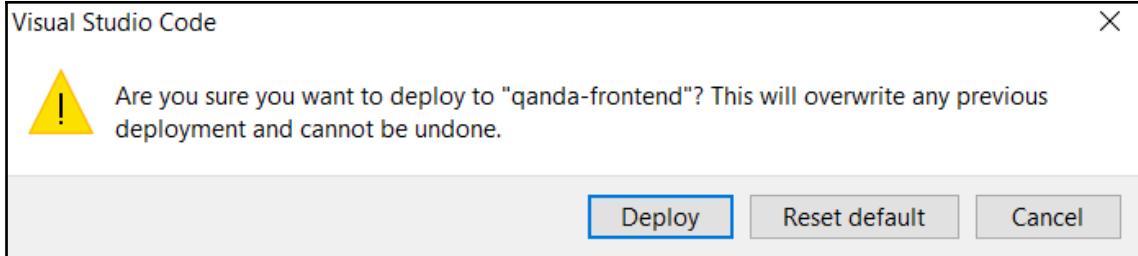
Stop Streaming Logs

[Generate Azure CLI Script](#)

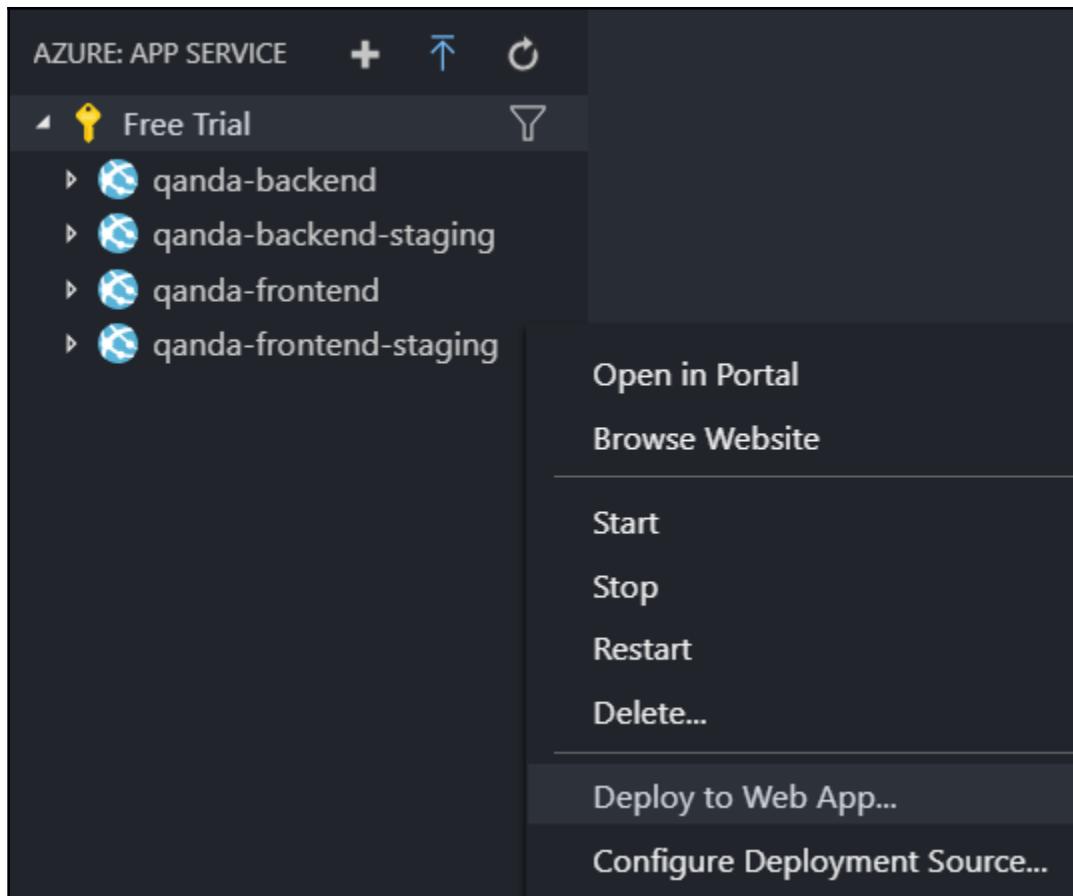
[Start Remote Debugging](#)

[Disable Remote Debugging](#)

Refresh



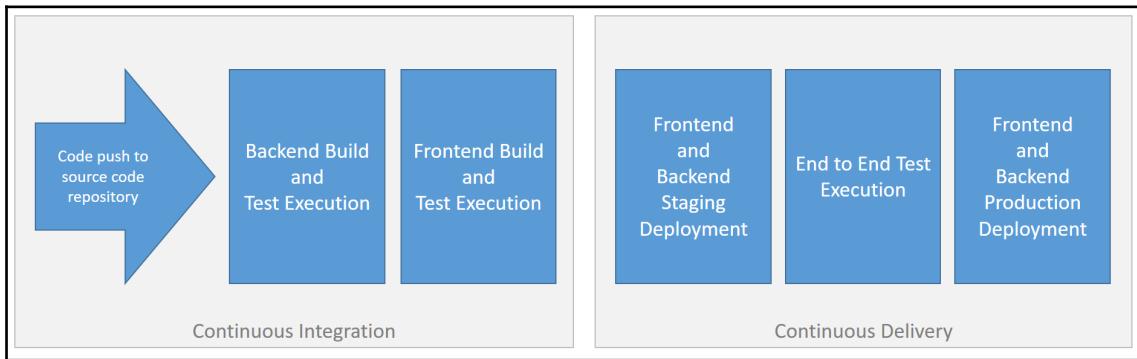
A screenshot of a Q & A production interface. It shows a search bar, a sign-in button, and a section titled "UNANSWERED QUESTIONS". Inside this section, there is a question: "Which state management tool should I use?". The answer starts with "There seem to be a fair few state management tools...". At the bottom, it says "Asked by jane.test@test.com on 18/05/2019 14:48:00".



The screenshot shows a web browser window with the URL 'https://qanda-frontend-staging.azurewebsites.net'. The page title is 'Q & A staging'. It features a search bar and a sign-in link. Below the header, there's a section titled 'UNANSWERED QUESTIONS' containing a single question: 'Which state management tool should I use?'. The question text is: 'There seem to be a fair few state management tools...'. At the bottom of the question box, it says 'Asked by jane.test@test.com on 18/05/2019 14:48:00'.

Allowed Callback URLs	http://localhost:3000/signin-callback,https://ganda-frontend-staging.azurewebsites.net/signin-callback,https://ganda-frontend.azurewebsites.net/signin-callback
Allowed Web Origins	http://localhost:3000,https://ganda-frontend-staging.azurewebsites.net,https://ganda-frontend.azurewebsites.net/
Allowed Logout URLs	http://localhost:3000/signout-callback,https://ganda-frontend-staging.azurewebsites.net/signout-callback,https://ganda-frontend.azurewebsites.net/signout-callback

Chapter 15: Implementing CI and CD with Azure DevOps



Create new project



Project name *

QandA



Description

Visibility



Public

Anyone on the internet can view the project. Certain features like TFVC are not supported.



Private

Only people you give access to will be able to view this project.



▼ Advanced

Create

Cancel

Connect

Select

Configure

Review

New pipeline

Where is your code?



Azure Repos Git YAML

Free private Git repositories, pull requests, and code search



Bitbucket Cloud YAML

Hosted by Atlassian



GitHub YAML

Home to the world's largest community of developers



GitHub Enterprise Server YAML

The self-hosted version of GitHub Enterprise



Other Git

Any Internet-facing Git repository



Subversion

Centralized version control by Apache

Azure DevOps carlrippon / QandA / Pipelines

QandA +

✓ Connect Select Configure Create pipeline

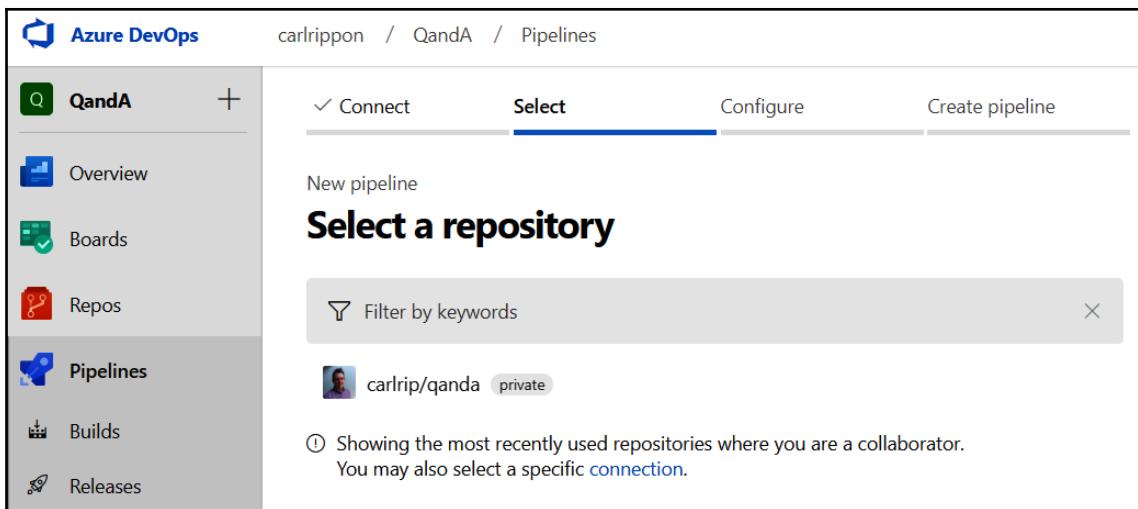
New pipeline

Select a repository

Filter by keywords X

carlrip/qanda private

Showing the most recently used repositories where you are a collaborator.
You may also select a specific [connection](#).

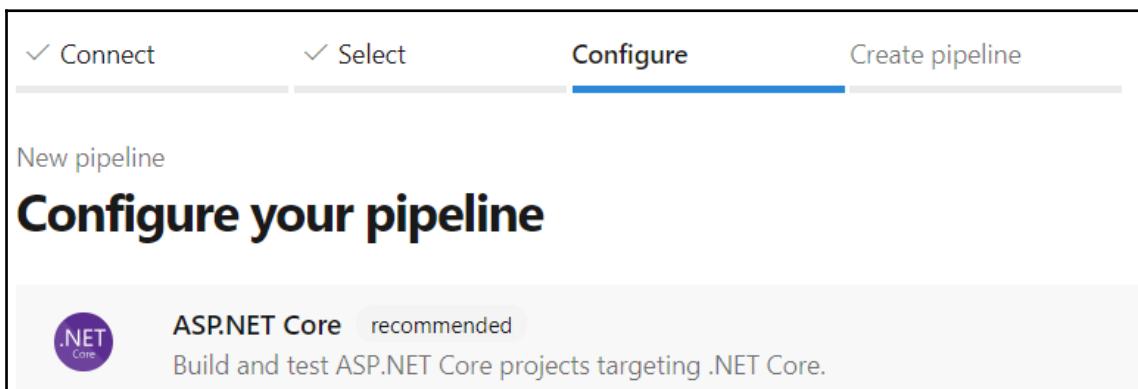


✓ Connect ✓ Select **Configure** Create pipeline

New pipeline

Configure your pipeline

.NET Core recommended
Build and test ASP.NET Core projects targeting .NET Core.



✓ Connect ✓ Select ✓ Configure Review

New pipeline

Review your pipeline YAML

Save and run

```
azure-pipelines.yml
```

```
1 # ASP.NET Core
2 # Build and test ASP.NET Core projects targeting .NET Core.
3 # Add steps that run tests, create a NuGet package, deploy, and more:
4 # https://docs.microsoft.com/azure/devops/pipelines/languages/dotnet-core
5
6 trigger:
7 - master
8
9 pool:
10   vmImage: 'ubuntu-latest'
11
12 variables:
13   buildConfiguration: 'Release'
14
15 steps:
16 - script: dotnet build --configuration $(buildConfiguration)
17   displayName: 'dotnet build $(buildConfiguration)'
```

Azure DevOps carlippon / QandA / Pipelines / Builds

Search all pipelines

carlip.qanda

Edit Queue

History Analytics

Commit	Build #	Branch
 Set up CI with Azure Pipelines CI build for carlip	20190412.1	master

Commit	Build #	Branch
 Update azure-pipelines.yml for Azure Pipelines CI build for carlrip	✓ 20190412.2	master
 Set up CI with Azure Pipelines CI build for carlrip	✗ 20190412.1	master

Commit	Build #	Branch
 Update azure-pipelines.yml for Azure Pipelines CI build for carlrip	✓ 20190412.3	master
 Update azure-pipelines.yml for Azure Pipelines CI build for carlrip	✓ 20190412.2	master
 Set up CI with Azure Pipelines CI build for carlrip	✗ 20190412.1	master

✓ #20190412.3: Update azure-pipelines.yml for Azure Pipelines

Triggered today at 19:40 for carlrip 🏃 carlrip/qanda2 ⚡ master ⚡ fcad871

Logs Summary Tests

Job Job

Pool: Hosted Ubuntu 1604 · Agent: Hosted Agent

✓ Prepare job · succeeded	<1s
✓ Initialize job · succeeded	1s

⋮ 3m 40s

Release Artifacts

- backend
- frontend-production
- frontend-staging



carlrippon / QandA / Pipelines

All pipelines > carlrip.qanda - CD

Pipeline Tasks Variables Retention Options History

Artifacts | + Add carlrip.qanda Schedule not set

Stages | + Add Stage 1 Select a template

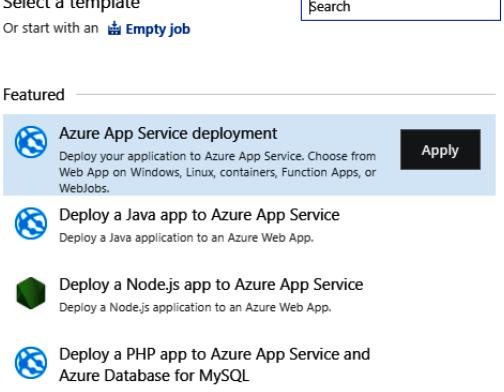
Select a template
Or start with an Empty job

Search

Featured

- Azure App Service deployment Deploy your application to Azure App Service. Choose from Web App on Windows, Linux, containers, Function Apps, or WebJobs.
- Deploy a Java app to Azure App Service Deploy a Java application to an Azure Web App.
- Deploy a Node.js app to Azure App Service Deploy a Node.js application to an Azure Web App.
- Deploy a PHP app to Azure App Service and Azure Database for MySQL

Apply



All pipelines > carlrip.qanda - CD

Save + Release View releases ...

Pipeline Tasks Variables Retention Options History

Artifacts | + Add carlrip.qanda Schedule not set

Stages | + Add Staging ① 1 job, 1 task

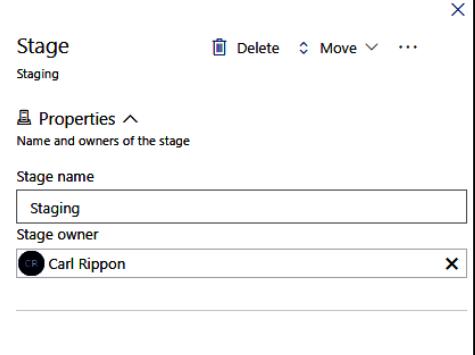
Stage

Delete Move ...

Properties ^ Name and owners of the stage

Stage name Staging

Stage owner Carl Rippon



All pipelines > carlrip.qanda - CD

Save + Release View releases ...

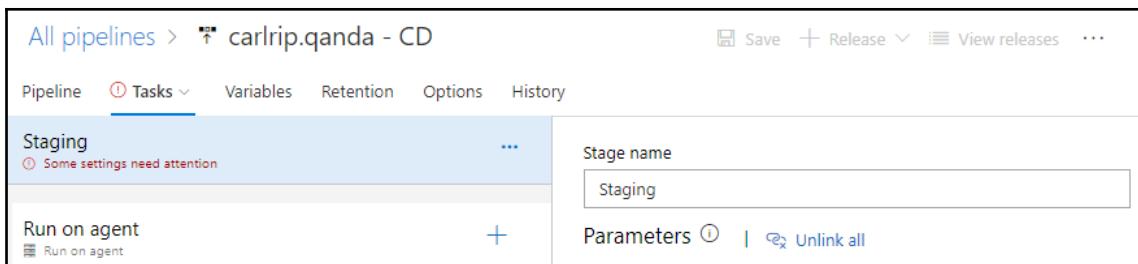
Pipeline Tasks Variables Retention Options History

Staging Some settings need attention

Run on agent Run on agent

Stage name: Staging

Parameters | Unlink all



Pipeline Tasks Variables Retention Options History

Staging Deployment process

Run on agent Run on agent

Backend App Service Azure App Service Deploy

Display name * Backend App Service

Connection type * (1)

Azure Resource Manager

Azure subscription * (1) | Manage

Free Trial (7c4dc824-813d-4e9c-bea7-c087373483cf) (1)

Scoped to subscription 'Free Trial'

App Service type * (1)

Web App on Windows

App Service name * (1)

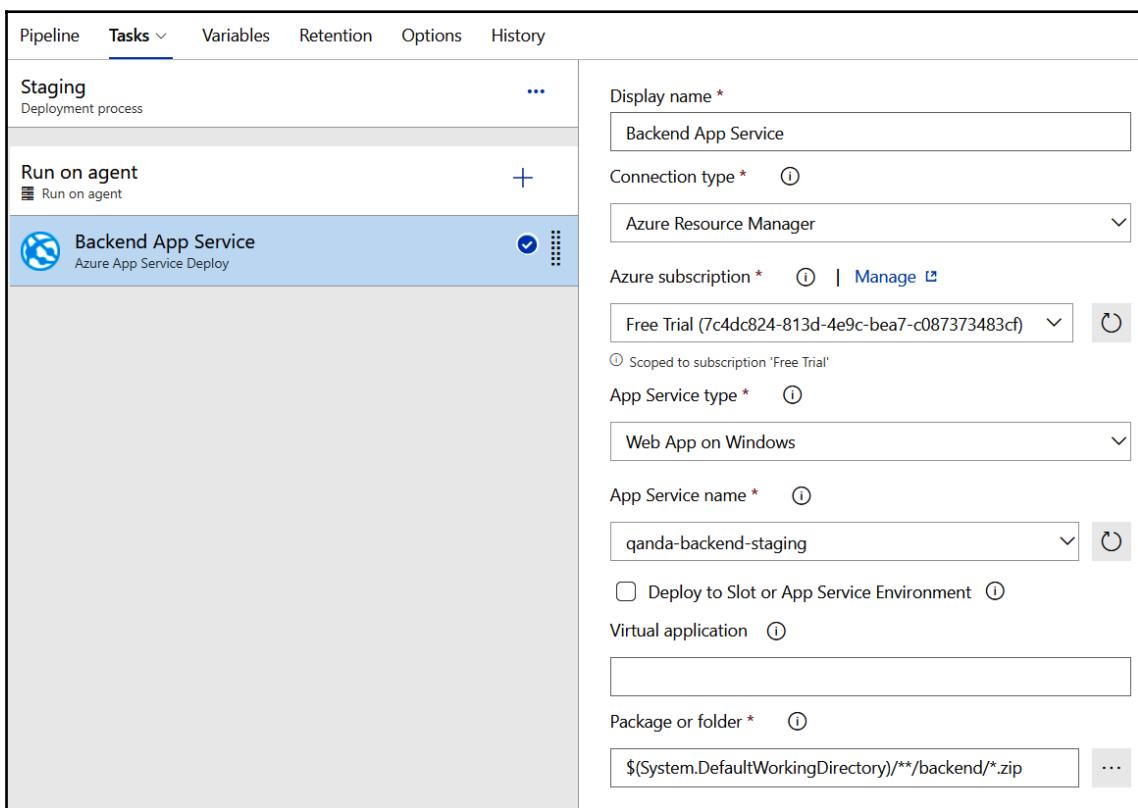
qanda-backend-staging

Deploy to Slot or App Service Environment (1)

Virtual application (1)

Package or folder * (1)

\$(System.DefaultWorkingDirectory)/**/backend/*.zip



Pipeline Tasks Variables Retention Options History

Staging
Deployment process

Run on agent

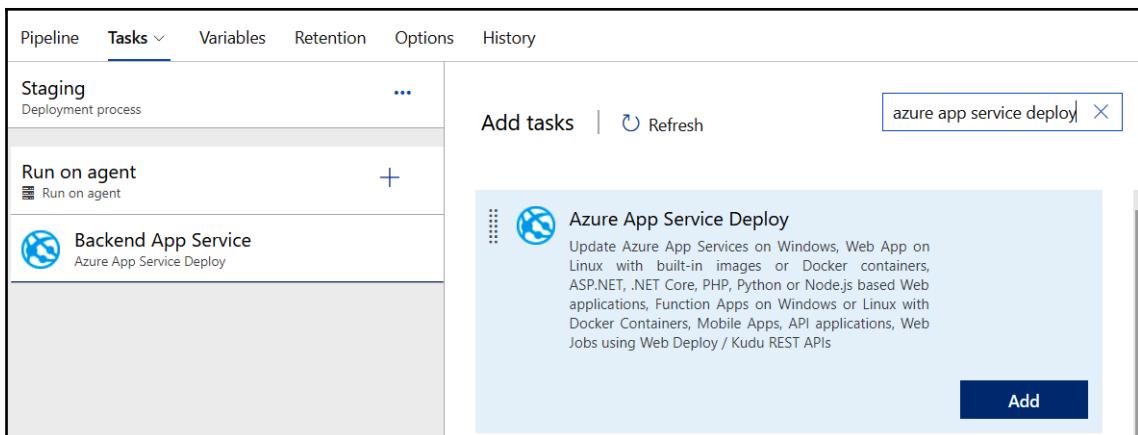
Backend App Service
Azure App Service Deploy

Add tasks | Refresh

azure app service deploy X

Azure App Service Deploy
Update Azure App Services on Windows, Web App on Linux with built-in images or Docker containers, ASP.NET, .NET Core, PHP, Python or Node.js based Web applications, Function Apps on Windows or Linux with Docker Containers, Mobile Apps, API applications, Web Jobs using Web Deploy / Kudu REST APIs

Add



Pipeline Tasks Variables Retention Options History

Staging
Deployment process

Run on agent

Backend App Service
Azure App Service Deploy

Frontend App Service:
Azure App Service Deploy

Display name *
Frontend App Service:

Connection type * ⓘ
Azure Resource Manager

Azure subscription * ⓘ | Manage ↗
Free Trial (7c4dc824-813d-4e9c-bea7-c087373483cf) ⏪

Scoped to subscription 'Free Trial'

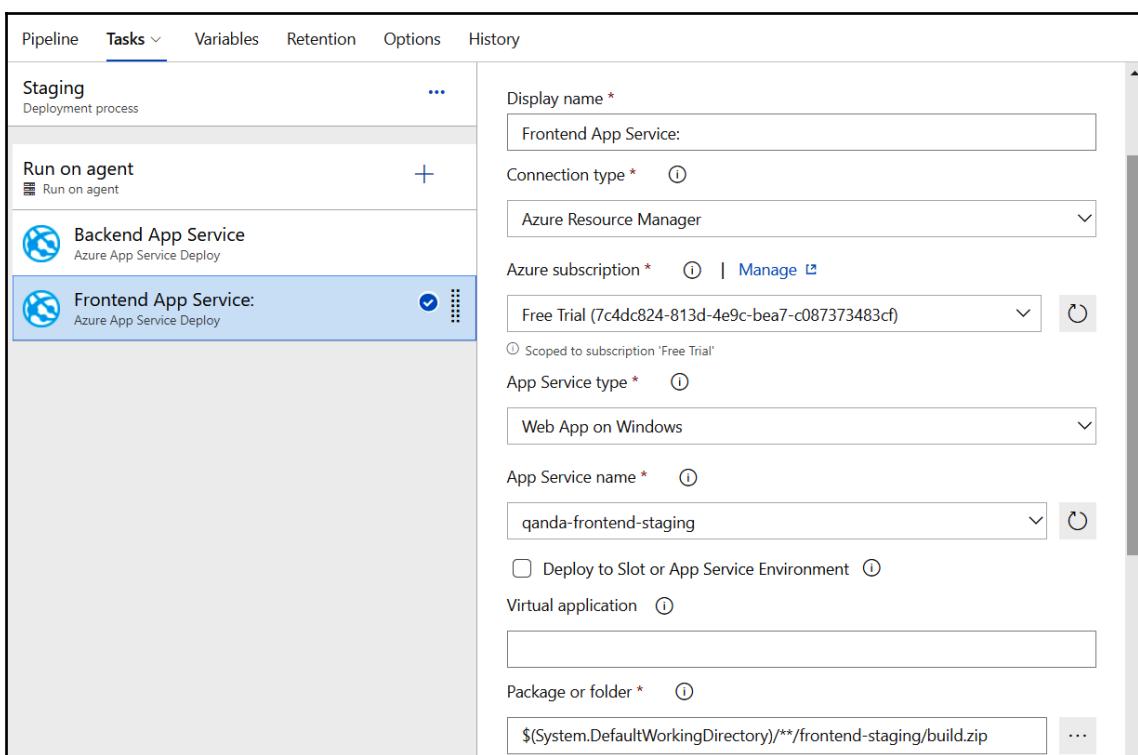
App Service type * ⓘ
Web App on Windows

App Service name * ⓘ
qanda-frontend-staging ⏪

Deploy to Slot or App Service Environment ⓘ

Virtual application ⓘ

Package or folder * ⓘ
\$(System.DefaultWorkingDirectory)/**/frontend-staging/build.zip ⏪



Pipeline **Tasks** ▾ Variables Retention Options History

Staging
Deployment process

Run on agent

Run on agent

Backend App Service
Azure App Service Deploy

Frontend App Service:
Azure App Service Deploy

Extract Cypress files

Extract files

Extract Files ⓘ

View YAML Remove

Task version 1.*

Display name *

Extract Cypress files

Archive file patterns *

\$(System.DefaultWorkingDirectory)/**/frontend-staging/tests.zip

Destination folder *

\$(System.DefaultWorkingDirectory)/cypress

Clean destination folder before extracting ⓘ

Control Options

Output Variables

This screenshot shows the 'Tasks' tab of a pipeline named 'Staging'. The pipeline has several stages: 'Run on agent', 'Backend App Service', 'Frontend App Service', and 'Extract Cypress files'. The 'Extract Cypress files' stage is currently selected. It contains an 'Extract Files' task. The task's 'Archive file patterns' field is set to '\$(System.DefaultWorkingDirectory)/**/frontend-staging/tests.zip'. The 'Destination folder' field is set to '\$(System.DefaultWorkingDirectory)/cypress'. A checkbox for 'Clean destination folder before extracting' is checked. There are also sections for 'Control Options' and 'Output Variables'.

Pipeline **Tasks** Variables Retention Options History

Staging Deployment process ...

Task version 2.*

Run on agent +
Run on agent

Backend App Service Azure App Service Deploy

Frontend App Service: Azure App Service Deploy

Extract Cypress files Extract files

Run Cypress tests Command line ✓ ...

Display name * Run Cypress tests

Script *

```
npm install  
npm run cypress:run
```

Advanced ^

Working Directory
\$(System.DefaultWorkingDirectory)/cypress ...

This screenshot shows the 'Tasks' tab of a pipeline configuration in Azure DevOps. The 'Staging' deployment stage is selected. A 'Run Cypress tests' task is highlighted with a blue background and a checkmark icon. The task details on the right show it's a 'Command line' task with the script `npm install` and `npm run cypress:run`. The 'Working Directory' is set to `\$(System.DefaultWorkingDirectory)/cypress`. Other stages like 'Backend App Service' and 'Frontend App Service' are also listed.

Artifacts | + Add

carlrip.qanda

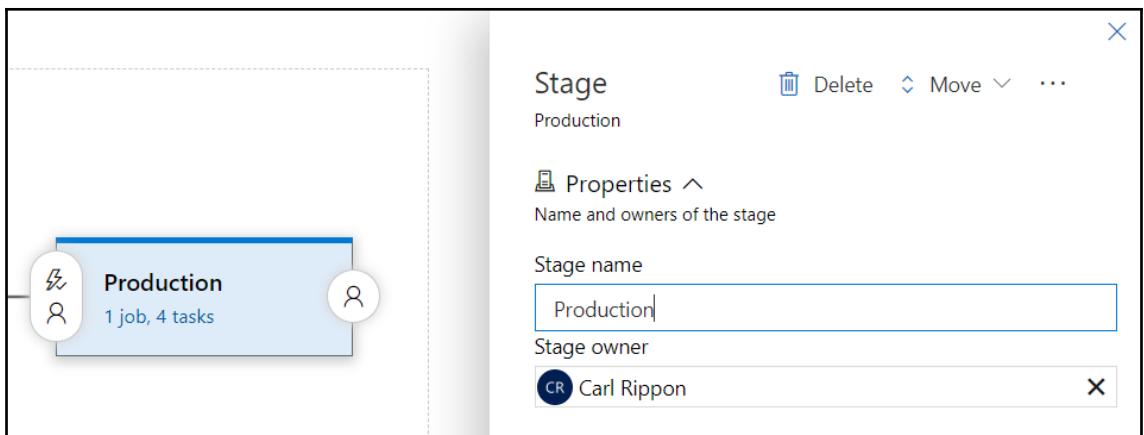
Schedule not set

Stages | + Add ▾

Staging 1 job, 4 tasks

+ Clone Clone stage

This screenshot shows the 'Stages' tab of the pipeline configuration. The 'Staging' stage is selected and highlighted in blue. It contains four tasks. There are buttons for adding a new stage (+), cloning the current stage (Clone), and cloning the entire stage (Clone stage). The 'Artifacts' tab is also visible on the left.



Pipeline Tasks **Tasks** Variables Retention Options History

Production	Deployment process	...
Run on agent	Run on agent	+
Backend App Service	Azure App Service Deploy	⊕
Frontend App Service:	Azure App Service Deploy	

Display name *
Backend App Service

Connection type * **①**
Azure Resource Manager

Azure subscription * **①** | Manage **②**
Free Trial (7c4dc824-813d-4e9c-bea7-c087373483cf) **③** **↻**
① Scoped to subscription 'Free Trial'

App Service type * **①**
Web App on Windows

App Service name * **①**
qanda-backend **③** **↻**

Deploy to Slot or App Service Environment **①**

Virtual application **①**
[empty input field]

Package or folder * **①**
\$(System.DefaultWorkingDirectory)/**/backend/*.zip **③** **...**

Pipeline Tasks Variables Retention Options History

Production Deployment process

Run on agent Run on agent +

Backend App Service Azure App Service Deploy

Frontend App Service: Azure App Service Deploy

Display name * Frontend App Service:

Connection type * Azure Resource Manager

Azure subscription * Free Trial (7c4dc824-813d-4e9c-bea7-c087373483cf) | Manage

Scoped to subscription 'Free Trial'

App Service type * Web App on Windows

App Service name * qanda-frontend

Deploy to Slot or App Service Environment

Virtual application

Package or folder * \$(System.DefaultWorkingDirectory)/**/frontend-production/*.zip

Search all pipelines

carlrip.qanda - CD

Edit Create release

Releases Deployments Analytics

All releases

Releases Created Stages

Release-1 CR 20190412.1 master 2019-04-12 22:35 Staging Production

Pre-deployment conditions

Production

Triggers ^

Define the trigger that will start deployment to this stage

Select trigger ⓘ

After release

After stage

Manual only

Stages ⓘ

✓ Staging