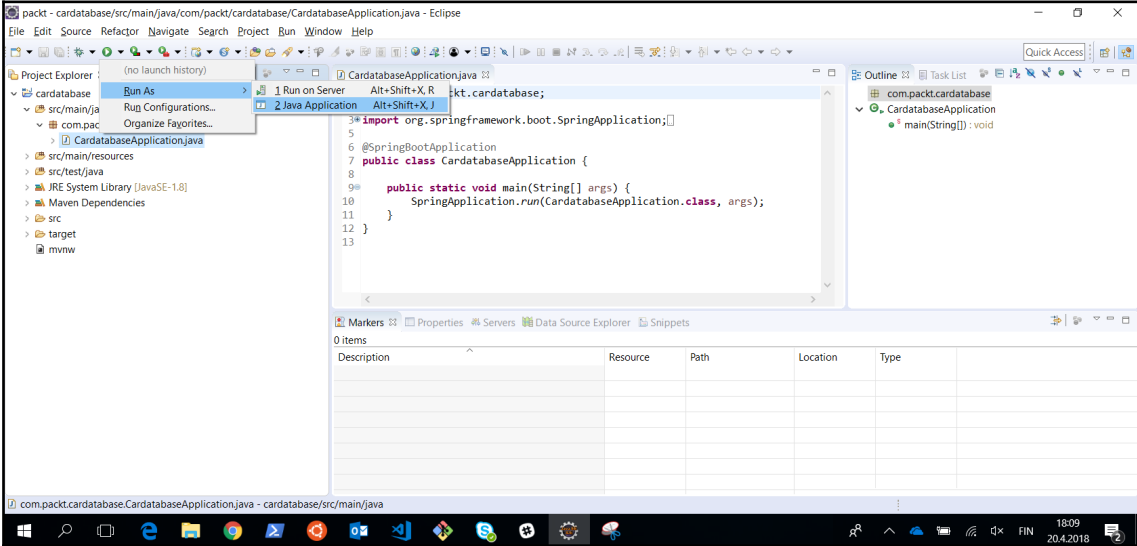



Chapter 1: Setting Up the Environment and Tools - Backend



← → ↻ https://start.spring.io



Spring Initializr

Bootstrap your application

Project Maven Project Gradle Project

Language Java Kotlin Groovy

Spring Boot 2.2.0 M1 2.2.0 (SNAPSHOT) 2.1.4 (SNAPSHOT) 2.1.3 1.5.19

Project Metadata

Group
com.packt

Artifact
cardatabase

More options

Dependencies
[See all](#)

Search dependencies to add
Web, Security, JPA, Actuator, Devtools...

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start.spring.io is powered by
[Spring Initializr](#) and [Pivotal Web Services](#)

Generate Project - alt + ↵

List of dependencies for **Spring Boot 2.1.3.RELEASE**

Core

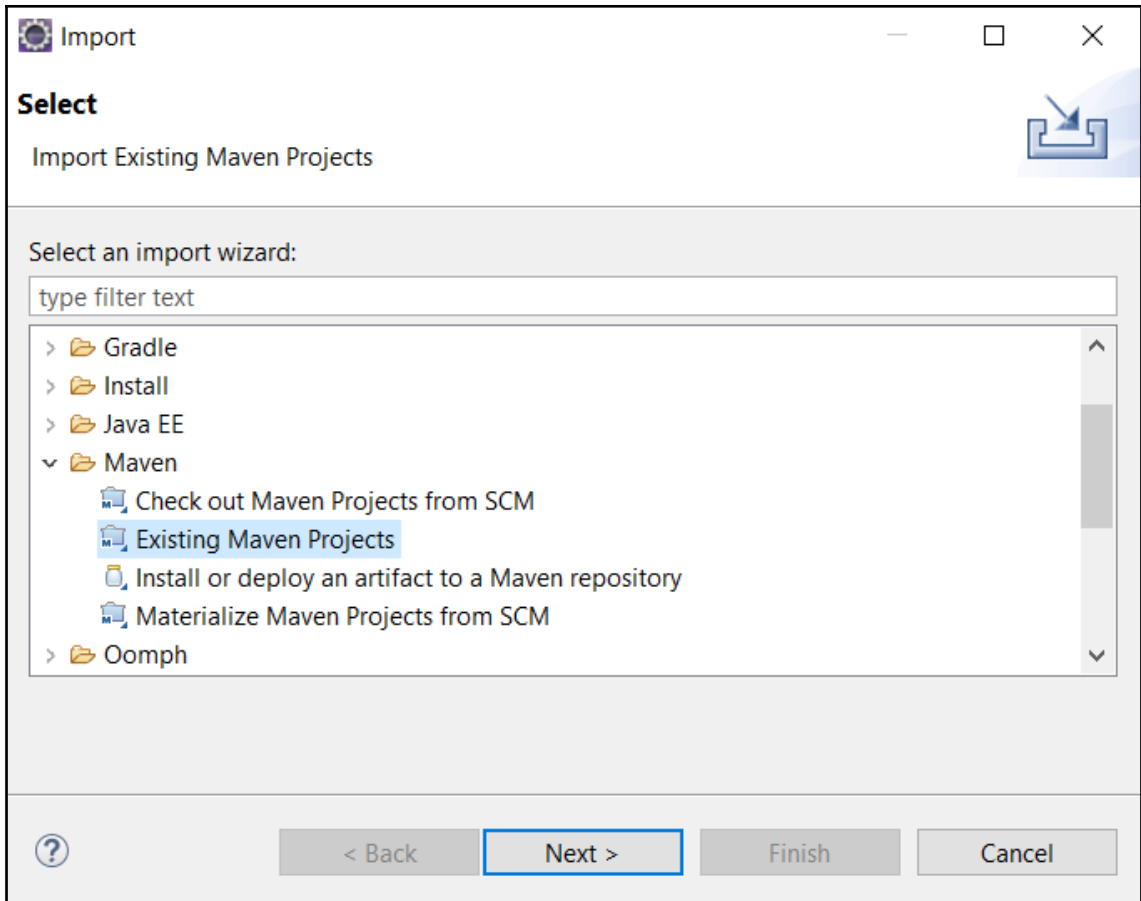
- DevTools:** Spring Boot Development Tools
- Lombok:** Java annotation library which helps to reduce boilerplate code and code faster
- Configuration Processor:** Generate metadata for your custom configuration keys
- Session:** API and implementations for managing a user's session information
- Cache:** Spring's Cache abstraction
- Validation:** JSR-303 validation infrastructure (already included with web)
- Retry:** Provide declarative retry support via spring-retry
- Aspects:** Create your own Aspects using Spring AOP and AspectJ

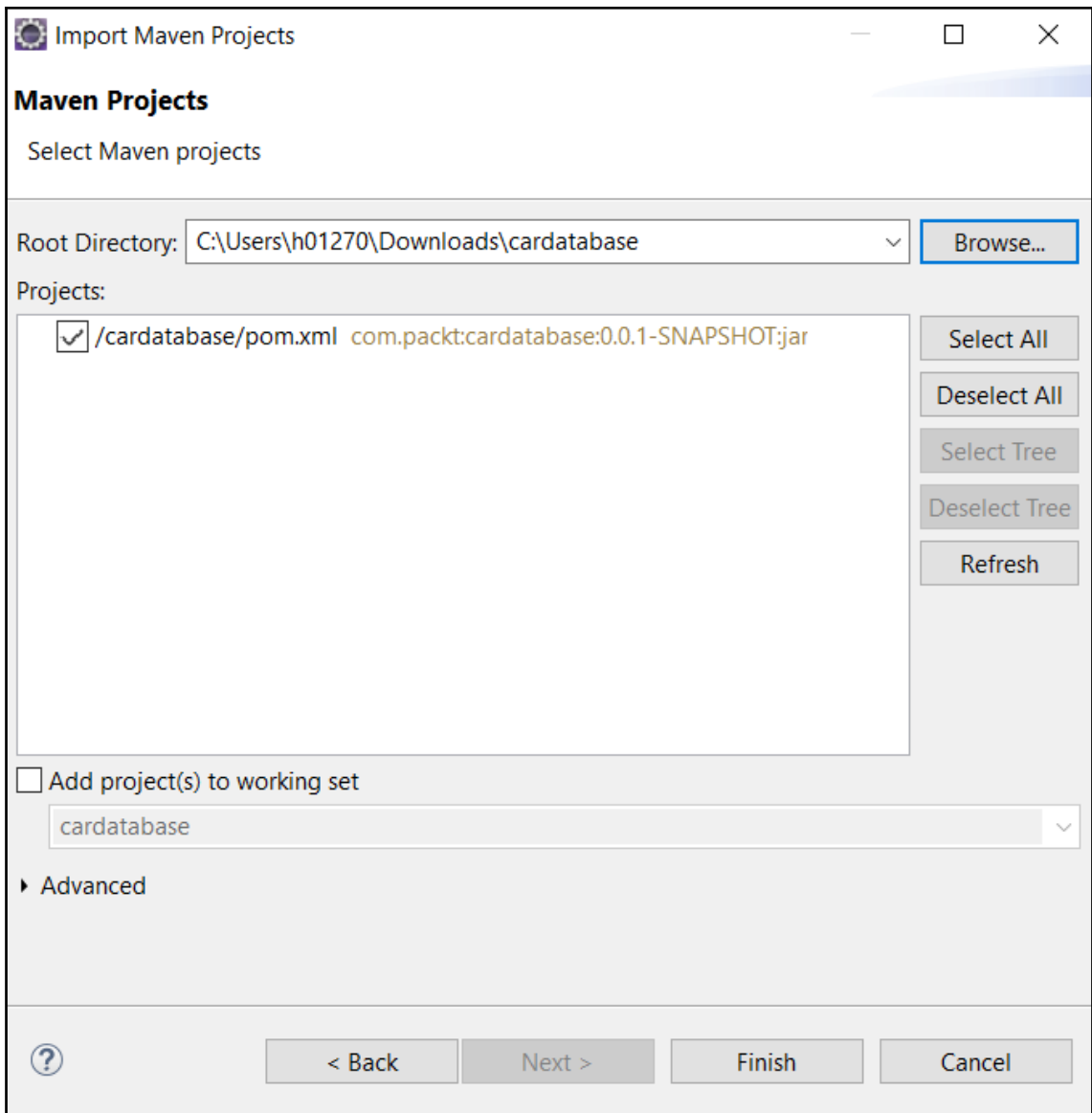
Web

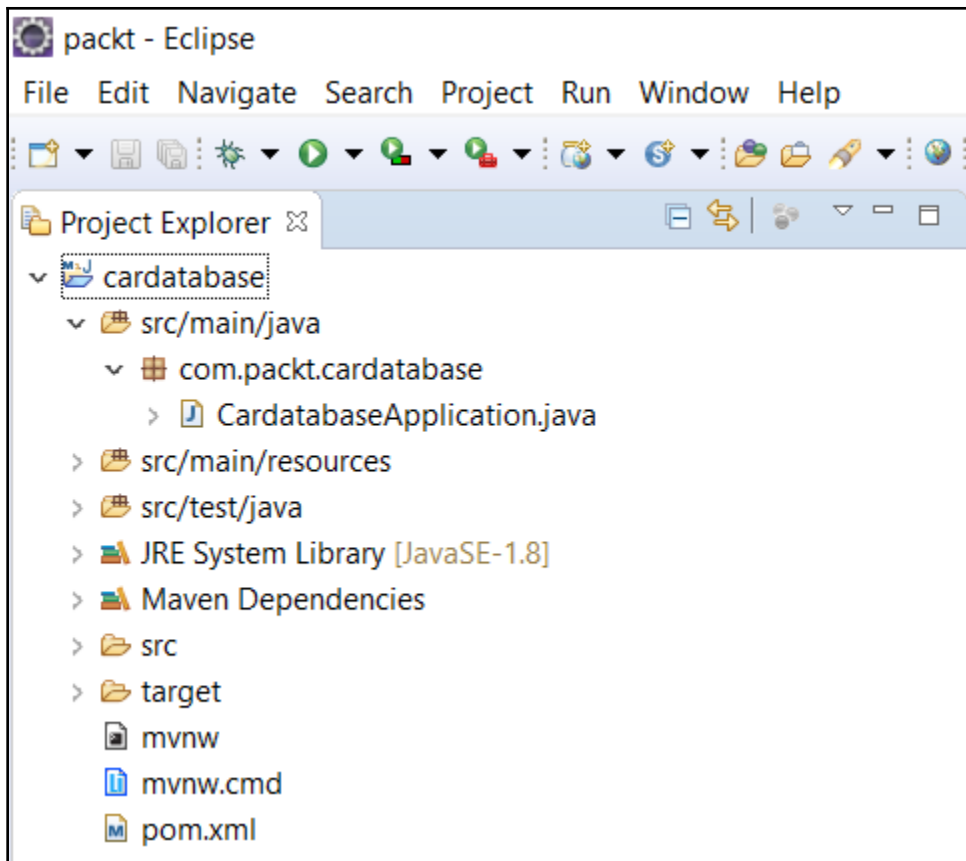
- Web:** Servlet web application with Spring MVC and Tomcat

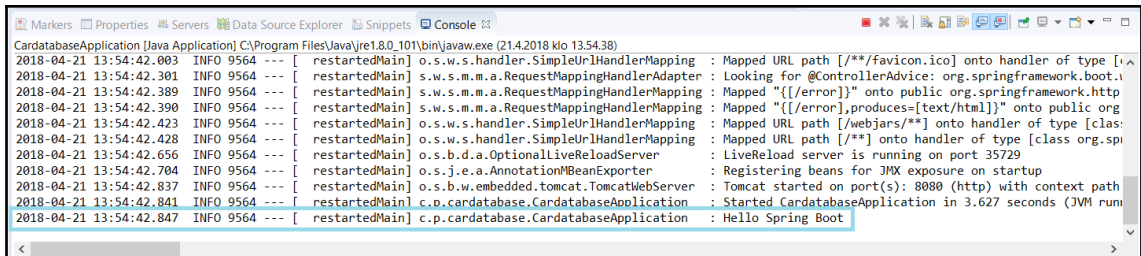
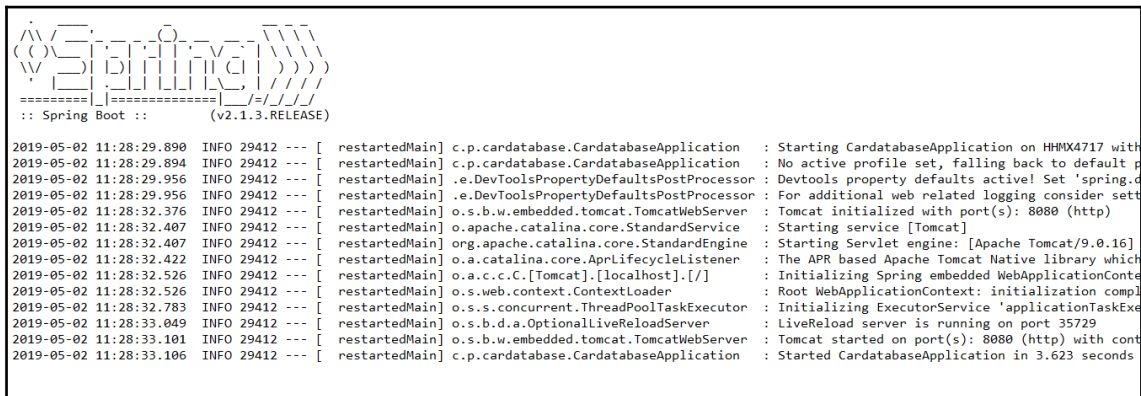
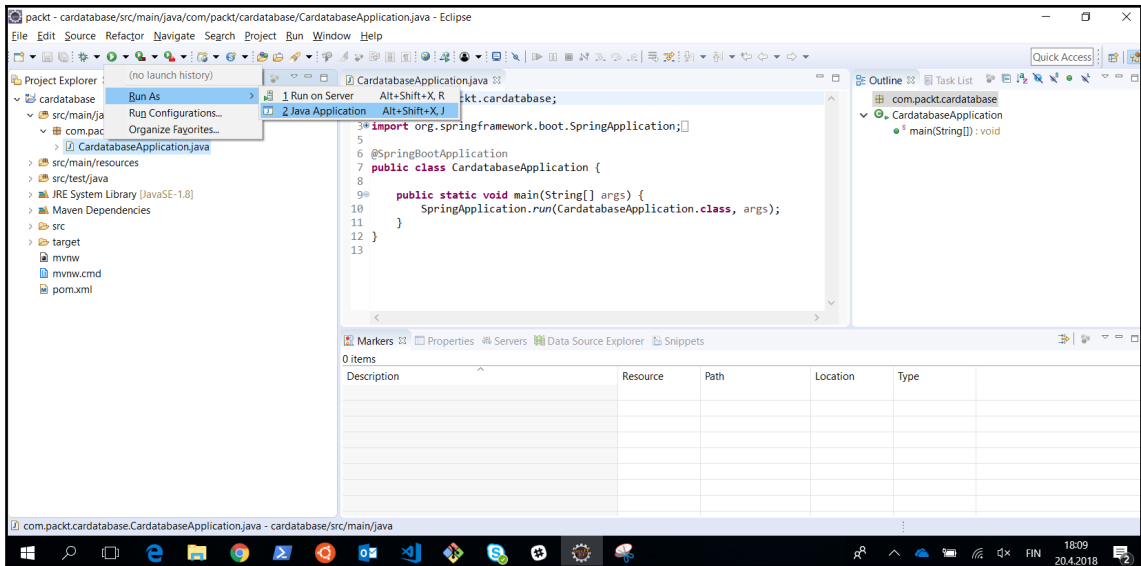
Update dependencies

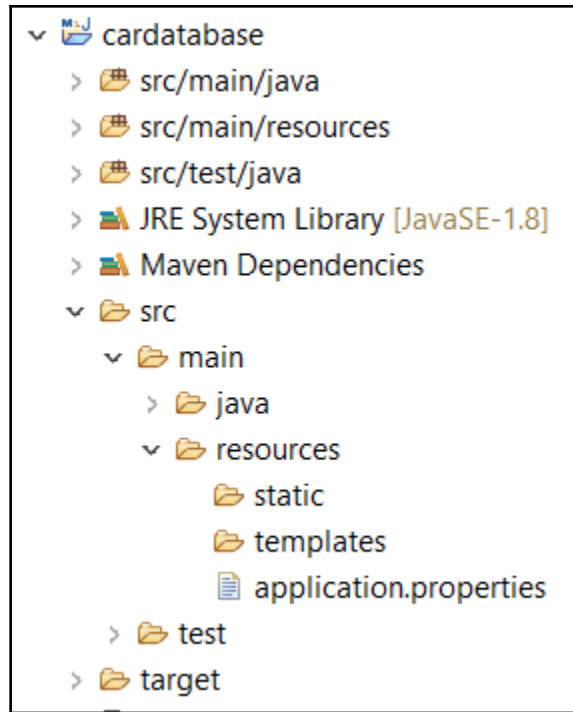
Cancel











```
Markers Properties Servers Data Source Explorer Snippets Console
CardatabaseApplication [Java Application] C:\Program Files\Java\jre1.8.0_101\bin\javaw.exe (21.4.2018 klo 13:54:38)
2018-04-21 14:09:39.739 INFO 9564 --- [ restartedMain] s.w.s.m.a.RequestMappingHandlerMapping : Mapped "{[/error]}" onto public org.springframework.http
2018-04-21 14:09:39.739 INFO 9564 --- [ restartedMain] s.w.s.m.a.RequestMappingHandlerMapping : Mapped "{[/error],produces=[text/html]}" onto public org
2018-04-21 14:09:39.743 INFO 9564 --- [ restartedMain] o.s.w.s.handler.SimpleUrlHandlerMapping : Mapped URL path [/webjars/**] onto handler of type [clas
2018-04-21 14:09:39.743 INFO 9564 --- [ restartedMain] o.s.w.s.handler.SimpleUrlHandlerMapping : Mapped URL path [/**] onto handler of type [class org.sp
2018-04-21 14:09:39.777 INFO 9564 --- [ restartedMain] o.s.b.d.a.OptionalLiveReloadServer : LiveReload server is running on port 35729
2018-04-21 14:09:39.785 INFO 9564 --- [ restartedMain] o.s.j.e.a.AnnotationMBeanExporter : Registering beans for JMX exposure on startup
2018-04-21 14:09:39.793 INFO 9564 --- [ restartedMain] o.s.b.w.embedded.tomcat.TomcatWebServer : Tomcat started on port(s): 8080 (http) with context path
2018-04-21 14:09:39.793 INFO 9564 --- [ restartedMain] c.p.cardatabase.CardatabaseApplication : Started CardatabaseApplication in 0.518 seconds (JVM run
2018-04-21 14:09:39.795 INFO 9564 --- [ restartedMain] .ConditionEvaluationDeltaLoggingListener : Condition evaluation unchanged
2018-04-21 14:09:39.795 INFO 9564 --- [ restartedMain] c.p.cardatabase.CardatabaseApplication : Hello Spring Boot
```

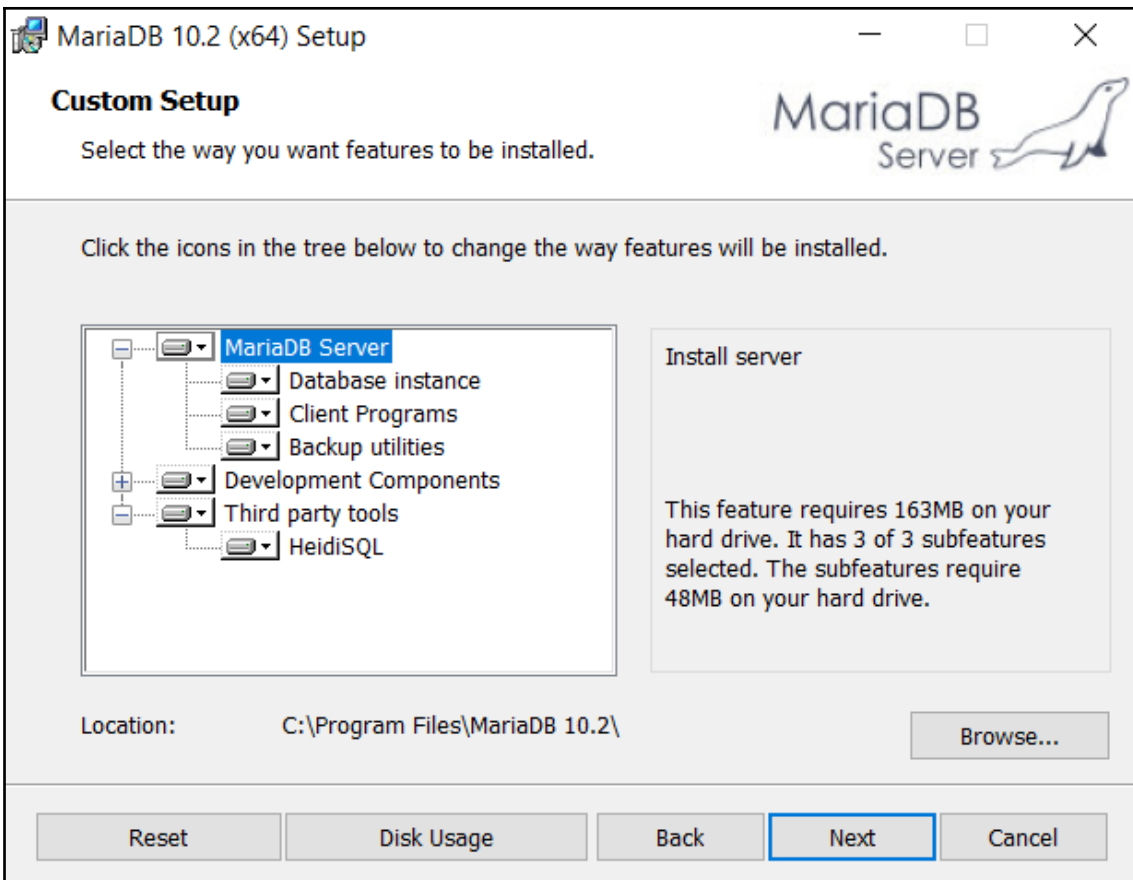
```
Markers Properties Servers Data Source Explorer Snippets Console
<-terminated> CardatabaseApplication [Java Application] C:\Program Files\Java\jre1.8.0_101\bin\javaw.exe (21.4.2018 klo 14:42:46)
*****
APPLICATION FAILED TO START
*****

Description:

The Tomcat connector configured to listen on port 8080 failed to start. The port may already be in use or the connector may be misconfigured.


Action:

Verify the connector's configuration, identify and stop any process that's listening on port 8080, or configure this application to listen on another port.
```

User settings

Default instance properties
MariaDB 10.2 (x64) database configuration

MariaDB Server 

Modify password for database user 'root'

New root password: Enter new root password

Confirm: Retype the password


Enable access from remote machines for 'root' user

Use UTF8 as default server's character set

Back Next Cancel

Database settings

Default instance properties
MariaDB 10.2 (x64) database configuration

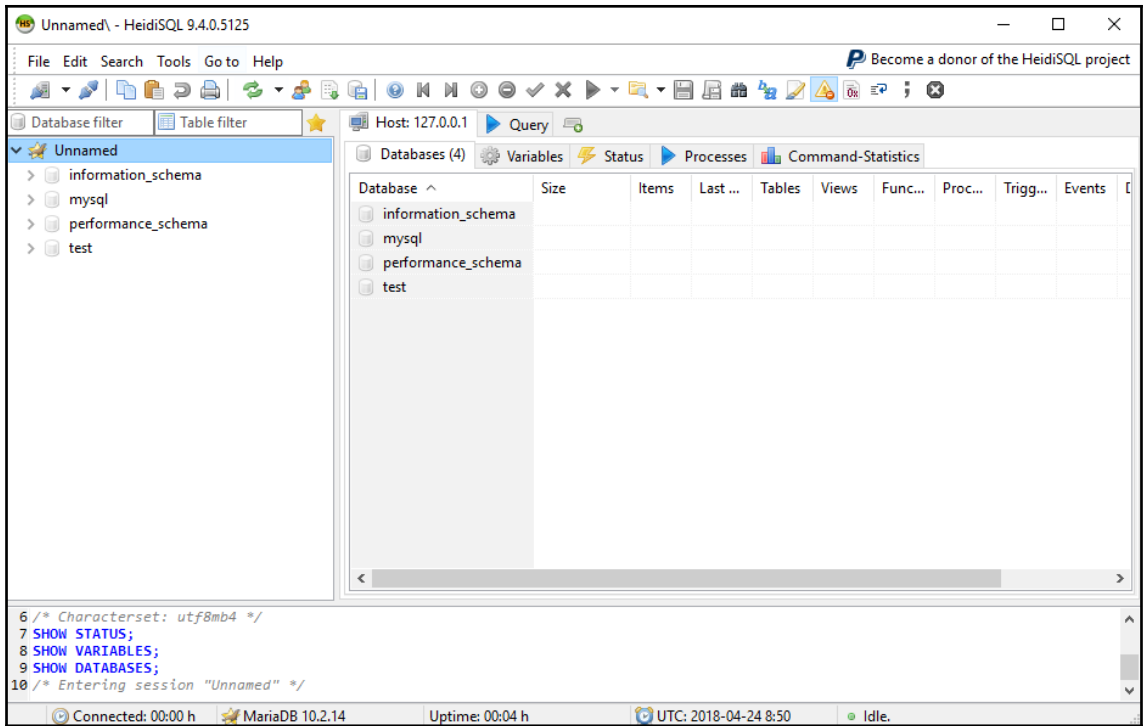
MariaDB Server 

Install as service
Service Name:

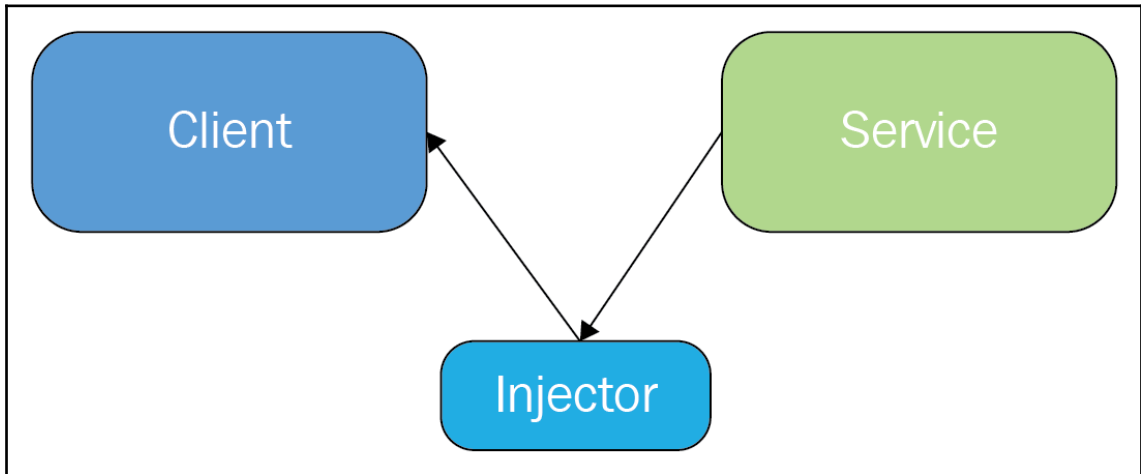
Enable networking
TCP port:

InnoDB engine settings
Buffer pool size: MB
Page size: KB

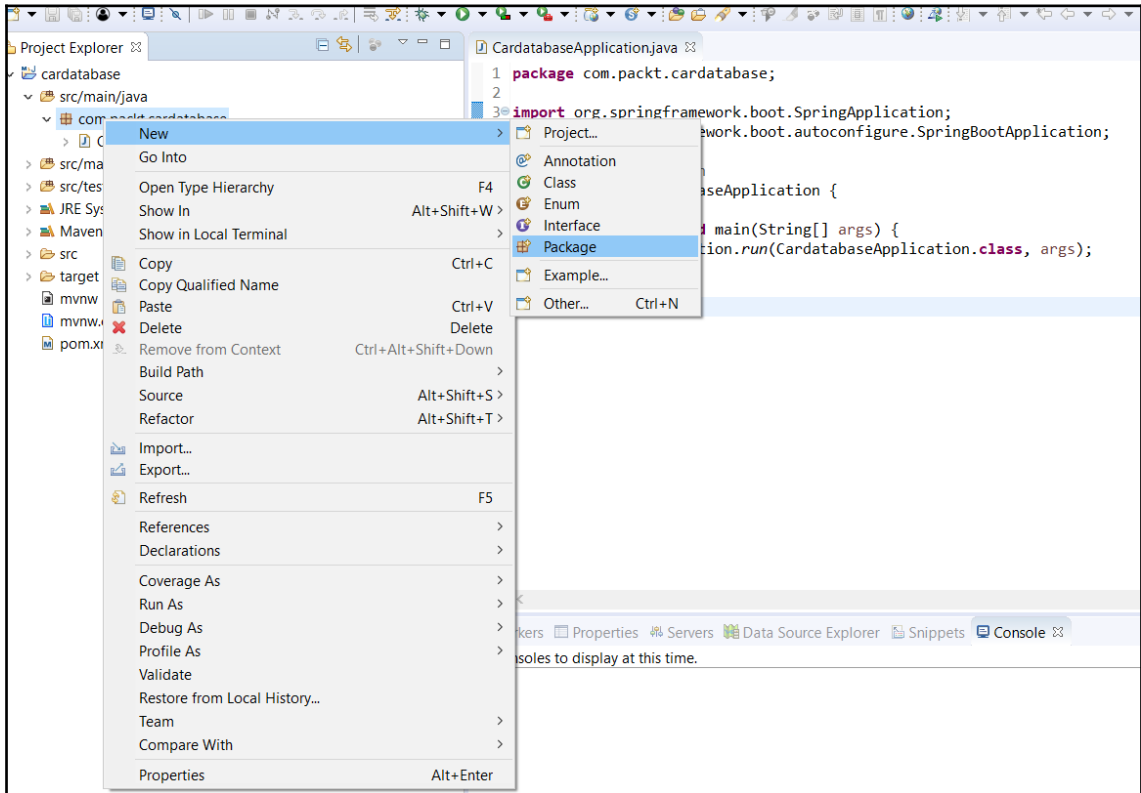
Back Next Cancel

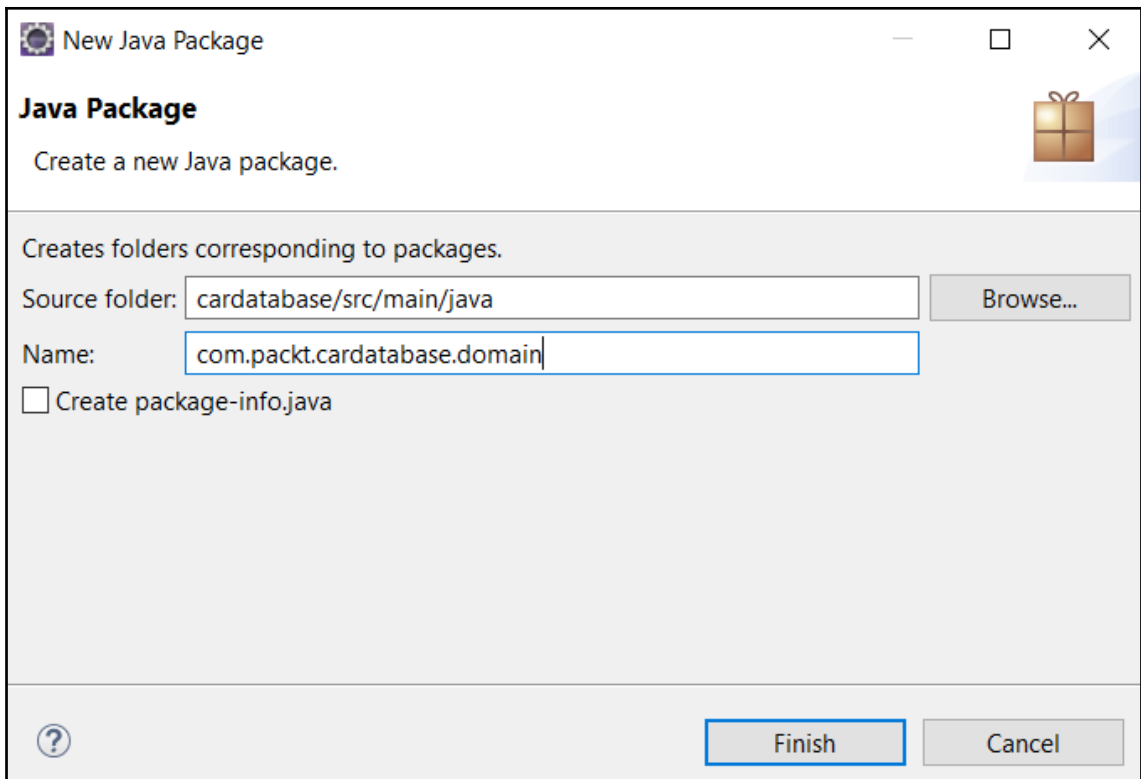


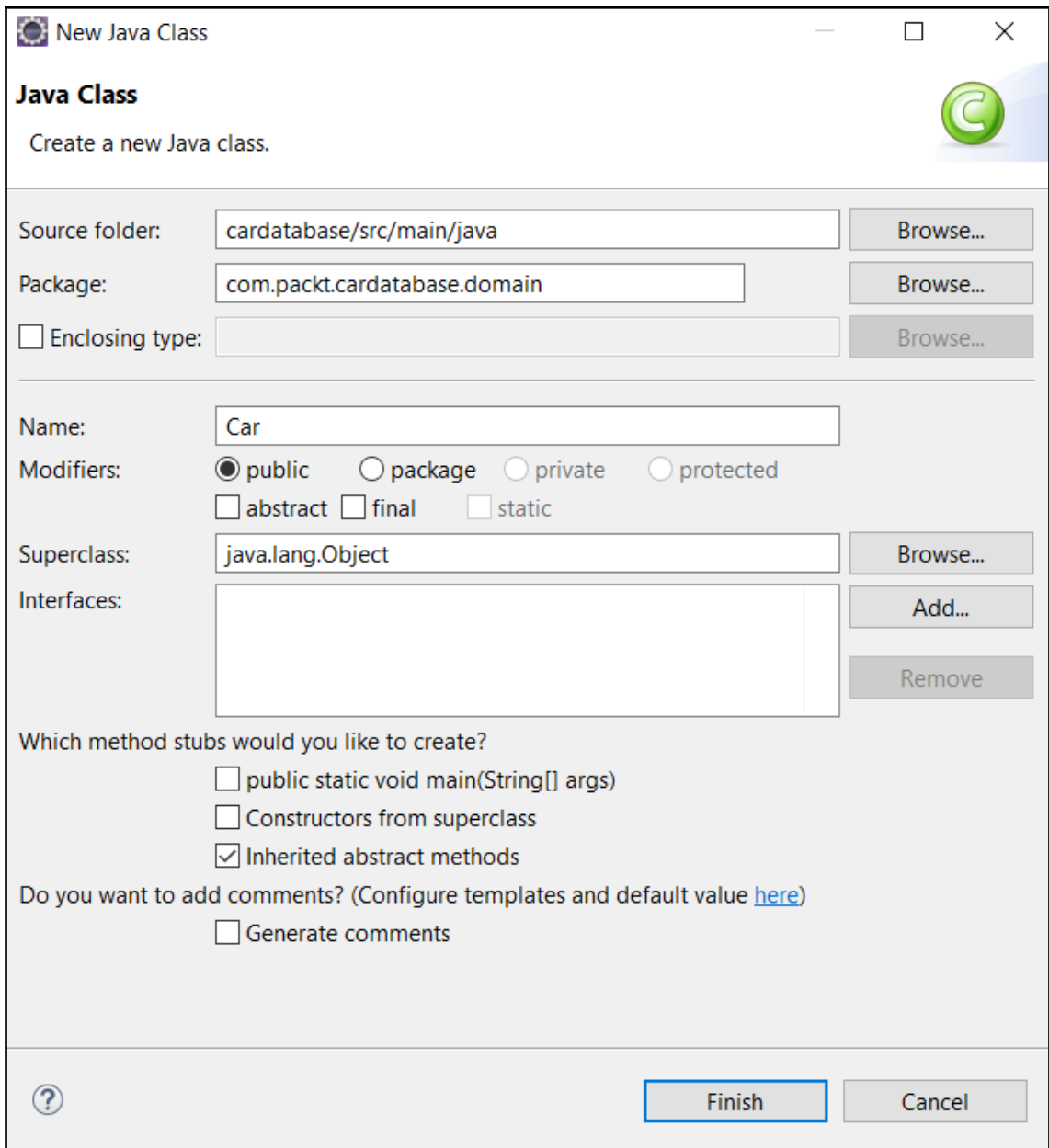
Chapter 2: Dependency Injection



Chapter 3: Using JPA to Create and Access a Database





The image shows a 'New Java Class' dialog box in an IDE. It has a title bar with a gear icon, the text 'New Java Class', and standard window controls. The main area is titled 'Java Class' and contains the instruction 'Create a new Java class.' and a green circular icon with a 'C'. The dialog is organized into several sections: 'Source folder' with a text field containing 'cardatabase/src/main/java' and a 'Browse...' button; 'Package' with a text field containing 'com.packt.cardatabase.domain' and a 'Browse...' button; 'Enclosing type' with an unchecked checkbox and a 'Browse...' button; 'Name' with a text field containing 'Car'; 'Modifiers' with radio buttons for 'public' (selected), 'package', 'private', and 'protected', and checkboxes for 'abstract', 'final', and 'static'; 'Superclass' with a text field containing 'java.lang.Object' and a 'Browse...' button; 'Interfaces' with an empty list box, an 'Add...' button, and a 'Remove' button; 'Which method stubs would you like to create?' with checkboxes for 'public static void main(String[] args)', 'Constructors from superclass', and 'Inherited abstract methods' (checked); 'Do you want to add comments? (Configure templates and default value [here](#))' with a checkbox for 'Generate comments'. At the bottom, there is a help icon, a 'Finish' button, and a 'Cancel' button.

New Java Class

Java Class

Create a new Java class.

Source folder:

Package:

Enclosing type:

Name:

Modifiers: public package private protected
 abstract final static

Superclass:

Interfaces:

Which method stubs would you like to create?

public static void main(String[] args)

Constructors from superclass

Inherited abstract methods

Do you want to add comments? (Configure templates and default value [here](#))

Generate comments


```
Markers Properties Servers Data Source Explorer Snippets Console
CardatabaseApplication [Java Application] C:\Program Files\Java\jre1.8.0_101\bin\javaw.exe (21.4.2018 klo 19:32:58)
...
2018-04-21 19:33:03.356 INFO 14756 --- [ restartedMain] org.hibernate.Version : HHH000412: Hibernate Core (5.2.16.Final)
2018-04-21 19:33:03.358 INFO 14756 --- [ restartedMain] org.hibernate.cfg.Environment : HHH000206: hibernate.properties not found
2018-04-21 19:33:03.403 INFO 14756 --- [ restartedMain] o.hibernate.annotations.common.Version : HCANN000001: Hibernate Commons Annotations (5.0.1.Final)
2018-04-21 19:33:03.551 INFO 14756 --- [ restartedMain] org.hibernate.dialect.Dialect : HHH000400: Using dialect: org.hibernate.dialect.H2Dialect
Hibernate: drop table car if exists
Hibernate: drop sequence if exists hibernate_sequence
Hibernate: create sequence hibernate_sequence start with 1 increment by 1
Hibernate: create table car (id bigint not null, brand varchar(255), color varchar(255), model varchar(255), price integer not null, register_number varchar(255))
2018-04-21 19:33:04.132 INFO 14756 --- [ restartedMain] o.h.t.schema.internal.SchemaCreatorImpl : HHH000470: Executing import script 'org.hibernate.tool.schema.internal.SchemaCreatorImpl.importScript'
2018-04-21 19:33:04.134 INFO 14756 --- [ restartedMain] j.LocalContainerEntityManagerFactoryBean : Initialized JPA EntityManagerFactory for persistence unit 'default'
2018-04-21 19:33:04.264 INFO 14756 --- [ restartedMain] o.s.w.s.h.HandlerSimpleHandlerMapping : Mapped URL path [/**/favicon.ico] onto handler of type 'org.springframework.web.servlet.mvc.annotation.AnnotationMethodMethodHandlerAdapter'

```

← → ↻ ⓘ localhost:8080/h2-console/login.jsp?jsessionid=860ee082

English ▾ Preferences Tools Help

Login

Saved Settings: Generic H2 (Embedded) ▾

Setting Name: Generic H2 (Embedded) Save Remove

Driver Class: org.h2.Driver

JDBC URL: jdbc:h2:mem:testdb

User Name: sa

Password:

Connect Test Connection

localhost:8080/h2-console/login.do?jsessionid=860ee082e6b9b045ca28e498a6c10a2e

Auto commit Max rows: 1000 Auto complete Off Auto select On

jdbc:h2:mem:testdb

- CAR
 - ID
 - BRAND
 - COLOR
 - MODEL
 - PRICE
 - REGISTER_NUMBER
 - YEAR
 - Indexes
- INFORMATION_SCHEMA
- Sequences
- Users
- H2 1.4.197 (2018-03-18)

Run Run Selected Auto complete Clear SQL statement:

Important Commands

		Displays this Help Page
		Shows the Command History
	Ctrl+Enter	Executes the current SQL statement
	Shift+Enter	Executes the SQL statement defined by the text selection
	Ctrl+Space	Auto complete
		Disconnects from the database

```

Markers Properties Servers Data Source Explorer Snippets Console
CardatabaseApplication [Java Application] C:\Program Files\Java\jre1.8.0_101\bin\javaw.exe (22.4.2018 klo 14.49.58)
2018-04-22 14:50:04.170 INFO 6912 --- [ restartedMain] o.s.j.e.a.AnnotationMBeanExporter      : Bean with name 'dataSource' has
2018-04-22 14:50:04.175 INFO 6912 --- [ restartedMain] o.s.j.e.a.AnnotationMBeanExporter      : Located MBean 'dataSource': reg
2018-04-22 14:50:04.214 INFO 6912 --- [ restartedMain] o.s.b.w.embedded.tomcat.TomcatWebServer : Tomcat started on port(s): 8080
2018-04-22 14:50:04.218 INFO 6912 --- [ restartedMain] c.p.cardatabase.CardatabaseApplication : Started CardatabaseApplication
Hibernate: call next value for hibernate_sequence
Hibernate: insert into car (brand, color, model, price, register_number, year, id) values (?, ?, ?, ?, ?, ?, ?)
Hibernate: call next value for hibernate_sequence
Hibernate: insert into car (brand, color, model, price, register_number, year, id) values (?, ?, ?, ?, ?, ?, ?)
Hibernate: call next value for hibernate_sequence
Hibernate: insert into car (brand, color, model, price, register_number, year, id) values (?, ?, ?, ?, ?, ?, ?)

```

Auto commit Max rows: 1000 Auto complete Off Auto select On

jdbc:h2:mem:testdb

- CAR
- OWNER
- INFORMATION_SCHEMA
- Sequences
- Users
- H2 1.4.197 (2018-03-18)

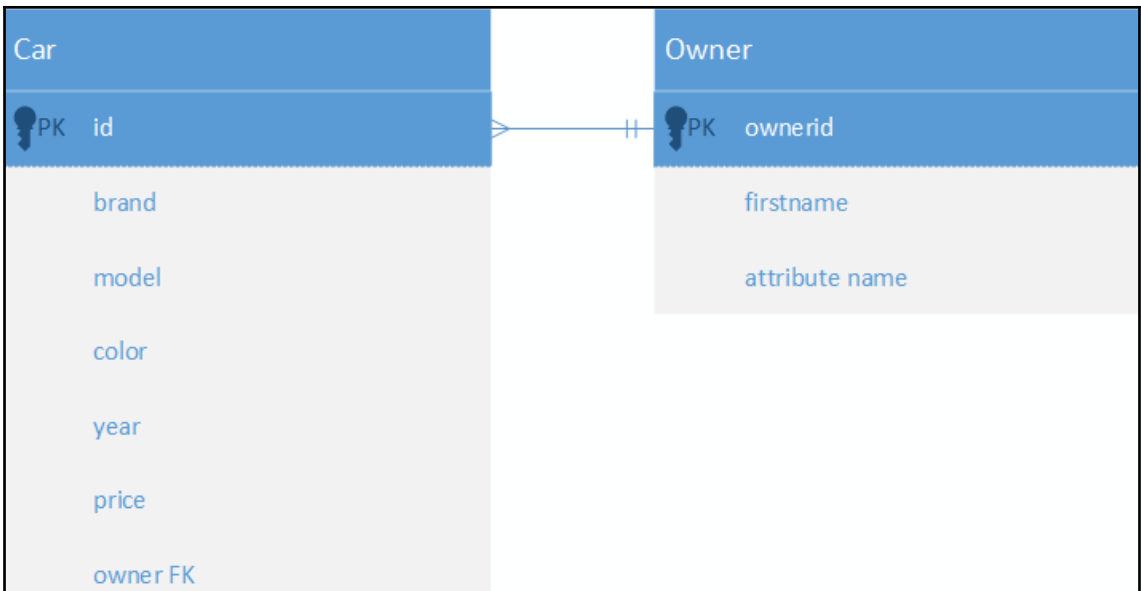
Run Run Selected Auto complete Clear SQL statement:

```
select * from car
```

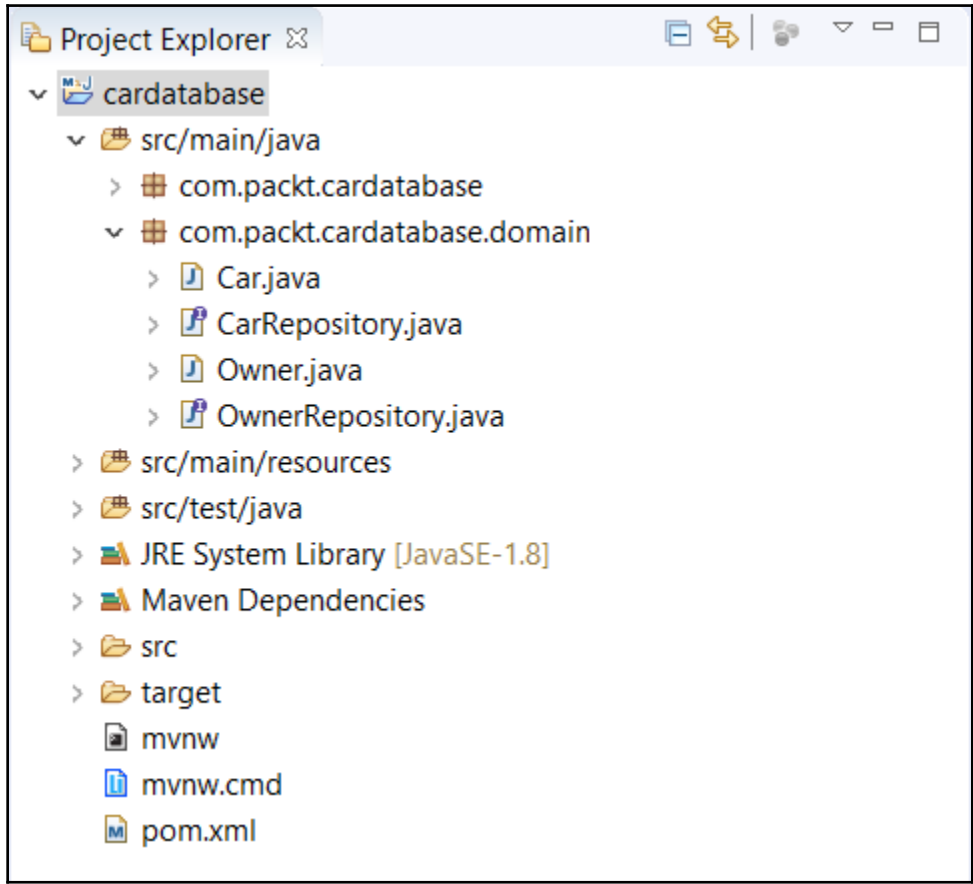
```
select * from car;
```

ID	BRAND	COLOR	MODEL	PRICE	REGISTER_NUMBER	YEAR	OWNER
3	Ford	Red	Mustang	59000	ADF-1121	2017	1
4	Nissan	White	Leaf	29000	SSJ-3002	2014	2
5	Toyota	Silver	Prius	39000	KKO-0212	2018	2

(3 rows, 4 ms)



```
Markers Properties Servers Data Source Explorer Snippets Console
CardatabaseApplication [Java Application] C:\Program Files\Java\jre1.8.0_101\bin\javaw.exe (22.4.2018 klo 14:49:58)
2018-04-22 16:17:17.441 INFO 6912 --- [ restartedMain] org.hibernate.dialect.Dialect : HHH000400: Using dialect: org.hibernate.dialect.H2Dialect
Hibernate: drop table car if exists
Hibernate: drop table owner if exists
Hibernate: drop sequence if exists hibernate_sequence
Hibernate: create sequence hibernate_sequence start with 1 increment by 1
Hibernate: create table car (id bigint not null, brand varchar(255), color varchar(255), model varchar(255), price integer not null, register_number varchar(255))
Hibernate: create table owner (ownerid bigint not null, firstname varchar(255), lastname varchar(255), primary key (ownerid))
2018-04-22 16:17:17.474 INFO 6912 --- [ restartedMain] o.h.t.s.SchemaInternalSchemaCreatorImpl : hibernate: executing import script org.hibernate.tool.schema.internal.SchemaCreatorImpl.importSchema
2018-04-22 16:17:17.475 INFO 6912 --- [ restartedMain] j.LocalContainerEntityManagerFactoryBean : Initialized JPA EntityManagerFactory for persistence unit 'default'
2018-04-22 16:17:17.538 INFO 6912 --- [ restartedMain] o.s.w.s.handler.SimpleUrlHandlerMapping : Mapped URL path [/**/favicon.ico] onto handler of type [org.springframework.web.servlet.mvc.annotation.AnnotationMethodHandlerAdapter]
2018-04-22 16:17:17.598 INFO 6912 --- [ restartedMain] s.w.s.m.m.a.RequestMappingHandlerAdapter : Looking for @ControllerAdvice: org.springframework.boot.autoconfigure.web.servlet.mvc.annotation.AnnotationMethodHandlerAdapter
2018-04-22 16:17:17.603 WARN 6912 --- [ restartedMain] aWebConfiguration$JpaWebMvcConfiguration : spring.jpa.open-in-view is enabled by default. Therefore
```



```

Markers Properties Servers Data Source Explorer Snippets Console
CardatabaseApplication [Java Application] C:\Program Files\Java\jre1.8.0_101\bin\java.exe (22.4.2018 klo 17.51.54)
2018-04-22 17:51:58.963 INFO 16596 --- [ restartedMain] o.g.hibermate:direct:direct... using direct: o.g.hibermate:direct:direct...
Hibernate: drop table car if exists
Hibernate: drop table owner if exists
Hibernate: drop sequence if exists hibernate_sequence
Hibernate: create sequence hibernate_sequence start with 1 increment by 1
Hibernate: create table car (id bigint not null, brand varchar(255), color varchar(255), model varchar(255), price integer not null, register_number varchar(255), year integer not null, ownerid bigint not null, primary key (ownerid))
Hibernate: create table owner (ownerid bigint not null, firstname varchar(255), lastname varchar(255), primary key (ownerid))
Hibernate: alter table car add constraint FK2mqgvxtovv4vddvtsmvtiqa2 foreign key (owner) references owner (ownerid)
2018-04-22 17:51:58.963 INFO 16596 --- [ restartedMain] o.n.t.schema.internal.SchemaCreatorImpl : HH000476: Executing import script 'org.hibernate.tool...
2018-04-22 17:51:58.966 INFO 16596 --- [ restartedMain] j.LocalContainerEntityManagerFactoryBean : Initialized JPA EntityManagerFactory for persistence un...
2018-04-22 17:51:59.489 INFO 16596 --- [ restartedMain] o.s.w.s.handler.SimpleUrlHandlerMapping : Mapped URL path [/**/favicon.ico] onto handler of type...
2018-04-22 17:51:59.766 INFO 16596 --- [ restartedMain] s.w.s.m.m.a.RequestMappingHandlerAdapter : Looking for @ControllerAdvice: org.springframework.boot...

```

Auto commit Max rows: 1000 Auto complete Off Auto select On

jdbc:h2:mem:testdb

Run Run Selected Auto complete Clear SQL statement:

select * from car

select * from car;

ID	BRAND	COLOR	MODEL	PRICE	REGISTER_NUMBER	YEAR	OWNER
3	Ford	Red	Mustang	59000	ADF-1121	2017	1
4	Nissan	White	Leaf	29000	SSJ-3002	2014	2
5	Toyota	Silver	Prius	39000	KKO-0212	2018	2

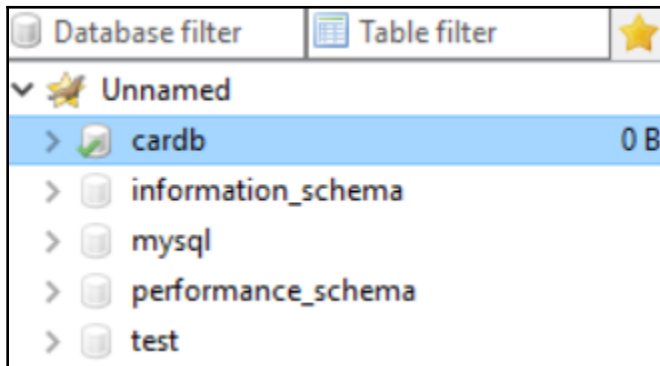
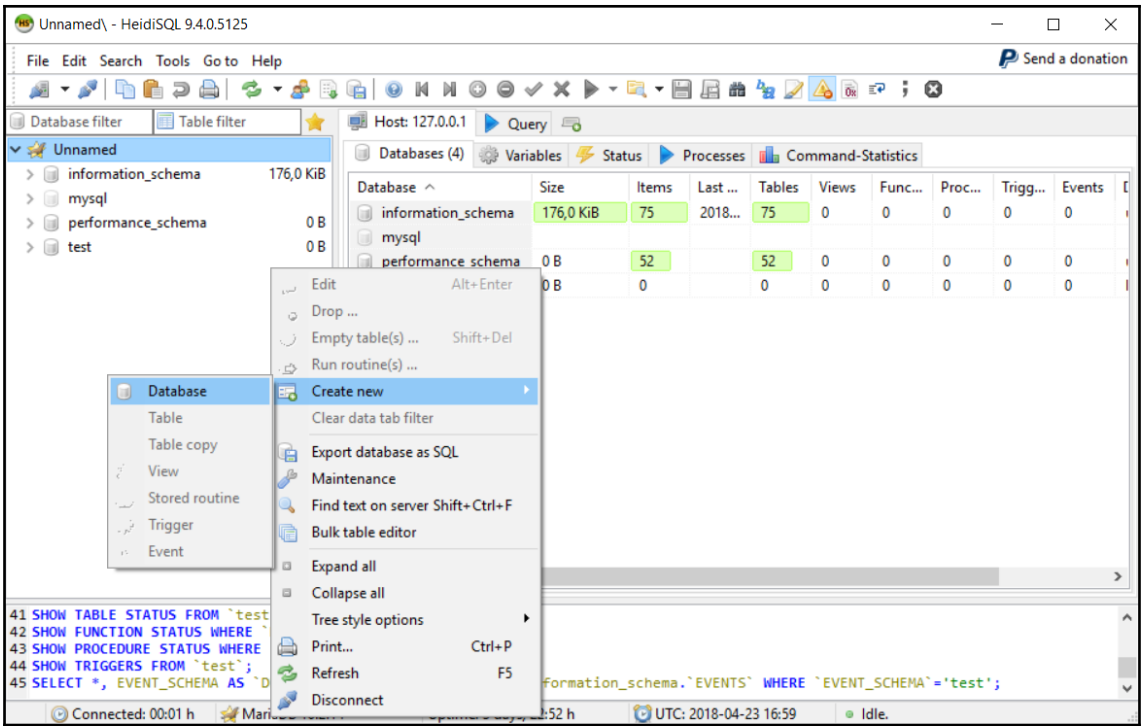
(3 rows, 4 ms)

Unnamed\cardb\ - HeidiSQL 9.4.0.5125

File Edit Search Tools Go to Help

Host: 127.0.0.1 Database: cardb Query

Name	Rows	Size	Created	Updated	Engine	Comment
car	0	16,0 KiB	2018-04-25 14:47:49		InnoDB	
car_owner	0	32,0 KiB	2018-04-25 14:47:49		InnoDB	
hibernate_sequ...	2	16,0 KiB	2018-04-25 14:47:49	2018-04-25 14:47:51	InnoDB	
owner	2	16,0 KiB	2018-04-25 14:47:50	2018-04-25 14:47:51	InnoDB	



Unnamed\cardb\ - HeidiSQL 9.4.0.5125

File Edit Search Tools Go to Help [Become a donor of the HeidiSQL project](#)

Host: 127.0.0.1 Database: cardb Query

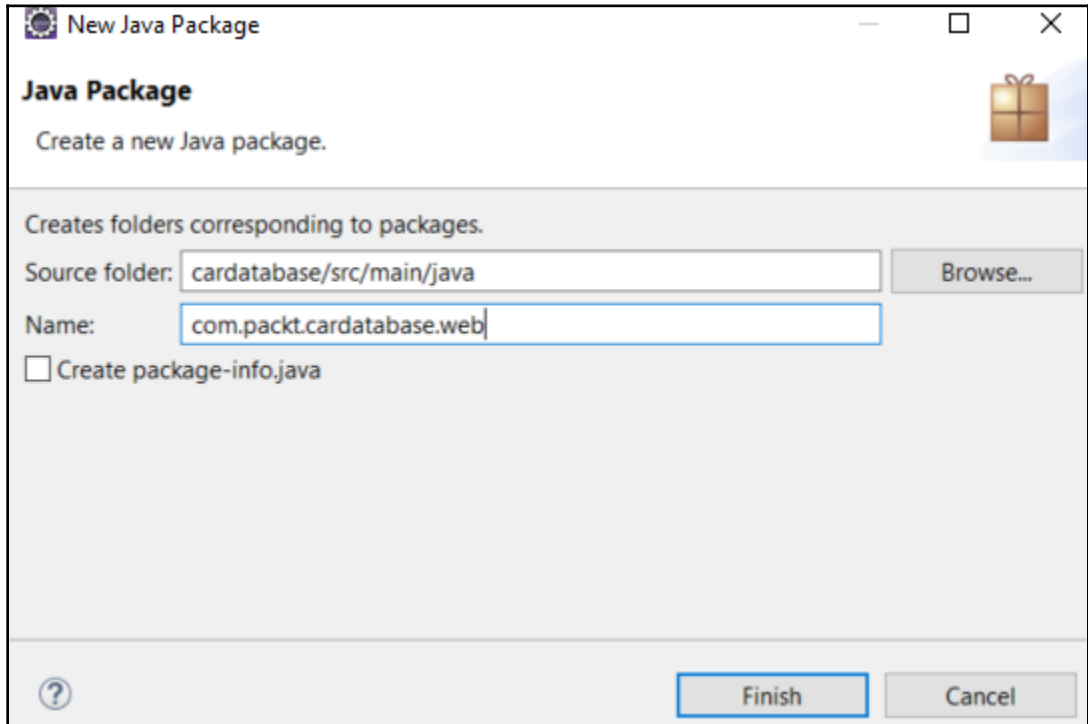
Database filter Table filter

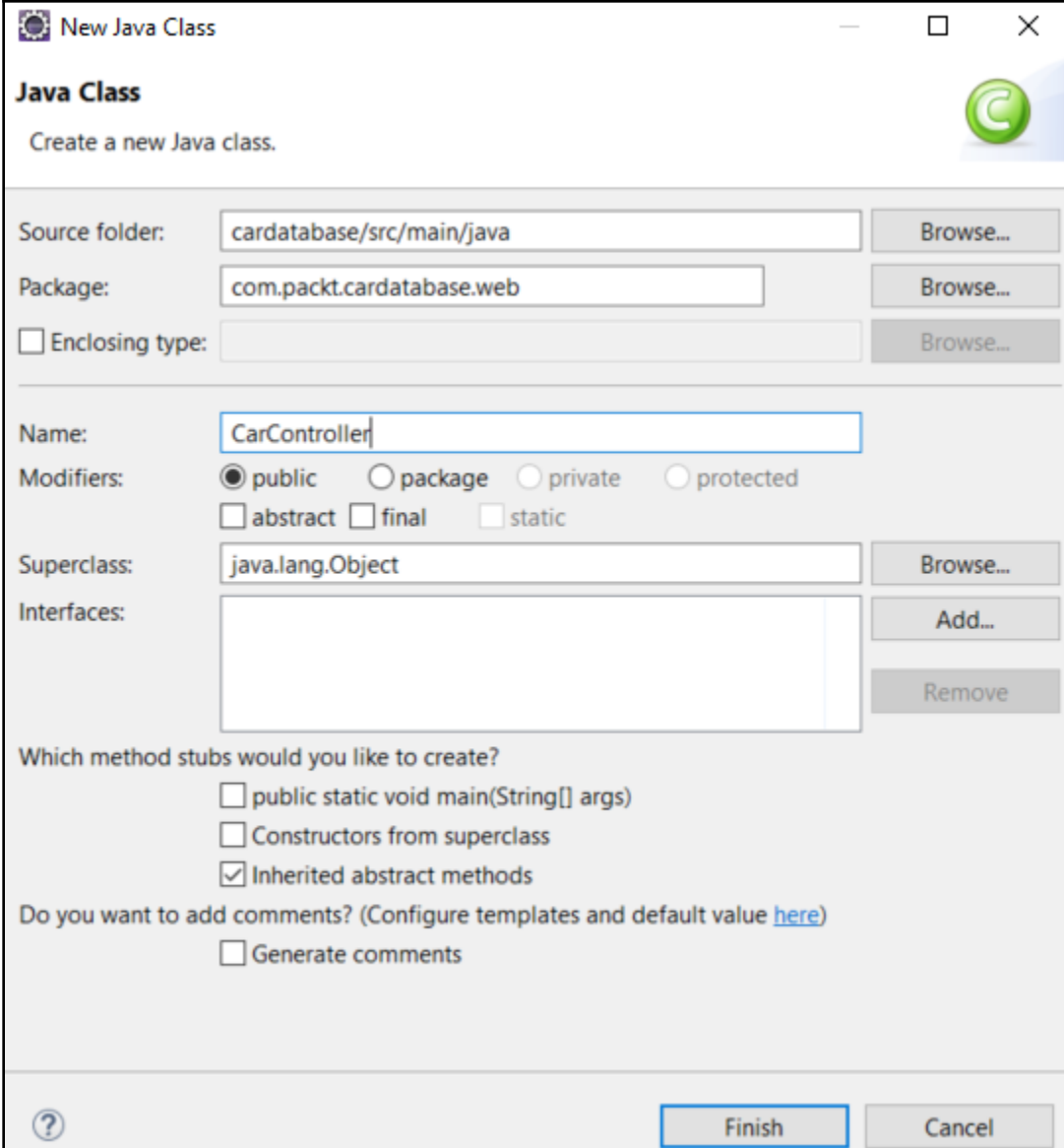
▼ Unnamed 80,0 KiB

- ▼ cardb 16,0 KiB
 - car 16,0 KiB
 - car_owner 32,0 KiB
 - hibernate_sequence 16,0 KiB
 - owner 16,0 KiB
- > information_schema
- > mysql
- > performance_schema
- > test

Name ^	Rows	Size	Created	Updated	Engine	Comment
car	0	16,0 KiB	2018-04-25 14:47:49		InnoDB	
car_owner	0	32,0 KiB	2018-04-25 14:47:49		InnoDB	
hibernate_sequ...	2	16,0 KiB	2018-04-25 14:47:49	2018-04-25 14:47:51	InnoDB	
owner	2	16,0 KiB	2018-04-25 14:47:50	2018-04-25 14:47:51	InnoDB	

Chapter 4: Creating a RESTful Web Service with Spring Boot



The image shows a 'New Java Class' dialog box with a title bar containing a gear icon, the text 'New Java Class', and standard window controls. The main title is 'Java Class' with a green circular icon containing a 'C'. Below the title is the instruction 'Create a new Java class.' The dialog is divided into several sections: 1. Source folder: 'cardatabase/src/main/java' with a 'Browse...' button. 2. Package: 'com.packt.cardatabase.web' with a 'Browse...' button. 3. Enclosing type: An empty field with a 'Browse...' button. 4. Name: 'CarController' in a text field. 5. Modifiers: Radio buttons for 'public' (selected), 'package', 'private', and 'protected'; checkboxes for 'abstract', 'final', and 'static'. 6. Superclass: 'java.lang.Object' with a 'Browse...' button. 7. Interfaces: An empty list box with 'Add...' and 'Remove' buttons. 8. Method stubs: A section titled 'Which method stubs would you like to create?' with checkboxes for 'public static void main(String[] args)', 'Constructors from superclass', and 'Inherited abstract methods' (checked). 9. Comments: A section titled 'Do you want to add comments? (Configure templates and default value [here](#))' with a 'Generate comments' checkbox. At the bottom, there is a help icon, a 'Finish' button, and a 'Cancel' button.

New Java Class

Java Class

Create a new Java class.

Source folder:

Package:

Enclosing type:

Name:

Modifiers: public package private protected
 abstract final static

Superclass:

Interfaces:

Which method stubs would you like to create?

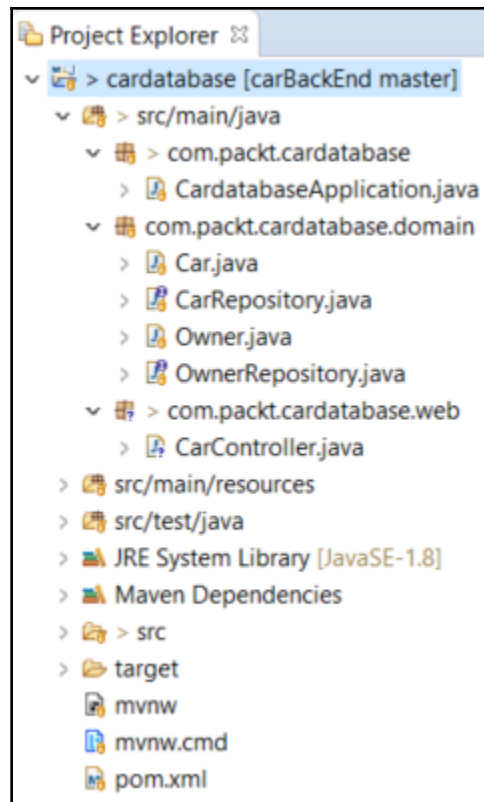
public static void main(String[] args)

Constructors from superclass

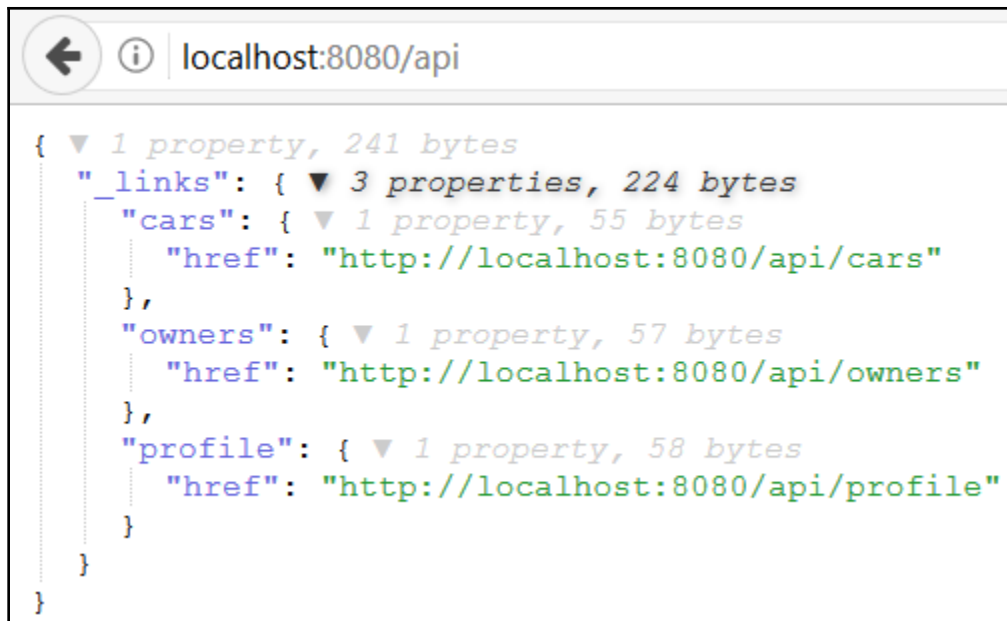
Inherited abstract methods

Do you want to add comments? (Configure templates and default value [here](#))

Generate comments




```
[ ▼ 3 items, 502 bytes
  { ▼ 7 properties, 164 bytes
    "brand": "Ford",
    "model": "Mustang",
    "color": "Red",
    "registerNumber": "ADF-1121",
    "year": 2017,
    "price": 59000,
    "owner": { ▼ 3 properties, 53 bytes
      "ownerid": 1,
      "firstname": "John",
      "lastname": "Johnson"
    }
  },
  { ▼ 7 properties, 166 bytes
    "brand": "Nissan",
    "model": "Leaf",
    "color": "White",
    "registerNumber": "SSJ-3002",
    "year": 2014,
    "price": 29000,
    "owner": { ▼ 3 properties, 54 bytes
      "ownerid": 2,
      "firstname": "Mary",
      "lastname": "Robinson"
    }
  },
  { ▼ 7 properties, 168 bytes
    "brand": "Toyota",
    "model": "Prius",
    "color": "Silver",
    "registerNumber": "KKO-0212",
    "year": 2018,
    "price": 39000,
    "owner": { ▼ 3 properties, 54 bytes
      "ownerid": 2,
      "firstname": "Mary",
      "lastname": "Robinson"
    }
  }
}
```



```
{
  "_links": {
    "cars": {
      "href": "http://localhost:8080/api/cars"
    },
    "owners": {
      "href": "http://localhost:8080/api/owners"
    },
    "profile": {
      "href": "http://localhost:8080/api/profile"
    }
  }
}
```

GET ⌵ http://localhost:8080/api/cars


Body Cookies (1) Headers (3) Test Results

Pretty Raw Preview JSON ⌵ 

```
1 {
2   "_embedded": {
3     "cars": [
4       {
5         "brand": "Ford",
6         "model": "Mustang",
7         "color": "Red",
8         "registerNumber": "ADF-1121",
9         "year": 2017,
10        "price": 59000,
11        "_links": {
12          "self": {
13            "href": "http://localhost:8080/api/cars/3"
14          },
15          "car": {
16            "href": "http://localhost:8080/api/cars/3"
17          },
18          "owner": {
19            "href": "http://localhost:8080/api/cars/3/owner"
20          }
21        }
22      },
23      {
24        "brand": "Nissan",
25        "model": "Leaf",
26        "color": "White",
27        "registerNumber": "SSJ-3002",
28        "year": 2014,
29        "price": 29000,
30        "_links": {
31          "self": {
```

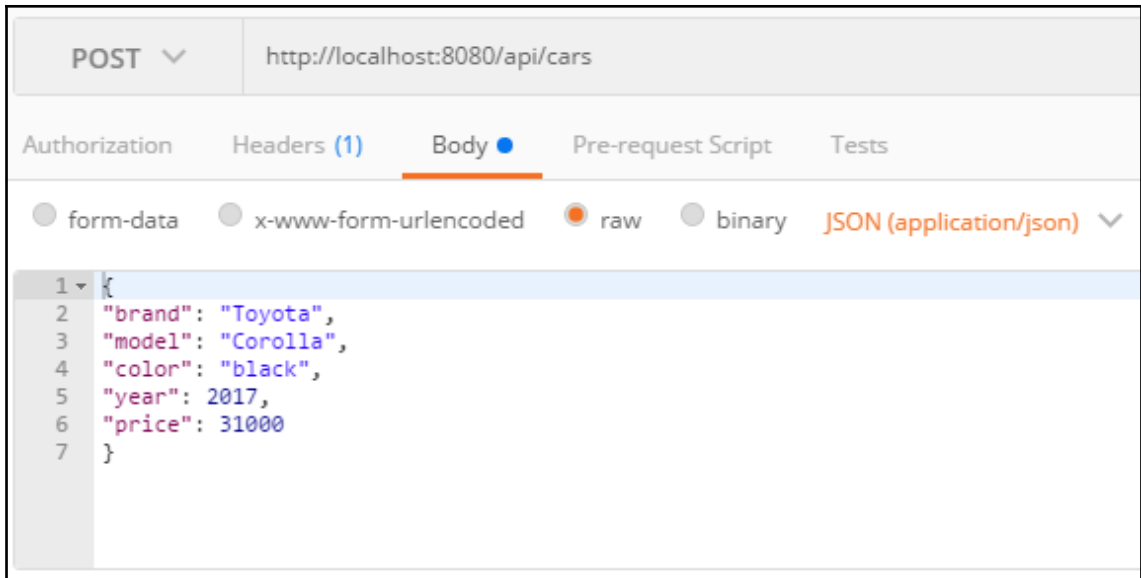
GET ▼ http://localhost:8080/api/cars/3/owner|

Body Cookies (1) Headers (4) Test Results

Pretty Raw Preview JSON ▼ 

```
1 {
2   "firstname": "John",
3   "lastname": "Johnson",
4   "_links": {
5     "self": {
6       "href": "http://localhost:8080/api/owners/1"
7     },
8     "owner": {
9       "href": "http://localhost:8080/api/owners/1"
10    },
11    "cars": {
12      "href": "http://localhost:8080/api/owners/1/cars"
13    }
14  }
15 }
```

```
root@HHMX4717: ~
root@HHMX4717:~# curl -X "DELETE" http://localhost:8080/api/cars/4
```



```
GET http://localhost:8080/api/cars

Pretty Raw Preview JSON

20 }
21 }
22 },
23 {
24   "brand": "Toyota",
25   "model": "Corolla",
26   "color": "black",
27   "registerNumber": null,
28   "year": 2017,
29   "price": 31000,
30   "_links": {
31     "self": {
32       "href": "http://localhost:8080/api/cars/6"
33     },
34     "car": {
35       "href": "http://localhost:8080/api/cars/6"
36     },
37     "owner": {
38       "href": "http://localhost:8080/api/cars/6/owner"
39     }
40   }
41 }
42 ]
43 },
```

```
PATCH http://localhost:8080/api/cars/6

Authorization Headers (1) Body Pre-request Script Tests

form-data x-www-form-urlencoded raw binary JSON (application/json)

1 {
2   "color": "white",
3   "registerNumber": "AAR-3440",
4   "owner": "http://localhost:8080/api/owners/1"
5 }
```



```
GET http://localhost:8080/api/cars

Pretty Raw Preview JSON

59     }
60     },
61     {
62         "brand": "Toyota",
63         "model": "Corolla",
64         "color": "white",
65         "registerNumber": "AAR-3440",
66         "year": 2017,
67         "price": 31000,
68         "_links": {
69             "self": {
70                 "href": "http://localhost:8080/api/cars/6"
71             },
72             "car": {
73                 "href": "http://localhost:8080/api/cars/6"
74             },
75             "owner": {
76                 "href": "http://localhost:8080/api/cars/6/owner"
77             }
78         }
79     }
80 ]
81 },
```

```
GET http://localhost:8080/api/cars/search

Pretty Raw Preview JSON

{
  1 | {
  2 |   "_links": {
  3 |     "findByBrand": {
  4 |       "href": "http://localhost:8080/api/cars/search/findByBrand{?brand}",
  5 |       "templated": true
  6 |     },
  7 |     "findByColor": {
  8 |       "href": "http://localhost:8080/api/cars/search/findByColor{?color}",
  9 |       "templated": true
 10 |     },
 11 |     "self": {
 12 |       "href": "http://localhost:8080/api/cars/search"
 13 |     }
 14 |   }
 15 | }
```

```
GET http://localhost:8080/api/cars/search/findByBrand?brand=Ford

Pretty Raw Preview JSON

1 {
2   "_embedded": {
3     "cars": [
4       {
5         "brand": "Ford",
6         "model": "Mustang",
7         "color": "Red",
8         "registerNumber": "ADF-1121",
9         "year": 2017,
10        "price": 59000,
11        "_links": {
12          "self": {
13            "href": "http://localhost:8080/api/cars/3"
14          },
15          "car": {
16            "href": "http://localhost:8080/api/cars/3"
17          },
18          "owner": {
19            "href": "http://localhost:8080/api/cars/3/owner"
20          }
21        }
22      }
23    ]
24  },
```

Chapter 5: Securing and Testing Your Backend

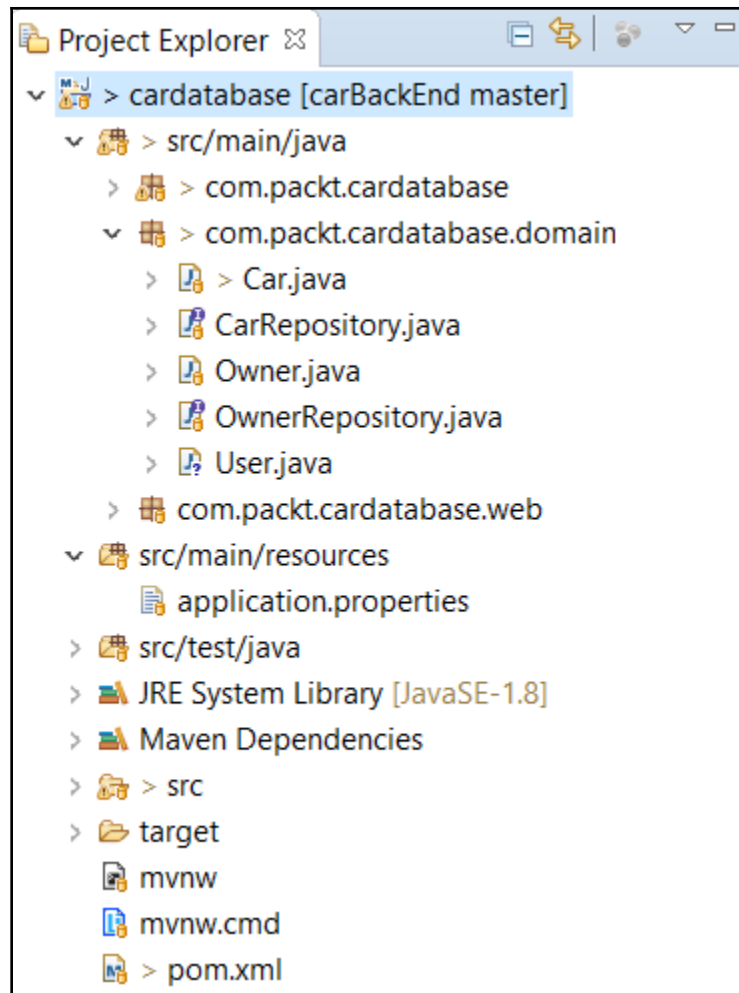
```
Overview | Dependencies | Dependency Hierarchy | Effective POM | pom.xml
Markers | Properties | Servers | Data Source Explorer | Snippets | Console | JUnit
CardatabaseApplication [Java Application] C:\Program Files\Java\jre1.8.0_101\bin\javaw.exe (29.4.2018 klo 17:41:42)
2018-04-29 17:41:49.387 INFO 4460 --- [ restartedMain] o.s.d.r.w.BasePathAwareHandlerMapping : Mapped "{[/api/profile],methods=[GET]}" onto org.springframework
2018-04-29 17:41:49.673 INFO 4460 --- [ restartedMain] .s.s.UserDetailsServiceAutoConfiguration :
Using generated security password: 8ff17db6-f297-46d9-8b75-330d1927e5ab
2018-04-29 17:41:49.881 INFO 4460 --- [ restartedMain] o.s.s.web.DefaultSecurityFilterChain : Creating filter chain: org.springframework.security.web.utili
2018-04-29 17:41:49.980 INFO 4460 --- [ restartedMain] o.s.b.d.a.OptionalLiveReloadServer : LiveReload server is running on port 35729
2018-04-29 17:41:50.023 INFO 4460 --- [ restartedMain] o.s.j.e.a.AnnotationMBeanExporter : Registering beans for JMX exposure on startup
```

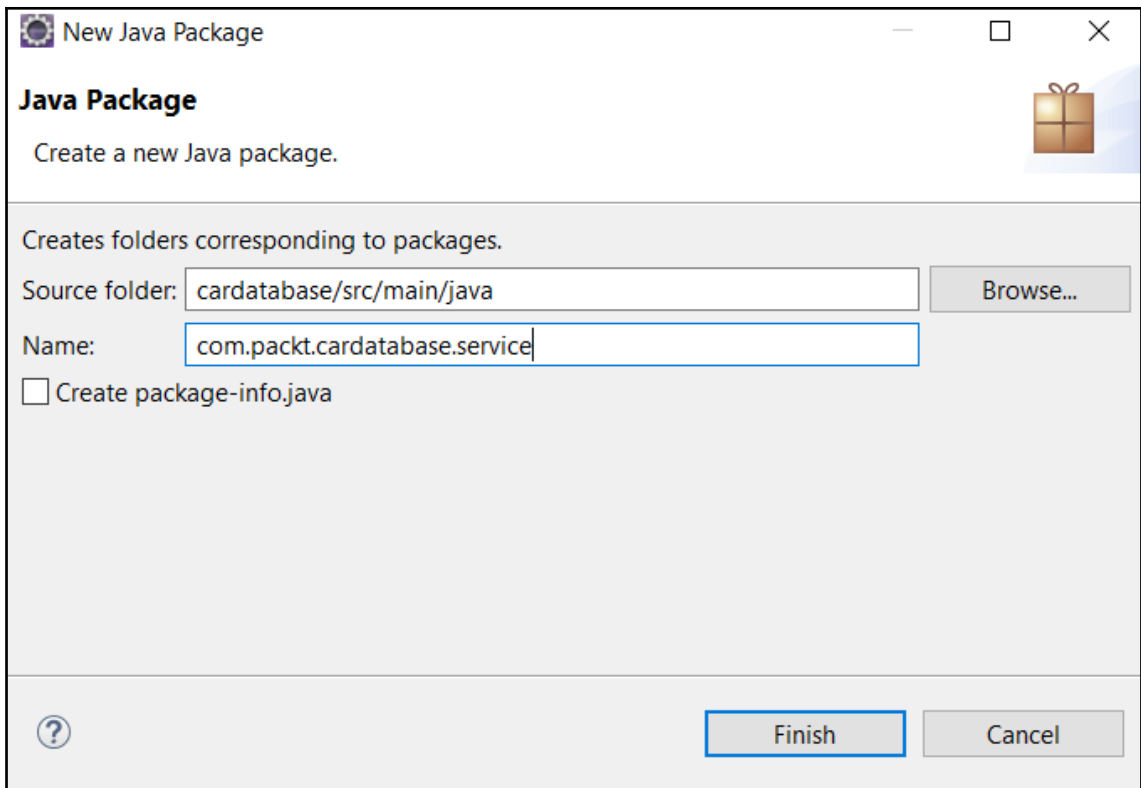
```
root@HHMX4717: ~
root@HHMX4717:~# curl http://localhost:8080/api
{"timestamp": "2018-04-29T16:33:23.004+0000", "status": 401, "error": "Unauthorized", "message": "Unauthorized", "path": "/api"}root@HHMX4717:~#
```

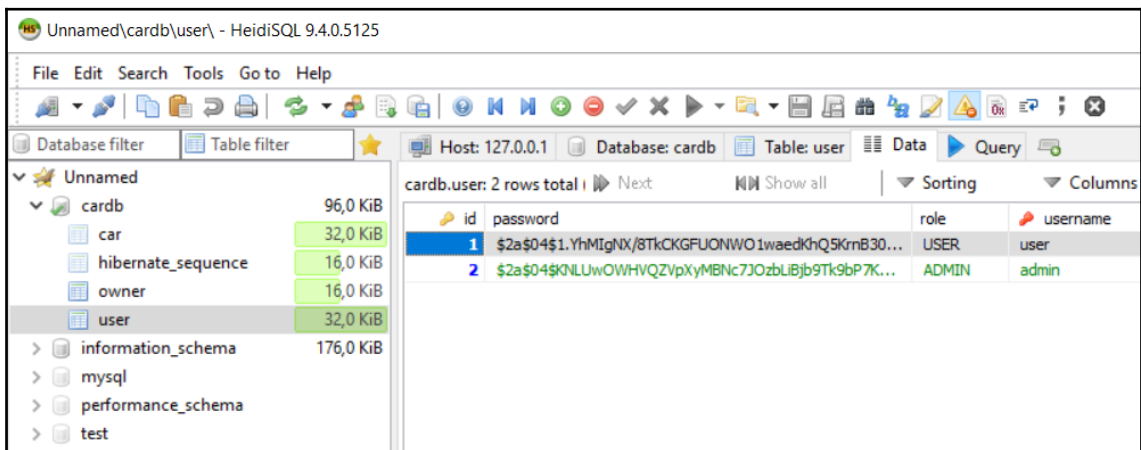
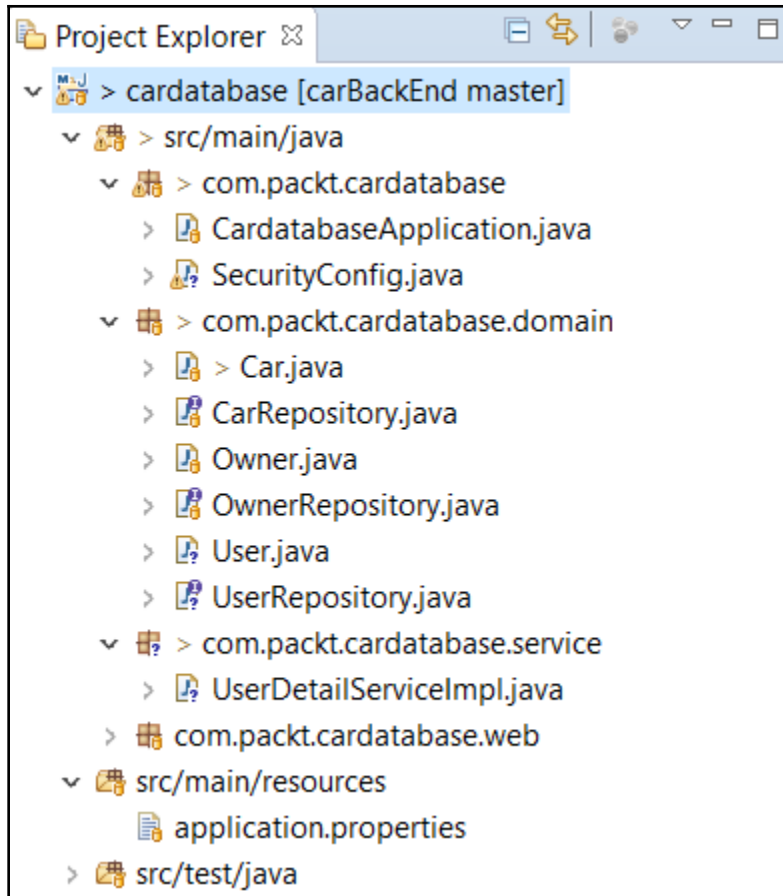
The screenshot shows a REST client interface with the following details:

- Method:** GET
- URL:** http://localhost:8080/api
- Auth:** Basic Auth
- Username:** user
- Password:** [masked]
- Status:** 200 OK
- Time:** 461 ms
- Response (JSON):**

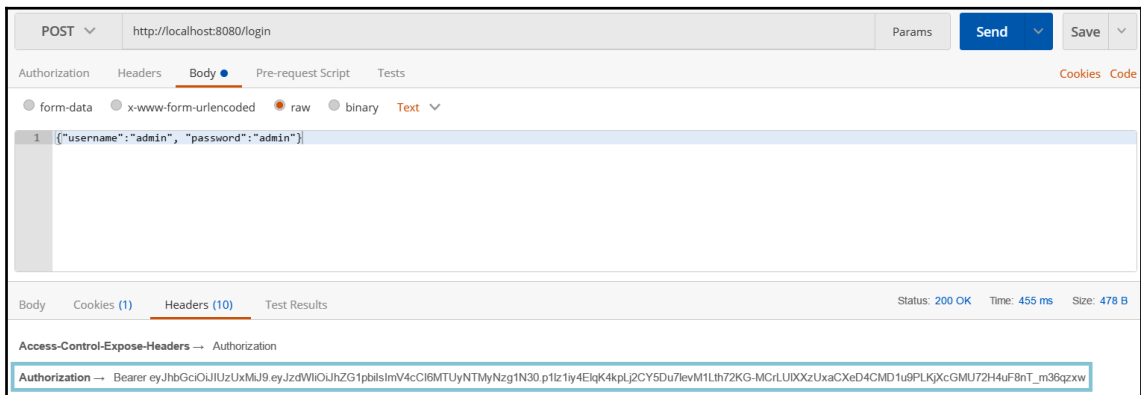
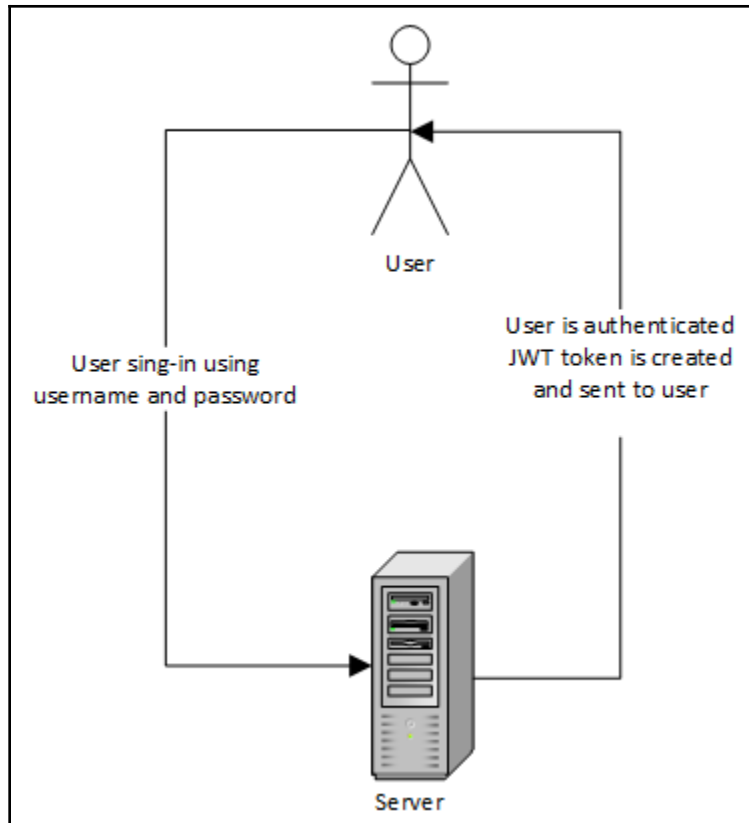
```
{
  "_links": {
    "owners": {
      "href": "http://localhost:8080/api/owners"
    },
    "cars": {
      "href": "http://localhost:8080/api/cars"
    },
    "profile": {
      "href": "http://localhost:8080/api/profile"
    }
  }
}
```







```
root@HHMX4717: ~  
root@HHMX4717:~# curl http://localhost:8080/api -u admin  
Enter host password for user 'admin':  
{  
  "_links" : {  
    "owners" : {  
      "href" : "http://localhost:8080/api/owners"  
    },  
    "users" : {  
      "href" : "http://localhost:8080/api/users"  
    },  
    "cars" : {  
      "href" : "http://localhost:8080/api/cars"  
    },  
    "profile" : {  
      "href" : "http://localhost:8080/api/profile"  
    }  
  }  
}  
root@HHMX4717:~#
```

GET http://localhost:8080/api/cars

Authorization Headers (1) Body Pre-request Script Tests

Key	Value
<input checked="" type="checkbox"/> Authorization	eyJhbGciOiJIUzUxMiJ9.eyJzdWIiOiJhZG1pbGlzImV4cCI6MTUyNTMz...
New key	Value

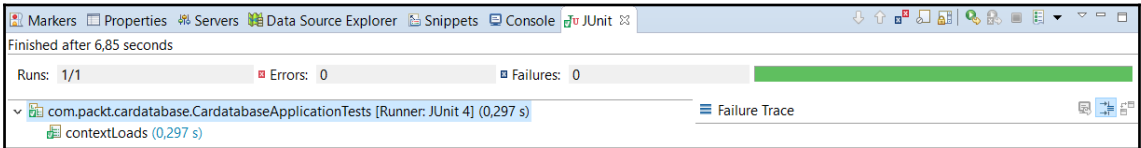
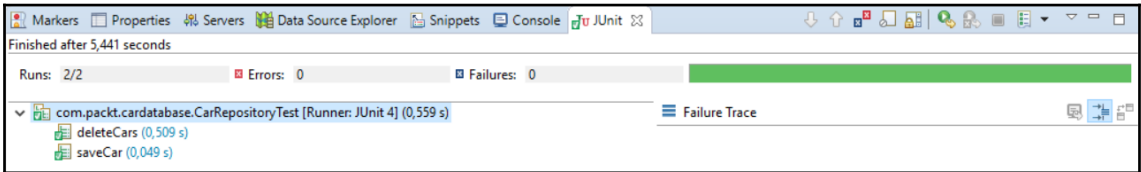
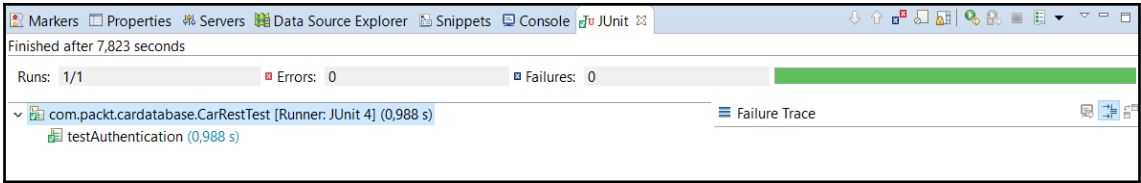
Body Cookies (1) Headers (10) Test Results

Pretty Raw Preview JSON

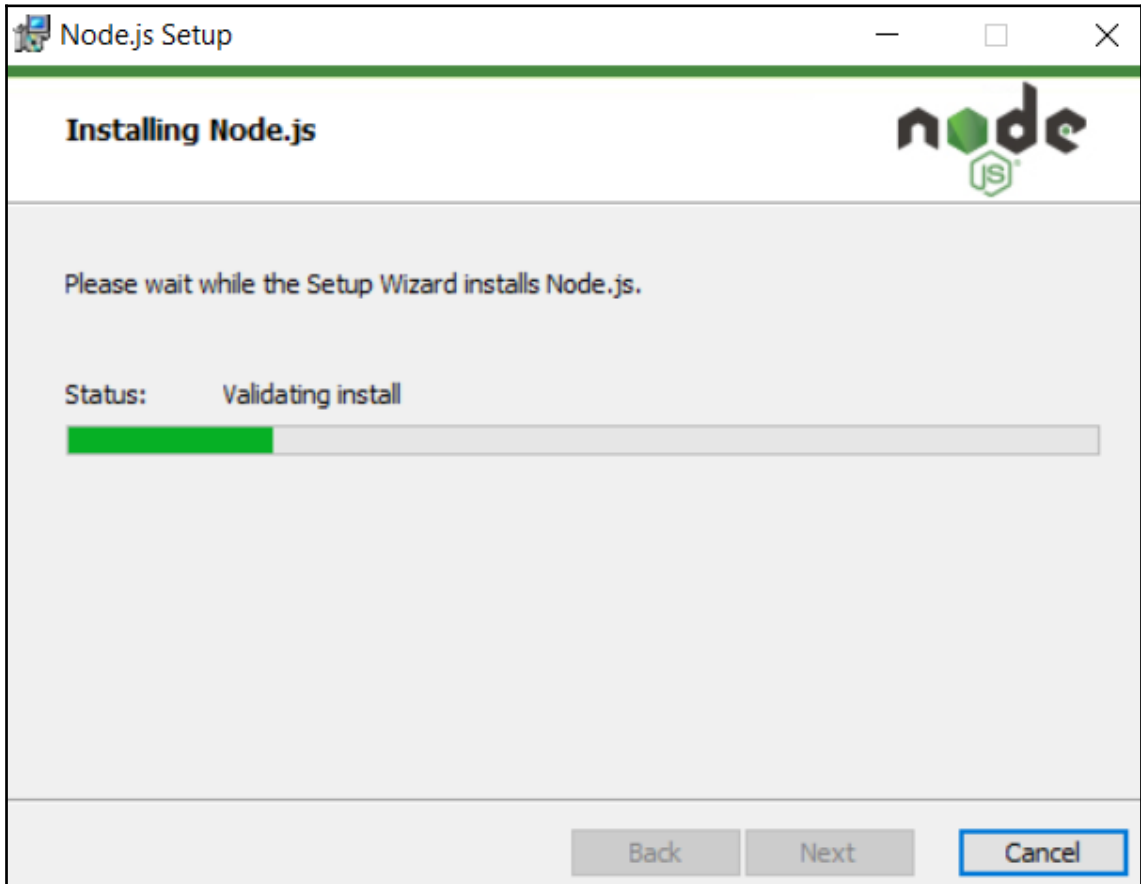
```
1 {
2   "_embedded": {
3     "cars": [
4       {
5         "brand": "Ford",
6         "model": "Mustang",
7         "color": "Red",
8         "registerNumber": "ADF-1121",
9         "year": 2017,
10        "price": 59000,
11        "_links": {
12          "self": {
13            "href": "http://localhost:8080/api/cars/3"
14          },
15          "car": {
16            "href": "http://localhost:8080/api/cars/3"
17          },
18          "owner": {
19            "href": "http://localhost:8080/api/cars/3/owner"
20          }
21        }
22      }
23    ]
24  }
25 }
```

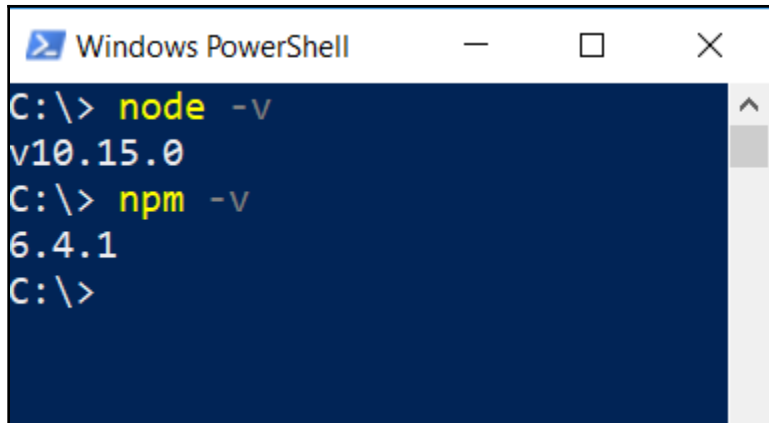
Project Explorer

- cardatabase [carBackEnd master]
 - src/main/java
 - src/main/resources
 - src/test/java
 - com.packt.cardatabase
 - CardatabaseApplicationTests.java

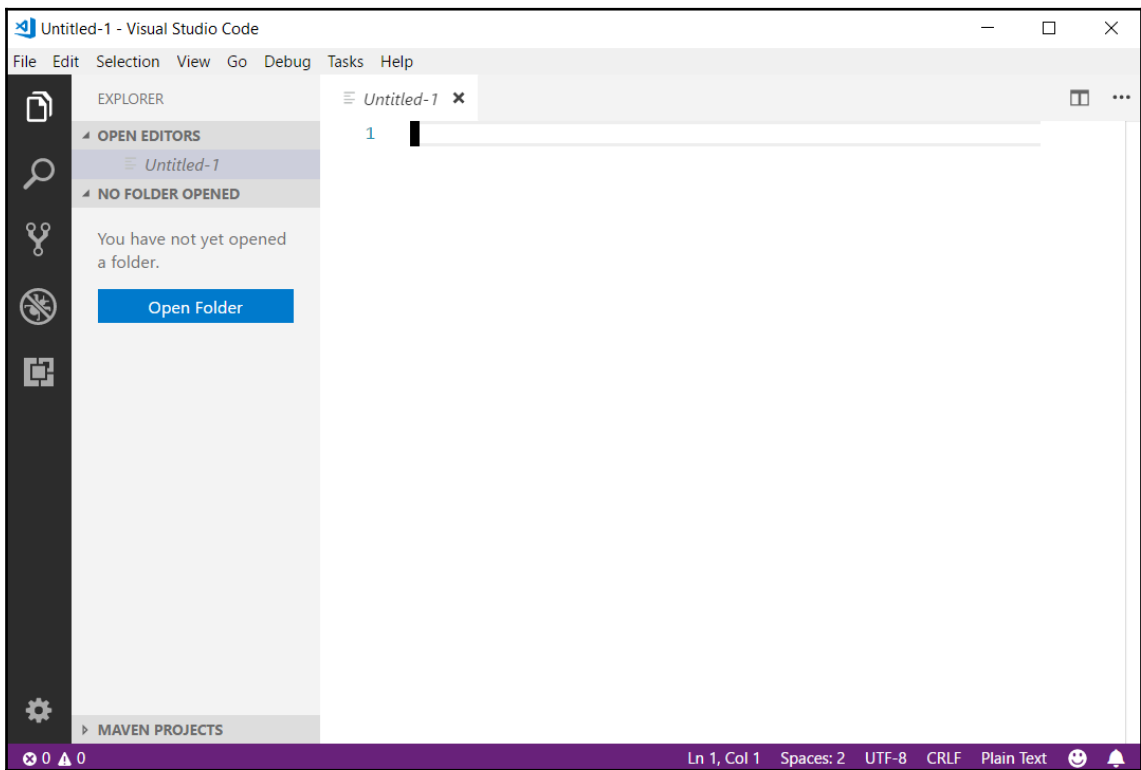


Chapter 6: Setting Up the Environment and Tools - Frontend






```
Windows PowerShell
C:\> node -v
v10.15.0
C:\> npm -v
6.4.1
C:\>
```



Extension: Reactjs code snippets - Visual Studio Code

File Edit Selection View Go Debug Tasks Help

EXTENSIONS: MA...  ...

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Angular v5 snippets by Joh...
John Papa [Install](#)

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dsznajder [Install](#)

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Reactjs code snippets xabikos.reactsnippets

charalampos karypidis | 475,290 | ★★★★★ | Repository

Code snippets for Reactjs development in ES6 syntax

[Disable](#) [Uninstall](#)

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Reactjs

VS Code Reactjs snippets

Visual Studio Marketplace v2.1.0 | installs: 475290 | rating: average: 4.93/5 (15 ratings)

This extension contains code snippets for [Reactjs](#) and is based on the awesome [babel-sublime-snippets](#) package.


Installation

In order to install an extension you need to launch the Command Palette (Ctrl + Shift + P or Cmd + Shift + P) and type Extensions. There you have either the option to show the already installed snippets or install new ones.

Supported languages (file extensions)

- JavaScript (.js)
- TypeScript (.ts)

eslint

ESLint 1.8.2
Integrates ESLint JavaSc...
Dirk Baeumer 

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Richa Avasthi [Install](#)

Debugger ESLint ... 0.0.3
Pierre Marchal [Install](#)

LintLens — ESLin... 2.3.0
Augment your ESLint ru...
Gabriel McAdams [Install](#)

eslint-disable-sni... 1.2.0
Simple snippets for disa...
Adam Knox [Install](#)

ESLint dbaeumer.vscode-eslint

Dirk Baeumer | 19,094,969 | ★★★★★ | Repository | License

Integrates ESLint JavaScript into VS Code.

[Disable](#) [Uninstall](#)

This extension is recommended based on the files you recently opened. [Ignore Recommendation](#)

[Details](#) [Contributions](#) [Changelog](#)

VS Code ESLint extension

[Build Status](#)

Integrates [ESLint](#) into VS Code. If you are new to ESLint check the [documentation](#).

The extension uses the ESLint library installed in the opened workspace folder. If the folder doesn't provide one the extension looks for a global install version. If you haven't installed ESLint either locally or globally do so by running `npm install eslint` in the workspace

prettier

Prettier - Code fo... 1.8.1
VS Code plugin for pret...
Esben Petersen

Prettier Now 1.4.9
VS Code plugin for Pret...
Remi Marsal [Install](#)


Prettier - JavaScri... 1.1.0
VS Code plugin for jlon...
Bastian Kistner [Install](#)

Prettier - Java... 0.17.101
Fork of prettier-vscode: ...
Mathieu SCHRO... [Install](#)

Prettier - JavaSc... 0.22.1
prettier or prettier + sta...
bySabi Files [Install](#)

Prettier - JavaSc... 0.22.1
prettier or prettier + se...
bySabi Files [Install](#)

Prettier Fuge Sta... 0.1.1
prettier with fuge-stand...



Prettier - Code formatter

esbenp.prettier-vscode

Esben Petersen | 7,708,910 | ★★★★★ | Repository | License

VS Code plugin for prettier/prettier

[Disable](#) [Uninstall](#)

[Details](#) [Contributions](#) [Changelog](#)

Prettier formatter for Visual Studio Code

VS Code package to format your JavaScript / TypeScript / CSS using [Prettier](#).

Installation

Install through VS Code extensions. Search for **Prettier - Code formatter**

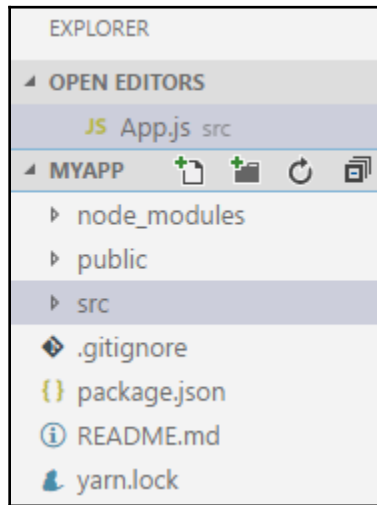
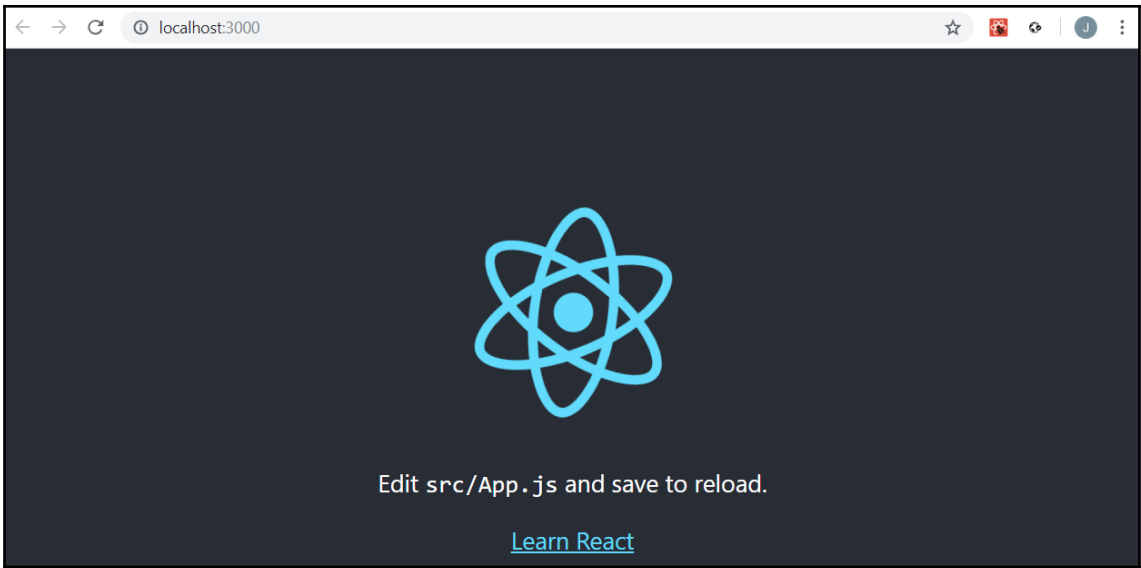
[Visual Studio Code Market Place: Prettier - Code formatter](#)

Can also be installed in VS Code: Launch VS Code Quick Open (Ctrl+P), paste the following command, and press enter.

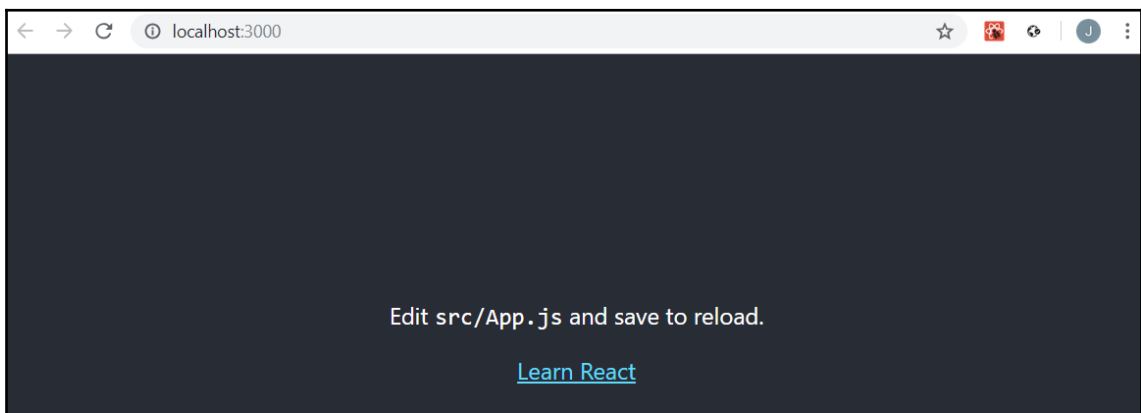
```
npm
PS C:\> npx create-react-app myapp

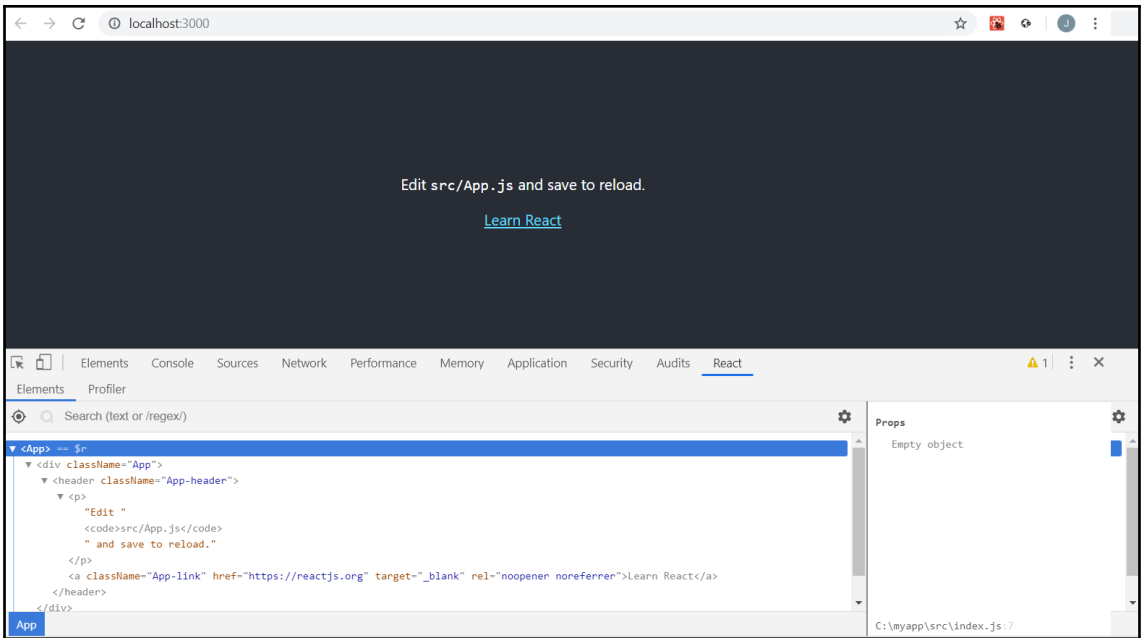
Creating a new React app in C:\myapp.

Installing packages. This might take a couple of minutes.
Installing react, react-dom, and react-scripts...
```




```
1 import React from 'react';
2 import logo from './logo.svg';
3 import './App.css';
4
5 function App() {
6   return (
7     <div className="App">
8       <header className="App-header">
9         <img src={logo} className="App-logo" alt="logo" />
10        <p>
11          Edit <code>src/App.js</code> and save to reload.
12        </p>
13        <a
14          className="App-link"
15          href="https://reactjs.org"
16          target="_blank"
17          rel="noopener noreferrer"
18        >
19          Learn React
20        </a>
21      </header>
22    </div>
23  );
24 }
25
26 export default App;
27
```

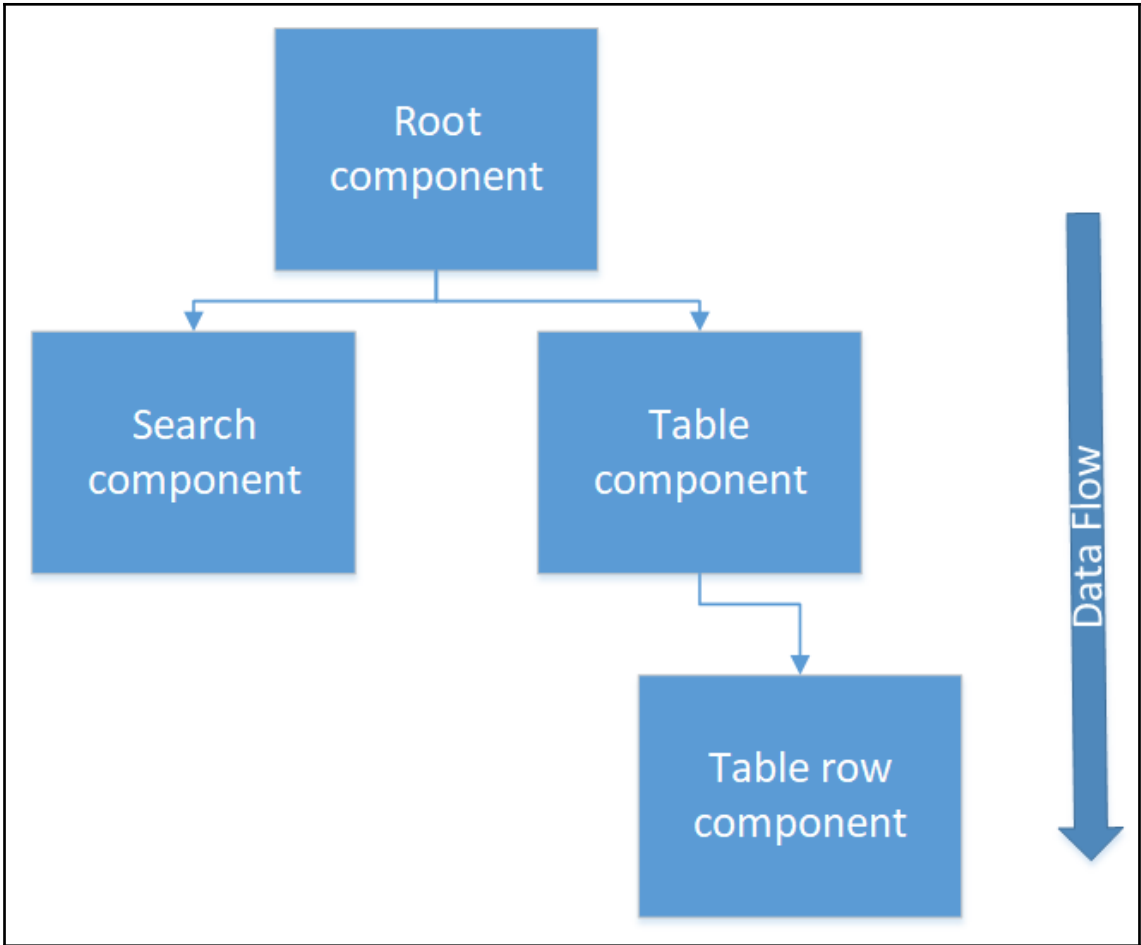




Chapter 7: Getting Started with React

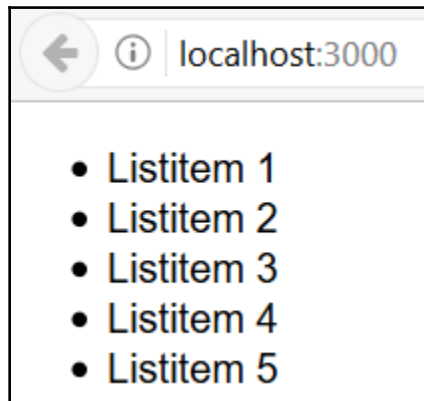
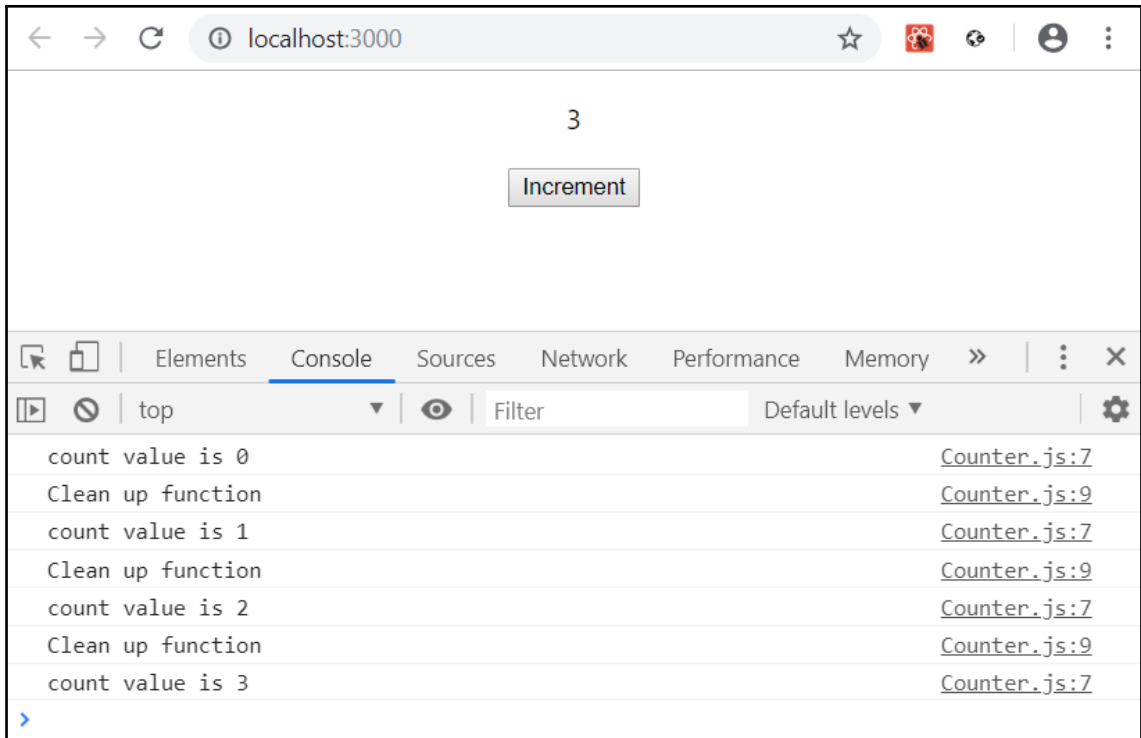
The image shows a web application interface with a search bar and a table of tasks. The search bar contains a text input field labeled 'Name' and a 'Search' button. Below the search bar is a table with four columns: 'Id', 'Description', 'Date', and an unchecked checkbox. The first row of the table is highlighted in light blue. The table data is as follows:

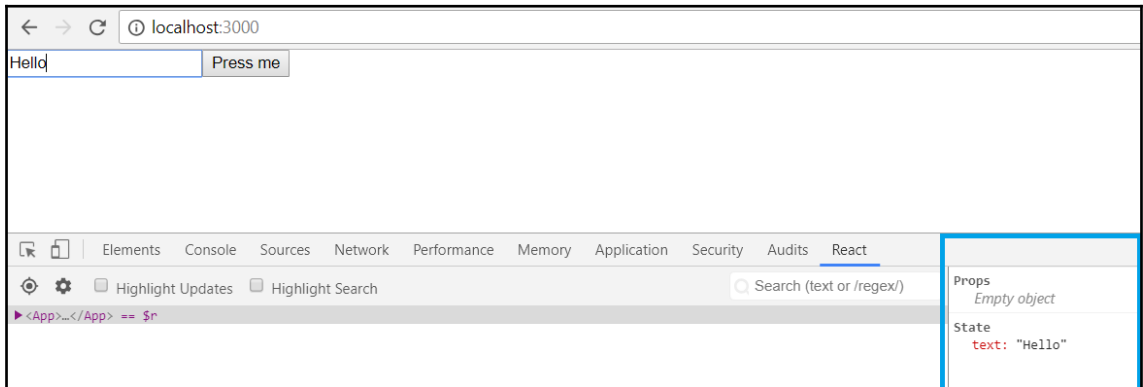
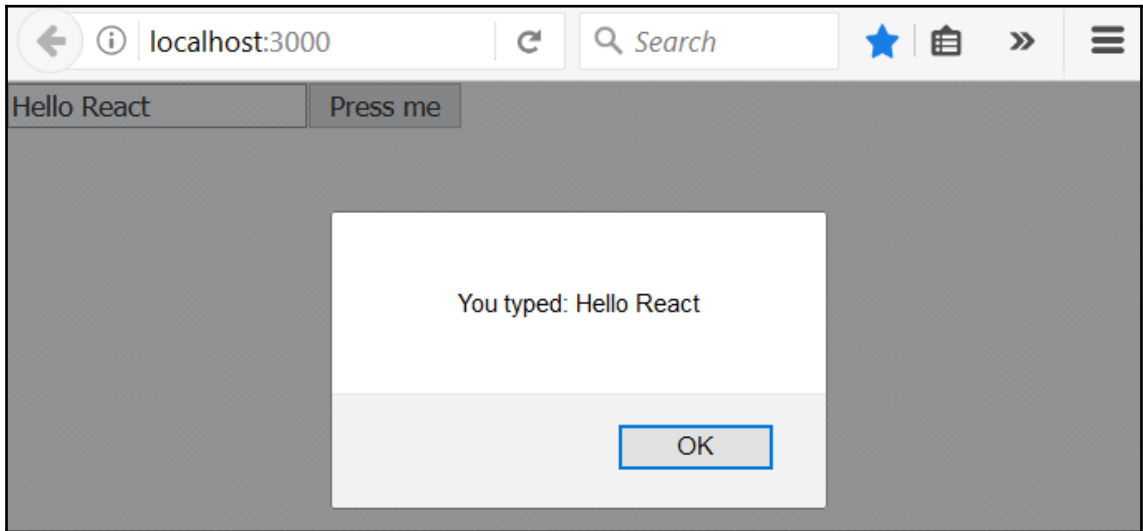
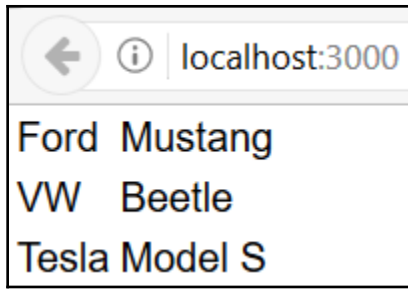
▼ Id	▼ Description	▼ Date	<input type="checkbox"/>
1	Go shopping	1.7.2017	<input type="checkbox"/>
4	Read to exam	23.8.2017	<input checked="" type="checkbox"/>
7	Coffee with Mike	1.9.2017	<input type="radio"/>
10	Wash car	2.9.2017	<input checked="" type="radio"/>

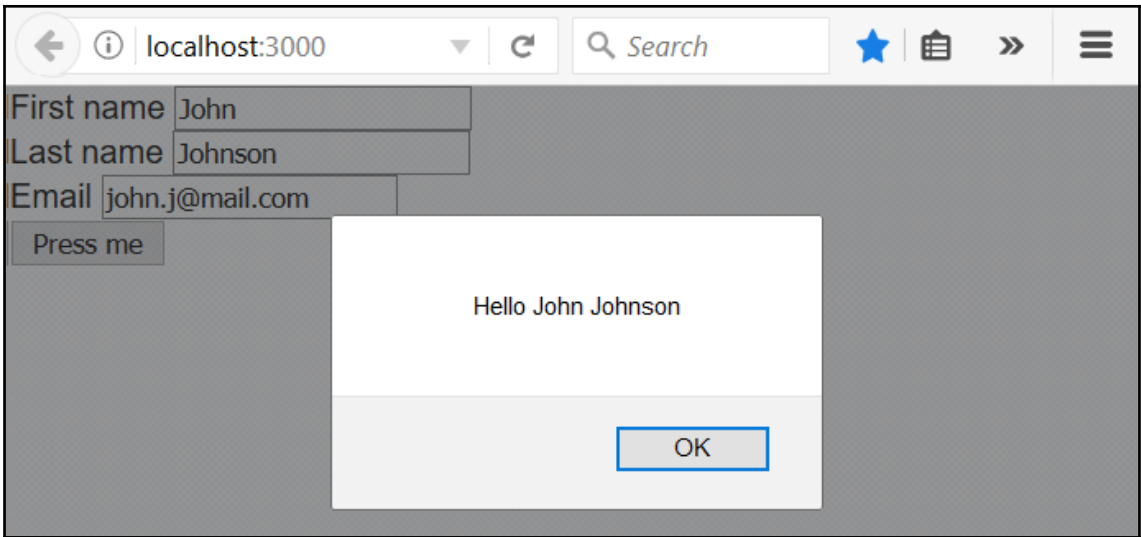


```
1 (x, y) => {x + y};
```

```
1 "use strict";  
2  
3 (function (x, y) {  
4   x + y;  
5 });
```



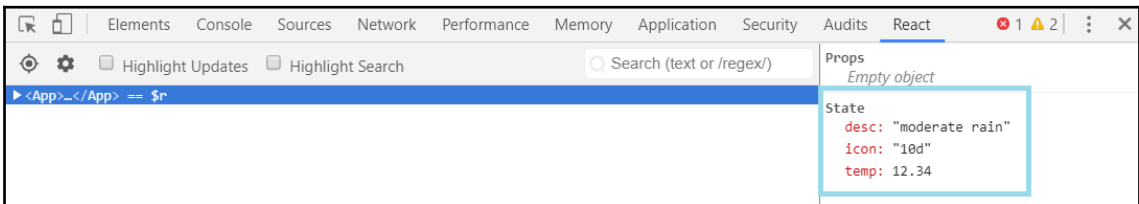




Chapter 8: Consuming the REST API with React

The screenshot shows the OpenWeatherMap API keys management interface. At the top, there is a navigation bar with the OpenWeatherMap logo and links for Weather, Maps, API, Price, Partners, Stations, Widgets, News, and About. Below the navigation bar, the page title is "API keys" with a "Home" link on the right. A secondary navigation bar contains links for Setup, API keys (which is active), My Services, My Payments, Billing plans, Map editor, Block logs, and History bulk, along with a "Logout" button. A light blue informational box states: "Activation of an API key for Free and Startup accounts takes 10 minutes. For other accounts it takes from 10 to 60 minutes. You can generate as many API keys as needed for your subscription. We accumulate the total load from all of them." Below this, there is a table with columns for "Key", "Name", and "Create key". The "Key" column contains a text input field with the value "c36b03a963176b9a63985". The "Name" column shows "Default" and a "Create key" button with a plus icon. The "Create key" column has a label "* Name" with a dropdown arrow.


```
api.openweathermap.org/data/2.5/weather?q=  
  
{  
  "coord": {  
    "lon": -0.13,  
    "lat": 51.51  
  },  
  "weather": [  
    {  
      "id": 804,  
      "main": "Clouds",  
      "description": "overcast clouds",  
      "icon": "04d"  
    }  
  ],  
  "base": "stations",  
  "main": {  
    "temp": 15.45,  
    "pressure": 1014,  
    "humidity": 45,  
    "temp_min": 14,  
    "temp_max": 17  
  },  
}
```



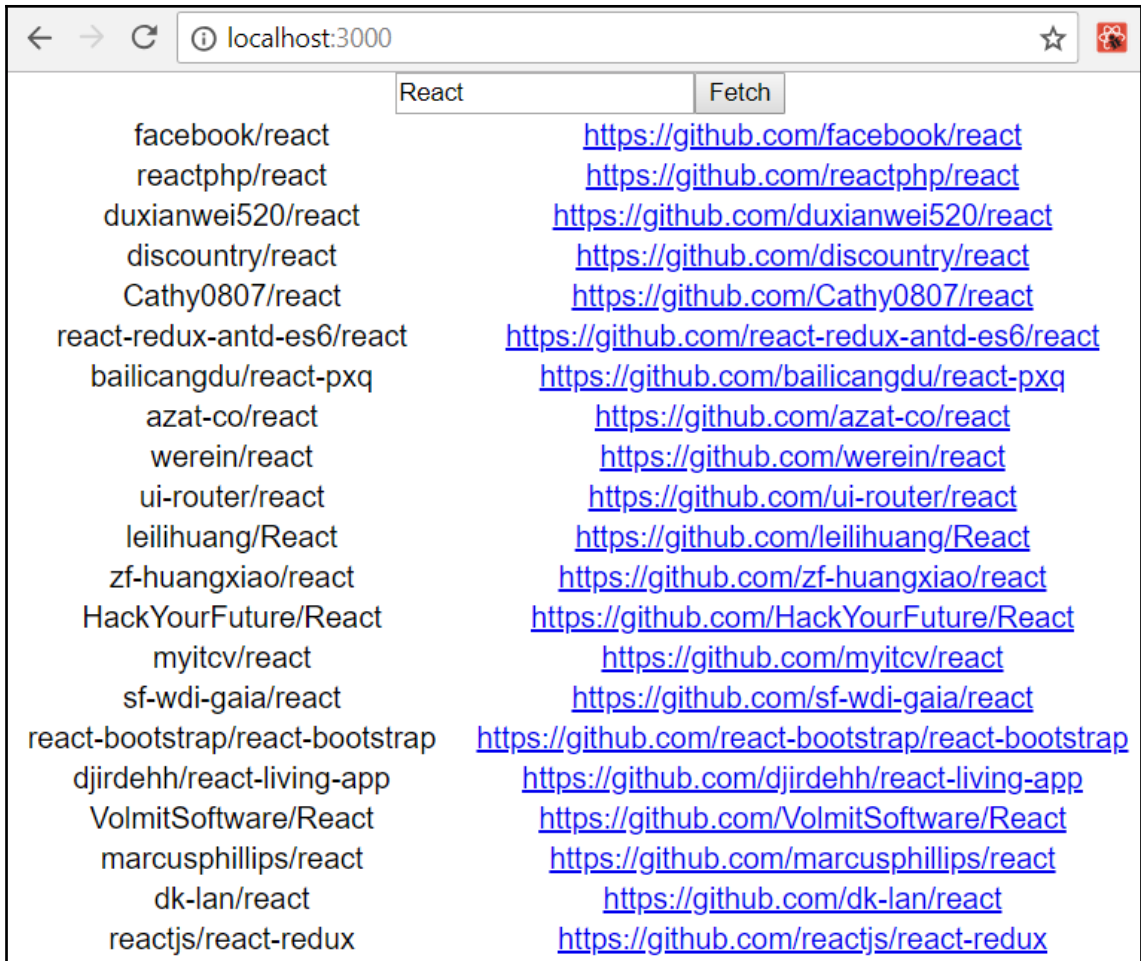
Temperature: 13.01 °C

Description: shower rain



```
https://api.github.com/search/repositories?q=react


"items": [ 30 items, 165 KB
  { 72 properties, 5 KB
    "id": 10270250,
    "name": "react",
    "full_name": "facebook/react",
    "owner": { 17 properties, 1 KB "login": "facebook", "id": 69631, "avatar_url": "https://avatars3.githubusercontent.com/u/69631?v=4", "gravatar_id": "", "url": "https://api.github.com/users/facebook", "html_url": "https://github.com/facebook", "description": "A declarative, efficient, and flexible JavaScript library for building user interfaces.", "fork": false,
    "url": "https://api.github.com/repos/facebook/react",
    "forks_url": "https://api.github.com/repos/facebook/react/forks",
    "keys_url": "https://api.github.com/repos/facebook/react/keys{/key_id}",
    "collaborators_url": "https://api.github.com/repos/facebook/react/collaborators{/collaborator}",
    "teams_url": "https://api.github.com/repos/facebook/react/teams",
    "hooks_url": "https://api.github.com/repos/facebook/react/hooks",
    "issue_events_url": "https://api.github.com/repos/facebook/react/issues/events{/number}",
    "events_url": "https://api.github.com/repos/facebook/react/events",
    "assignees_url": "https://api.github.com/repos/facebook/react/assignees{/user}",
    "branches_url": "https://api.github.com/repos/facebook/react/branches{/branch}",
    "tags_url": "https://api.github.com/repos/facebook/react/tags",
    "blobs_url": "https://api.github.com/repos/facebook/react/git/blobs{/sha}",
    "git_tags_url": "https://api.github.com/repos/facebook/react/git/tags{/sha}",
    "git_refs_url": "https://api.github.com/repos/facebook/react/git/refs{/sha}",
    "trees_url": "https://api.github.com/repos/facebook/react/git/trees{/sha}",
    "statuses_url": "https://api.github.com/repos/facebook/react/statuses/{sha}",
    "languages_url": "https://api.github.com/repos/facebook/react/languages",
    "stargazers_url": "https://api.github.com/repos/facebook/react/stargazers",
    "contributors_url": "https://api.github.com/repos/facebook/react/contributors",
    "subscribers_url": "https://api.github.com/repos/facebook/react/subscribers",
    "subscription_url": "https://api.github.com/repos/facebook/react/subscription",
    "commits_url": "https://api.github.com/repos/facebook/react/commits{/sha}",
    "git_commits_url": "https://api.github.com/repos/facebook/react/git/commits{/sha}",
    "comments_url": "https://api.github.com/repos/facebook/react/comments{/number}",
    "issue_comment_url": "https://api.github.com/repos/facebook/react/issues/comments{/number}",
    "contents_url": "https://api.github.com/repos/facebook/react/contents/{+path}",
```



React	Fetch
facebook/react	https://github.com/facebook/react
reactphp/react	https://github.com/reactphp/react
duxianwei520/react	https://github.com/duxianwei520/react
discountry/react	https://github.com/discountry/react
Cathy0807/react	https://github.com/Cathy0807/react
react-redux-antd-es6/react	https://github.com/react-redux-antd-es6/react
bailicangdu/react-pxq	https://github.com/bailicangdu/react-pxq
azat-co/react	https://github.com/azat-co/react
werein/react	https://github.com/werein/react
ui-router/react	https://github.com/ui-router/react
leilihuang/React	https://github.com/leilihuang/React
zf-huangxiao/react	https://github.com/zf-huangxiao/react
HackYourFuture/React	https://github.com/HackYourFuture/React
myitcv/react	https://github.com/myitcv/react
sf-wdi-gaia/react	https://github.com/sf-wdi-gaia/react
react-bootstrap/react-bootstrap	https://github.com/react-bootstrap/react-bootstrap
djirdehh/react-living-app	https://github.com/djirdehh/react-living-app
VolmitSoftware/React	https://github.com/VolmitSoftware/React
marcusphillips/react	https://github.com/marcusphillips/react
dk-lan/react	https://github.com/dk-lan/react
reactjs/react-redux	https://github.com/reactjs/react-redux



Chapter 9: Useful Third-Party Components for React



JS.coach



×



All **React** React Native Webpack Babel PostCSS Clear filters

Sort by relevance ▾

React Popular
fixed-data-table v0.6.5 updated 6 months ago by  facebookarchive
A React **table** component designed to allow presenting thousands of rows of data.
BSD-3-Clause ★ 4k ↓ 93k ● 0 

React Popular
react-table v6.8.2 updated 3 weeks ago by  react-tools
A fast, lightweight, opinionated **table** and datagrid built on React.
MIT ★ 4k ↓ 246k ● 0 

React Popular
react-bootstrap-table v4.3.1 updated 2 months ago by  AllenFang
It's a react **table** for bootstrap.
MIT ★ 2k ↓ 87k ● 0 

React Popular
fixed-data-table-2 v0.8.13 updated 2 days ago by  schrodinger
A React **table** component designed to allow presenting thousands of rows of data.
BSD-3-Clause ★ 671 ↓ 72k ● 0 




list

All React React Native Webpack Babel PostCSS

Sort by relevance ▾


React Popular

react-tiny-virtual-list v2.1.4 updated 6 months ago by  clauderic

A tiny but mighty **list** virtualization component, with zero dependencies 🔗

MIT ★ 813 ↓ 31k 0

React Native Popular

react-native-sortable-listview v0.2.8 updated 3 months ago by  deanmcpherson

Drag drop capable wrapper of **ListView** for React Native.

MIT ★ 631 ↓ 5k 0  



npm v2.1.4 downloads 31k/month build passing codecov 93% </> TypeScript license MIT chat on gitter

- **Tiny & dependency free** - Only 3kb gzipped
- **Render millions of items**, without breaking a sweat
- **Scroll to index** or **set the initial scroll offset**
- **Supports fixed** or **variable** heights/widths
- **Vertical** or **Horizontal** lists

Check out the [demo](#) for some examples, or take it for a test drive right away in [Code Sandbox](#).

Getting Started

Using [npm](#):

```
npm install react-tiny-virtual-list --save
```

- ▶ react-scripts
- ◀ react-tiny-virtual-list
- ▶ build
- ▶ types
- 🕒 CHANGELOG.md
- 📄 package.json
- 📖 README.md
- ▶ redent
- ▶ regexpu-core
- ▶ registry-auth-token
- ▶ registry-url

localhost:3000 Search Star Home Refresh Close

react Fetch

Name	URL	Owner
facebook/react	https://github.com/facebook/react	facebook
reactphp/react	https://github.com/reactphp/react	reactphp
duxianwei520/react	https://github.com/duxianwei520/react	duxianwei520
discountry/react	https://github.com/discountry/react	discountry
Cathy0807/react	https://github.com/Cathy0807/react	Cathy0807
react-redux-antd-es6/react	https://github.com/react-redux-antd-...	react-redux-antd-es6
bailicangdu/react-pxq	https://github.com/bailicangdu/react-...	bailicangdu
azat-co/react	https://github.com/azat-co/react	azat-co
werein/react	https://github.com/werein/react	werein
ui-router/react	https://github.com/ui-router/react	ui-router

Previous Page 1 of 3 10 rows Next

localhost:3000

React Fetch

Name	URL	Owner
facebook		
facebook/create-react-app	https://github.com/facebook/create-r...	facebook
facebook/react	https://github.com/facebook/react	facebook

localhost:3000

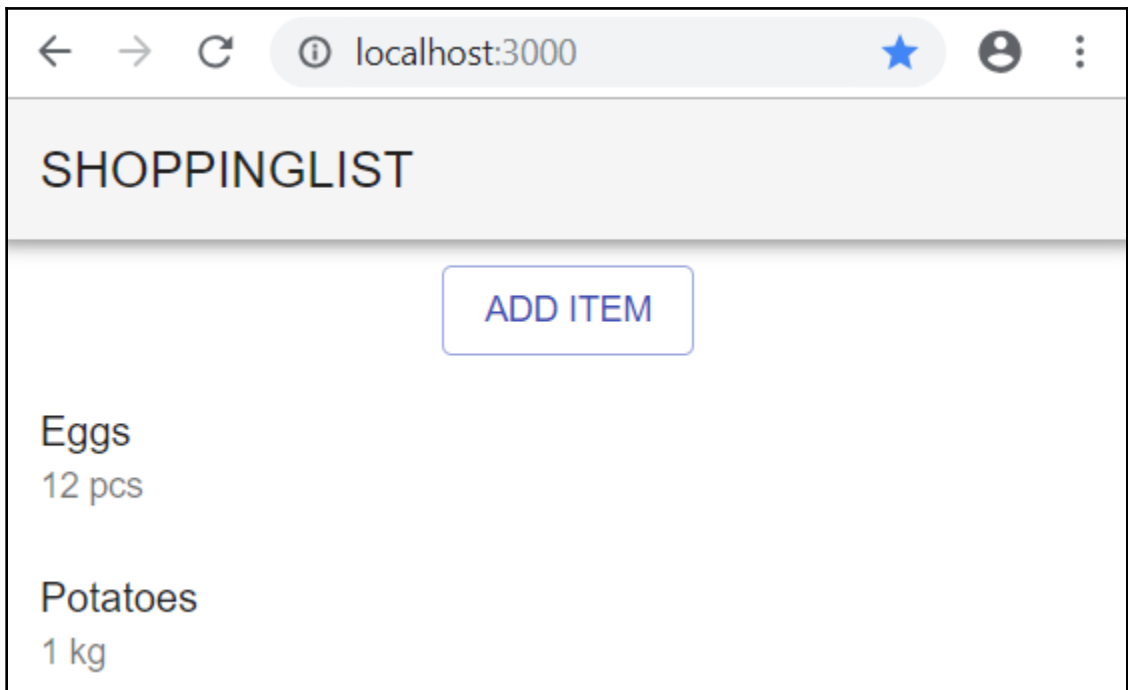
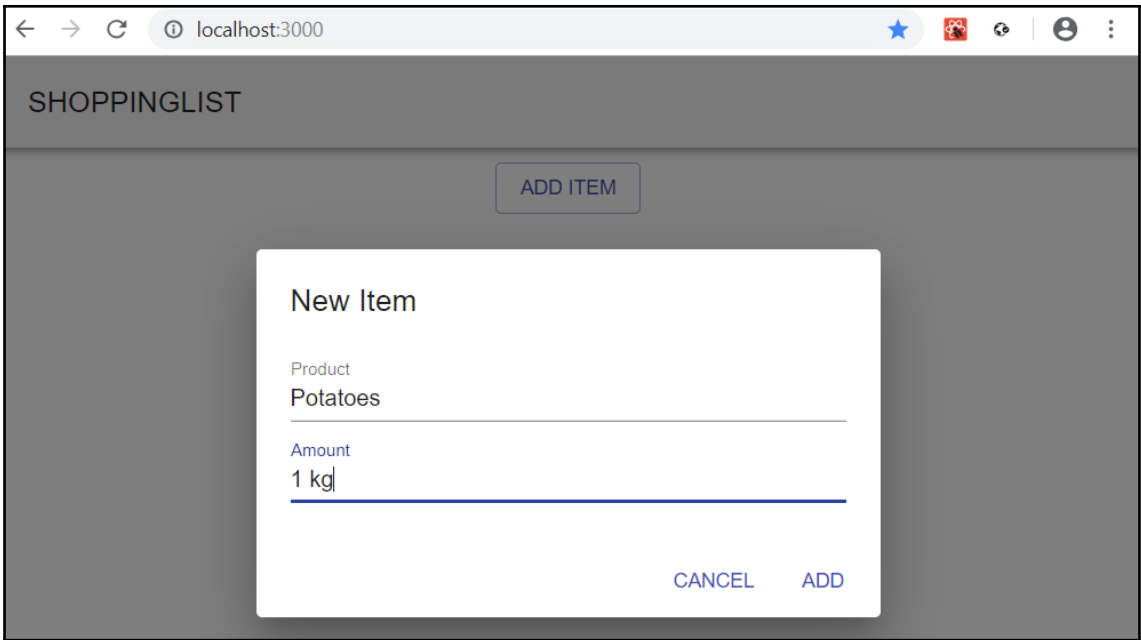
react Fetch

Name	URL	Owner	
facebook/react	https://github.com/facebook/react	facebook	Press me
reactphp/react	https://github.com/reactphp/react	reactphp	Press me
duxianwei520/react	https://github.com/duxianwei52...	duxianwei520	Press me
discountry/react	https://github.com/discountry/re...	discountry	Press me
Cathy0807/react	https://github.com/Cathy0807/re...	Cathy0807	Press me
react-redux-antd-es6/react	https://github.com/react-redux-a...	react-redux-antd-es6	Press me
bailicangdu/react-pxq	https://github.com/bailicangdu/r...	bailicangdu	Press me
azat-co/react	https://github.com/azat-co/react	azat-co	Press me
werein/react	https://github.com/werein/react	werein	Press me
ui-router/react	https://github.com/ui-router/react	ui-router	Press me

Previous Page 1 of 3 10 rows Next

localhost:3000

SHOPPINGLIST



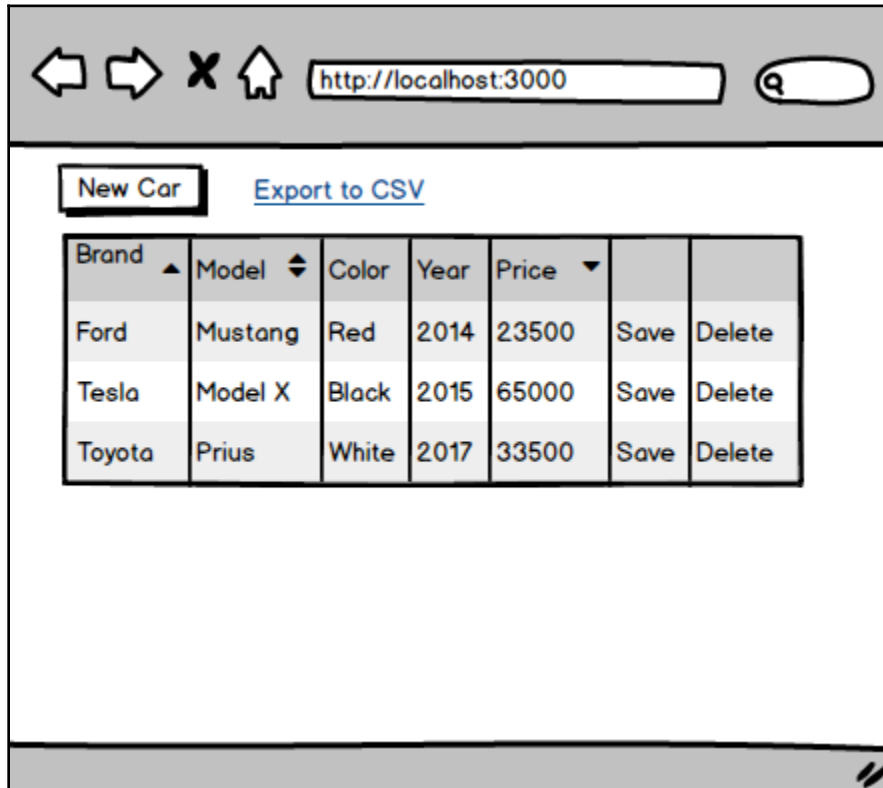
[Home](#) [Contact](#) [Links](#)

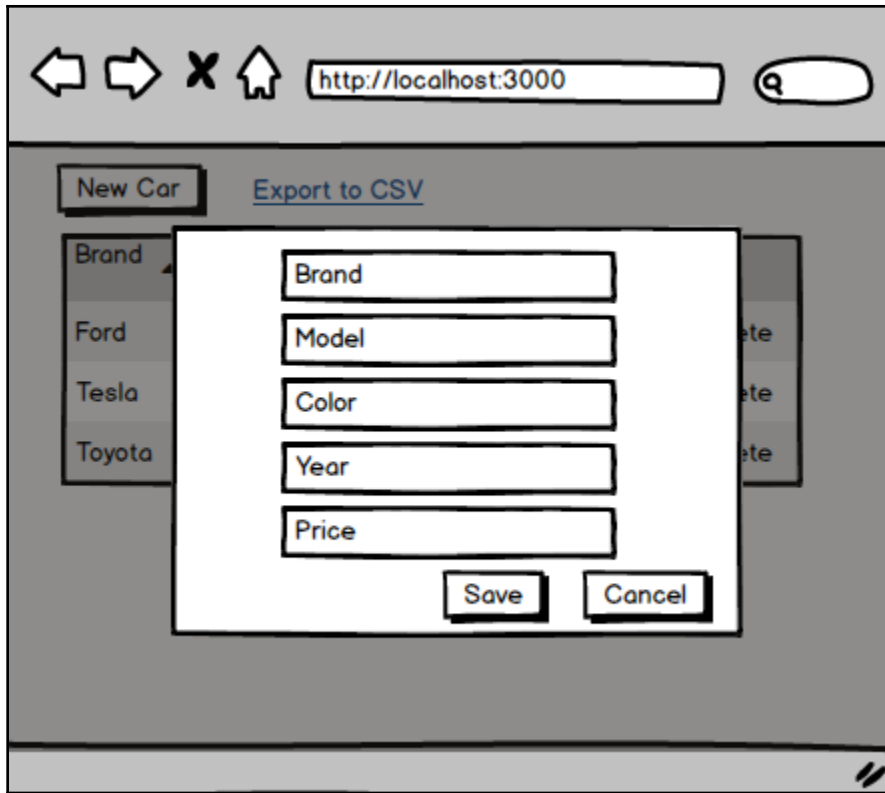
Home.js

[Home](#) [Contact](#) [Links](#)

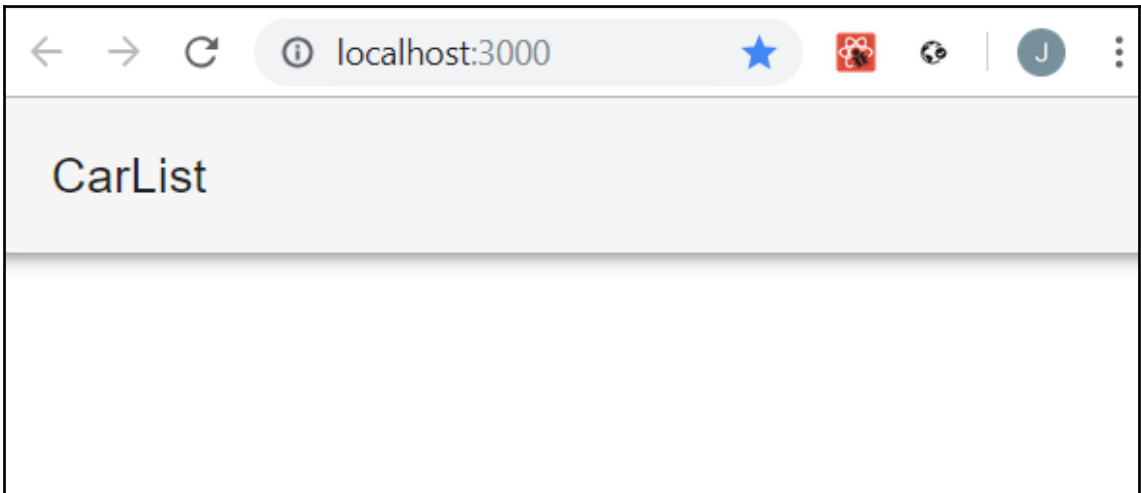
Contact.js

Chapter 10: Setting Up the Frontend for Our Spring Boot RESTful Web Service

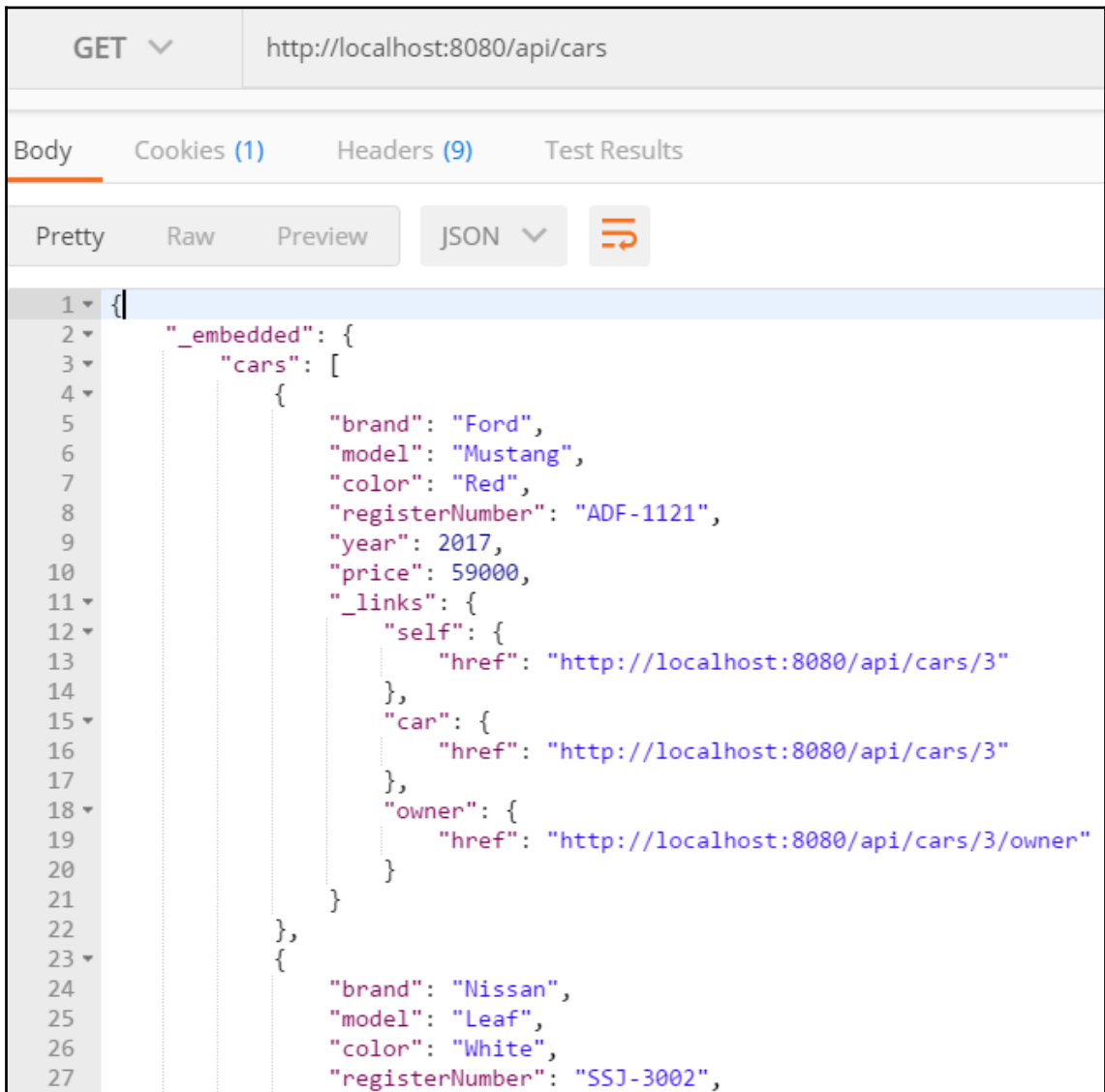




```
GET http://localhost:8080/api/cars Params Send Save
Pretty Raw Preview JSON
1 {
2   "_embedded": {
3     "cars": [
4       {
5         "brand": "Ford",
6         "model": "Mustang",
7         "color": "Red",
8         "registerNumber": "ADF-1121",
9         "year": 2017,
10        "price": 59000,
11        "_links": {
12          "self": {
13            "href": "http://localhost:8080/api/cars/3"
14          },
15          "car": {
16            "href": "http://localhost:8080/api/cars/3"
17          },
18          "owner": {
19            "href": "http://localhost:8080/api/cars/3/owner"
20          }
21        }
22      },
23      {
24        "brand": "Nissan",
25        "model": "Leaf",
26        "color": "White",
27        "registerNumber": "SSJ-3002",
28        "year": 2014,
29        "price": 20000
30      }
31    ]
32  }
33 }
```



Chapter 11: Adding CRUD Functionalities

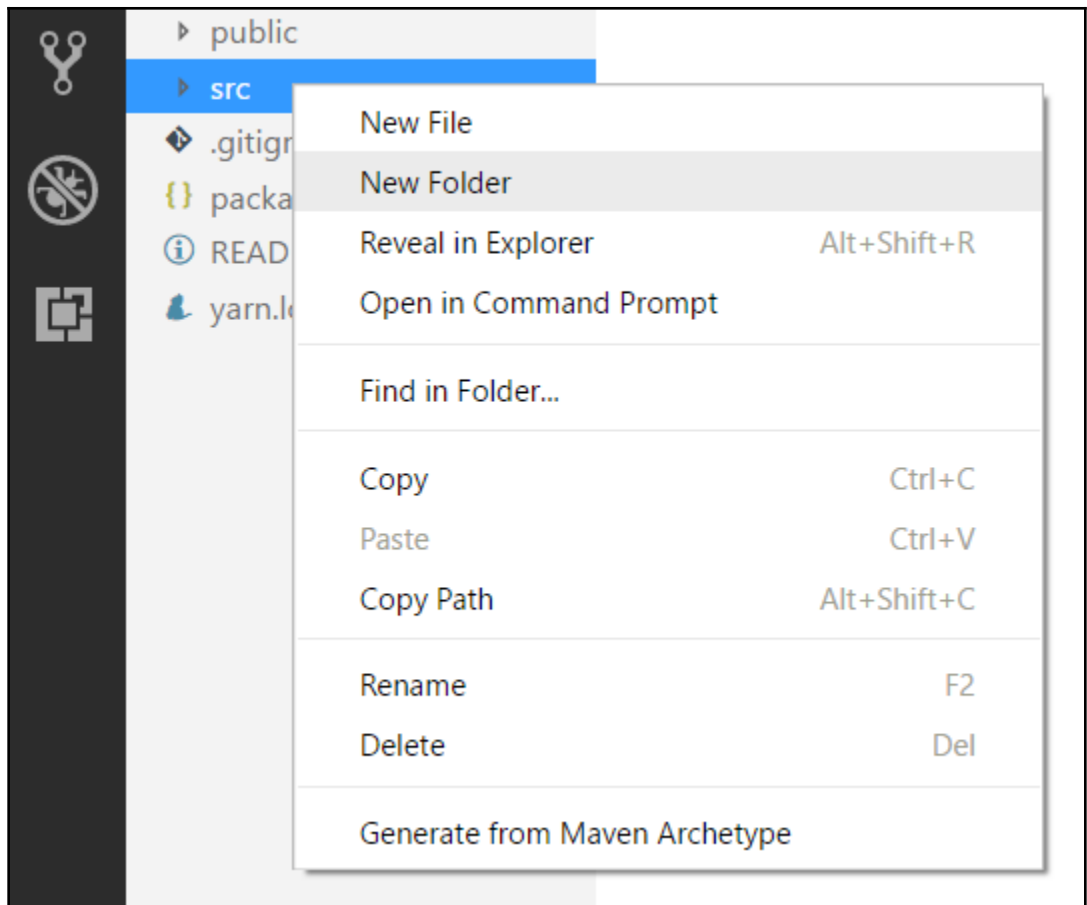


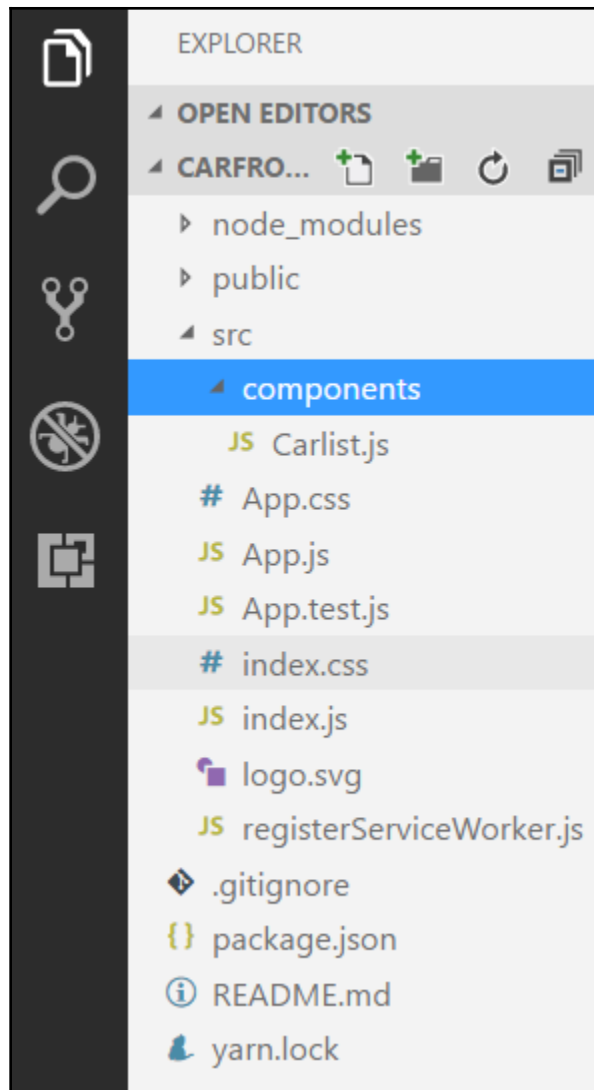
```
GET http://localhost:8080/api/cars

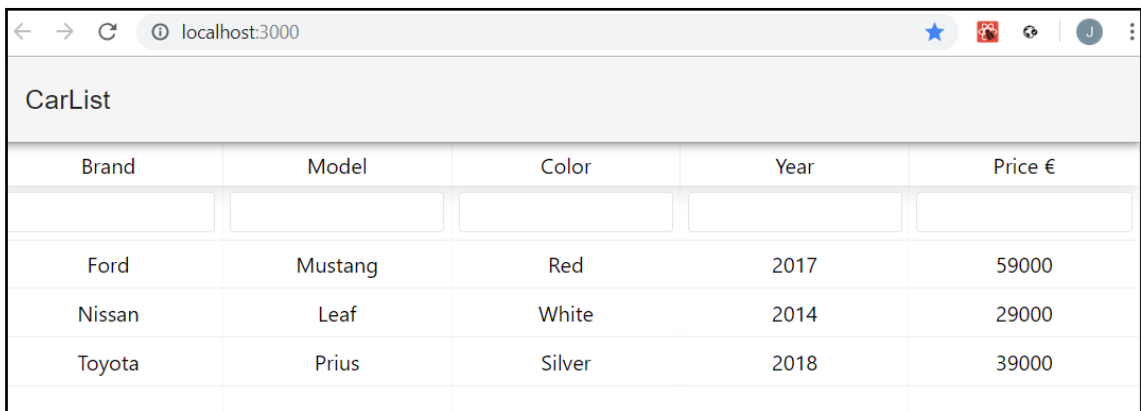
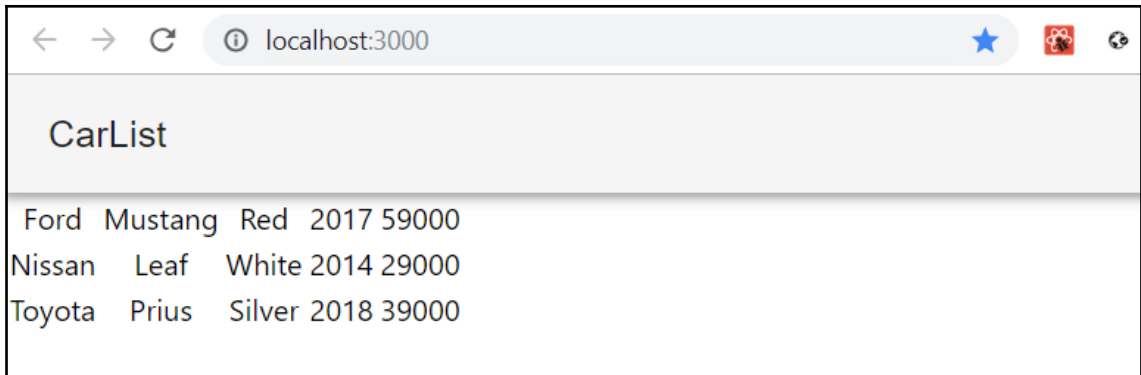
Body Cookies (1) Headers (9) Test Results

Pretty Raw Preview JSON

1 {
2   "_embedded": {
3     "cars": [
4       {
5         "brand": "Ford",
6         "model": "Mustang",
7         "color": "Red",
8         "registerNumber": "ADF-1121",
9         "year": 2017,
10        "price": 59000,
11        "_links": {
12          "self": {
13            "href": "http://localhost:8080/api/cars/3"
14          },
15          "car": {
16            "href": "http://localhost:8080/api/cars/3"
17          },
18          "owner": {
19            "href": "http://localhost:8080/api/cars/3/owner"
20          }
21        }
22      },
23      {
24        "brand": "Nissan",
25        "model": "Leaf",
26        "color": "White",
27        "registerNumber": "SSJ-3002",
```








GET ▼ http://localhost:8080/api/cars

Body Cookies (1) Headers (9) Test Results

Pretty Raw Preview JSON ▼ 

```
1 {
2   "_embedded": {
3     "cars": [
4       {
5         "brand": "Ford",
6         "model": "Mustang",
7         "color": "Red",
8         "registerNumber": "ADF-1121",
9         "year": 2017,
10        "price": 59000
11        "_links": {
12          "self": {
13            "href": "http://localhost:8080/api/cars/3"
14          },
15          "car": {
16            "href": "http://localhost:8080/api/cars/3"
17          },
18          "owner": {
19            "href": "http://localhost:8080/api/cars/3/owner"
20          }
21        }
22      },
23    ]
24  },
25  "brand": "Nissan",
26  "model": "Leaf",
27  "color": "White",
  "registerNumber": "SSJ-3002",
```

localhost:3000

CarList

Brand	Model	Color	Year	Price €	
Ford	Mustang	Red	2017	59000	Delete
Nissan	Leaf	White	2014	29000	Delete
Toyota	Prius	Silver	2018	39000	Delete

localhost:3000

CarList

Brand	Model	Color	Year	Price €	
Nissan	Leaf	White	2014	29000	Delete
Toyota	Prius	Silver	2018	39000	Delete

Car deleted

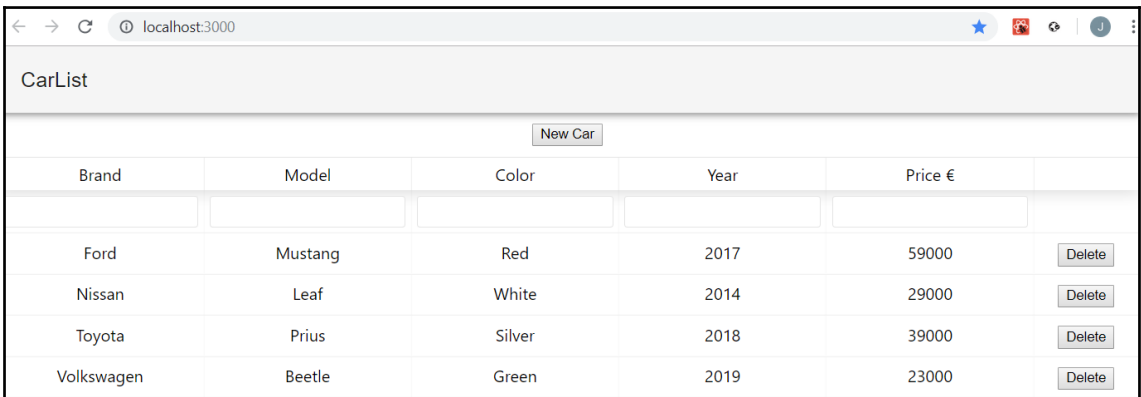
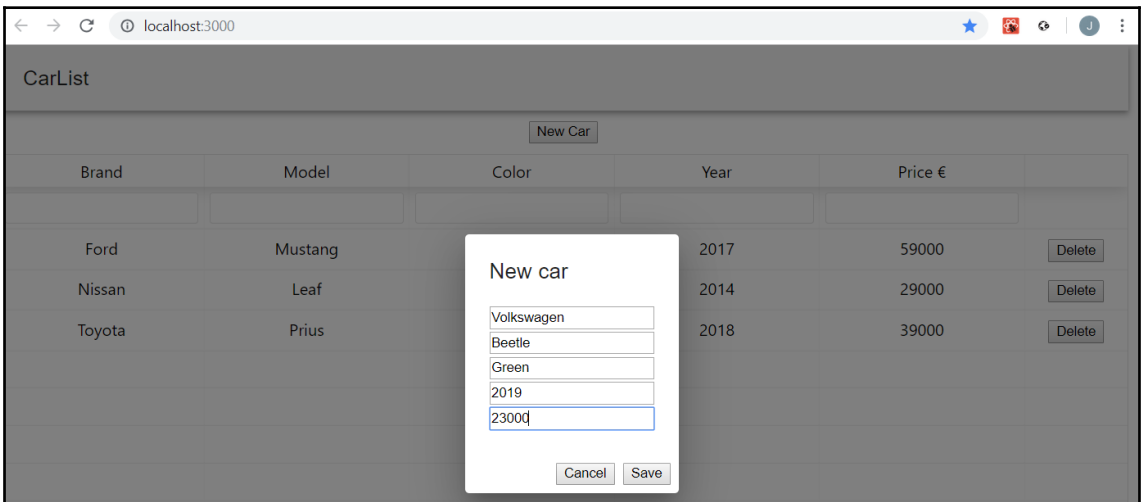
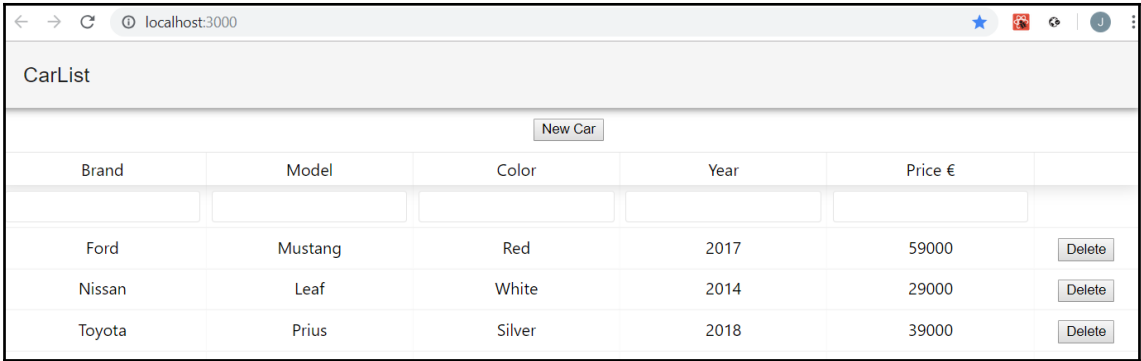
localhost:3000

CarList

Brand	Model	Color	Year	Price €	
Nissan	Leaf	White	2014	29000	Delete

localhost:3000 says
Are you sure to delete?

OK Cancel



localhost:3000

CarList

New Car

Brand	Model	Color	Year	Price €		
Ford	Mustang	Red		59000	Edit	Delete
Nissan	Leaf	Wh		29000	Edit	Delete
Toyota	Prius	Silv		39000	Edit	Delete

Edit car

localhost:3000

CarList

New Car

[Export CSV](#)

Brand	Model	Color	registerNu	year	price	_links	Price €
Ford	Mustang	Red	ADF-1121	2017	59000	[object Object]	59000
Nissan	Leaf	White	SSJ-3002	2014	29000	[object Object]	29000
Toyota	Prius	Silver	KKO-0212	2018	39000	[object Object]	39000

generatedBy_react-csv (5) - Excel

File Home Insert Page Layout Formulas Data Review View Dynamic Macros Acrobats Tell me Hinkula... Share

Paste Font Alignment Number Conditional Formatting Format as Table Cell Styles

Clipboard Styles

A1 brand

	A	B	C	D	E	F	G	H
1	brand	model	color	registerNu	year	price	_links	
2	Ford	Mustang	Red	ADF-1121	2017	59000	[object Object]	
3	Nissan	Leaf	White	SSJ-3002	2014	29000	[object Object]	
4	Toyota	Prius	Silver	KKO-0212	2018	39000	[object Object]	
5								
6								
7								
8								
9								
10								
11								

generatedBy_react-csv (5)

Ready 100 %

Chapter 12: Styling the Frontend with React Material-UI

NEW CAR

[Export CSV](#)

Color	Year
-------	------

New car

CANCELSAVE

Brand	Model	Color	Year	Price €		
Ford	Mustang	Red	2017	59000	EDIT	DELETE
Nissan	Leaf	White	2014	29000	EDIT	DELETE
Toyota	Prius	Silver	2018	39000	EDIT	DELETE

localhost:3000

CarList

[NEW CAR](#) [Export CSV](#)

Brand	Model	Color	Year	Price €		
Ford	Mustang	Red	2017	59000	EDIT	DELETE
Nissan	Leaf	White	2014	29000	EDIT	DELETE
Toyota	Prius	Silver	2018	39000	EDIT	DELETE

New car

Brand
Tesla

Model
Model S

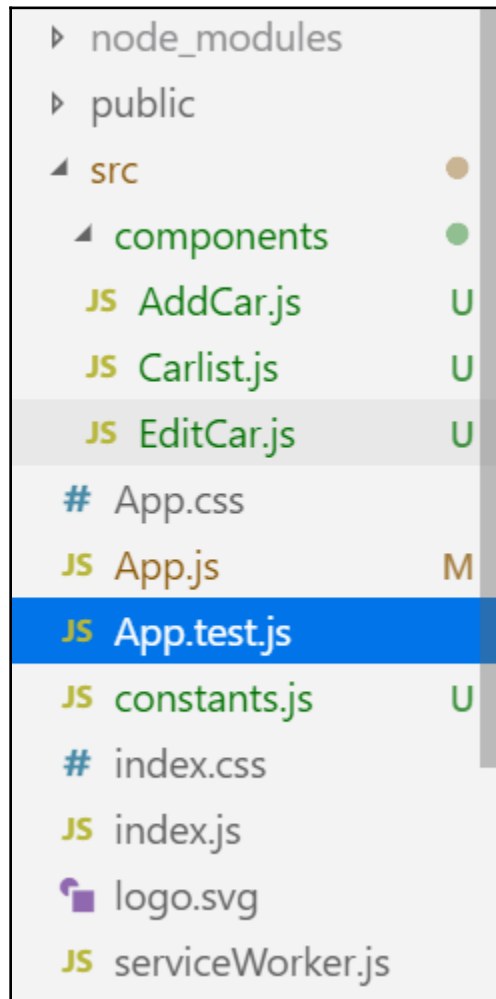
Color
Red

Year
2019

Price
85000

[CANCEL](#) [SAVE](#)

Chapter 13: Testing Your Frontend



```
PASS src\App.test.js
  ✓ renders without crashing (156ms)

Test Suites: 1 passed, 1 total
Tests:       1 passed, 1 total
Snapshots:   0 total
Time:        3.623s
Ran all test suites related to changed files.
```

```
PASS src/App.test.jstal
  ✓ renders without crashing (208ms)
  ✓ renders a snapshot (30ms)

> 1 snapshot written.
Snapshot Summary
> 1 snapshot written from 1 test suite.

Test Suites: 1 passed, 1 total
Tests:       2 passed, 2 total
Snapshots:   1 written, 1 total
Time:        5.548s
```

▲ src	●
▲ __snapshots__	●
☰ App.test.js.snap	U
▲ components	●
JS AddCar.js	U
JS Carlist.js	U
JS EditCar.js	U
# App.css	
JS App.js	M
JS App.test.js	M
JS constants.js	U

PASS src\AddCar.test.js

Test Suites: 2 passed, 2 total
Tests: 3 passed, 3 total
Snapshots: 1 passed, 1 total
Time: 6.212s
Ran all test suites.

Chapter 14: Securing Your Application

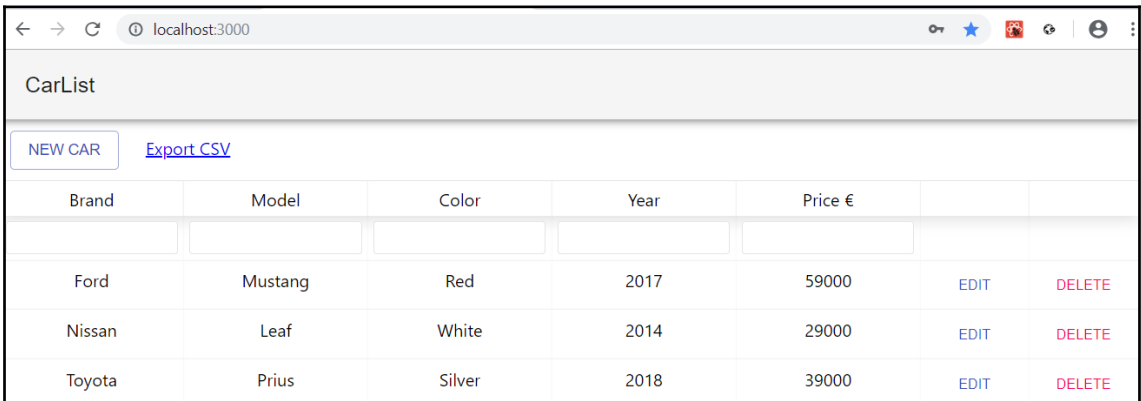
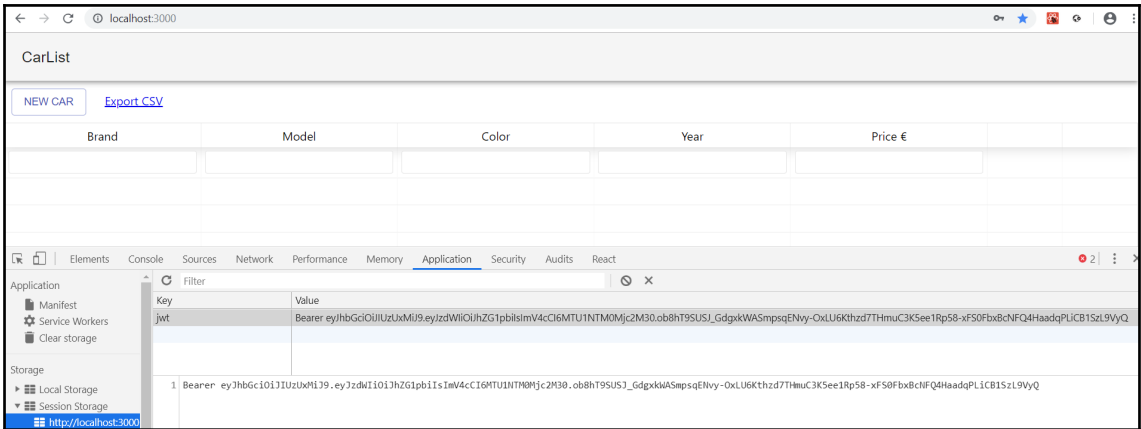
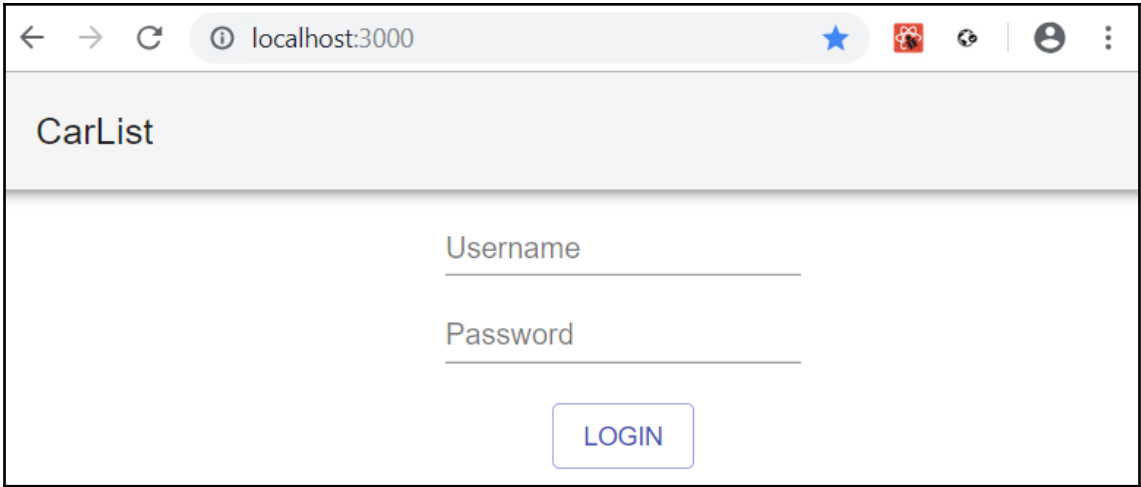
The screenshot shows a web browser at localhost:3000 displaying a 'CarList' application. The application has a header with 'NEW CAR' and 'Export CSV' buttons, and a table with columns for Brand, Model, Color, and Year. Below the application, the browser's developer tools are open to the Network tab, showing a list of requests. The selected request is 'cars /api', which is a GET request to http://localhost:8080/api/cars. The status code is 403, and the remote address is [::1]:8080. The Referrer Policy is no-referrer-when-downgrade.

Brand	Model	Color	Year

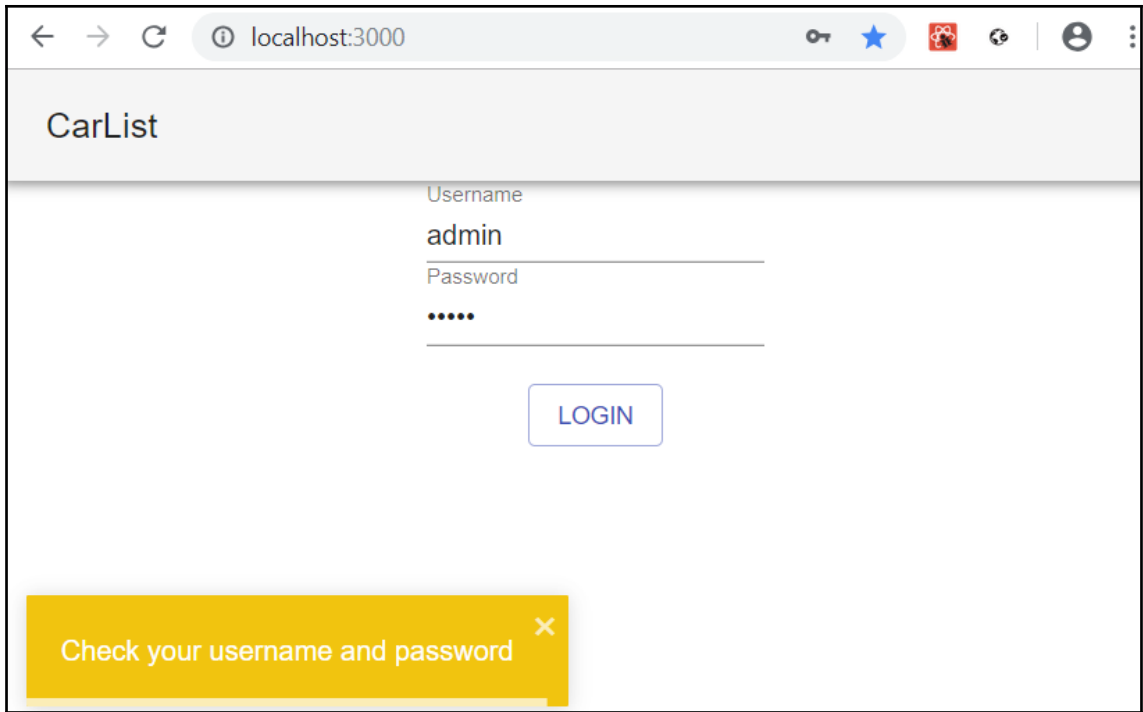
Network Tab: cars /api

- Request URL: http://localhost:8080/api/cars
- Request Method: GET
- Status Code: 403
- Remote Address: [::1]:8080
- Referrer Policy: no-referrer-when-downgrade

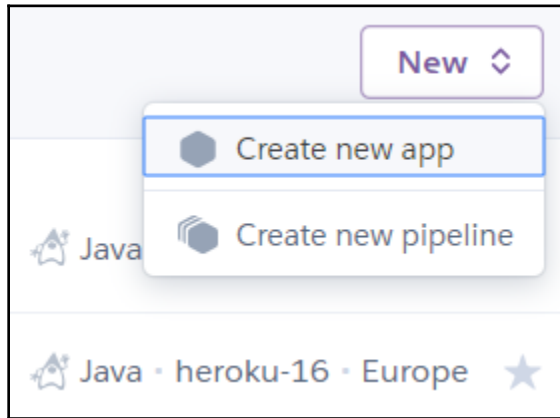
▲ src	●
▲ __snapshots__	●
☰ App.test.js.snap	U
▲ components	●
JS AddCar.js	U
JS Carlist.js	U
JS EditCar.js	U
JS Login.js	U
JS AddCar.test.js	U
# App.css	
JS App.js	M
JS App.test.js	M
JS constants.js	U
# index.css	
JS index.js	
📁 logo.svg	
JS serviceWorker.js	
⚙️ .eslintrc.json	U
📄 .gitignore	
{} package.json	M
📖 README.md	



Headers	Cookies	Params	Response	Timings	Stack Trace
Request URL: <code>http://localhost:8080/api/cars</code>					
Request method: GET					
Remote address: <code>127.0.0.1:8080</code>					
Status code: ● 200 ?	Edit and Resend		Raw headers		
Version: HTTP/1.1					
Filter headers					
Request Headers (701 B)					
?	Accept: */*				
?	Accept-Encoding: gzip, deflate				
?	Accept-Language: en-US,en;q=0.5				
?	authorization: Bearer eyJhbGciOiJIUzUxMiJ9.eyJ1b250aW50eX...				
	oO4Thw4dqw25B8LDUCG5aLNUJGdDQ				
?	Connection: keep-alive				
?	Host: localhost:8080				
?	origin: http://localhost:3000				
?	Referer: http://localhost:3000/				
?	User-Agent: Mozilla/5.0 (Windows NT 10.0; ...) Gecko/20100101				
	Firefox/60.0				




Chapter 15: Deploying Your Application





Create New App


App name

carbackend 

carbackend is available


Choose a region

 Europe 


 [Add to pipeline...](#)

Create app


Deployment method




Heroku Git
Use Heroku CLI



GitHub
Connect to GitHub



Dropbox
Connect to Dropbox



Container Registry
Use Heroku CLI

Deploy using Heroku Git

Use git in the command line or a GUI tool to deploy this app.

Install the Heroku CLI

Download and install the Heroku CLI.

If you haven't already, log in to your Heroku account and follow the prompts to create a new SSH public key.

```
$ heroku login
```

Create a new Git repository


Initialize a git repository in a new or existing directory

```
$ cd my-project/
$ git init
$ heroku git:remote -a carbackend
```

Connect to GitHub

Connect this app to GitHub to enable code diffs and deploys.


Search for a repository to connect to



↕

Search

Missing a GitHub organization? [Ensure Heroku Dashboard has team access.](#)



juhahinkula/carBackEnd


Connect

Automatic deploys

Enables a chosen branch to be automatically deployed to this app.

Enable automatic deploys from GitHub

Every push to the branch you specify here will deploy a new version of this app. **Deploys happen automatically**; be sure that this branch is always in a deployable state and any tests have passed before you push. [Learn more.](#)



Wait for CI to pass before deploy

Only enable this option if you have a Continuous Integration service configured on your repo.


Enable Automatic Deploys

Manual deploy

Deploy the current state of a branch to this app.

Deploy a GitHub branch

This will deploy the current state of the branch you specify below. [Learn more.](#)



Deploy Branch

Deploy a GitHub branch

This will deploy the current state of the branch you specify below. [Learn more.](#)

 master

Deploy Branch

Receive code from GitHub



Build master [Hide build log](#)



```
[INFO] -----  
-----> Discovering process types  
Procfile declares types    -> (none)  
Default types for buildpack -> web  
-----> Compressing...  
Done: 77.9M  
-----> Launching...  
Released v3  
https://carbackend.herokuapp.com/ deployed to Heroku
```

Build finished

[View build log](#)

Release phase



Deploy to Heroku



Your app was successfully deployed.

Overview Resources Deploy Metrics Activity Access Settings



Free Dynos [Upgrade to Hobby...](#)

Web Dyno Autoscaling: Available now for Performance web dynos and Private Spaces. [Hide](#) [Learn More](#)

web `java -Dserver.port=$PORT $JAVA_OPTS -jar target/cardatabase-0.0.1-SNAPSHOT.jar` \$0.00 [✎](#)

Add-ons [Find more add-ons](#)

Q JawsDB|

-  JawsDB MySQL
-  JawsDB Maria

Connection Info

Connection String

```
mysql://bdcpogfahcyf6fjb:ke68n28w6ka6ttvo@n7qmapts6baip9z.chr7pe7iynqr.eu-west-1.rds.amazonaws.com:3306/ebp6gq2544v5gcpc
```

You can use your connection information to connect manually through a client such as [HeidiSQL](#) to administer your database.

Property	Value
Host	n7qmapts6baip9z.chr7pe7iynqr.eu-west-1.rds.amazonaws.com
Username	bdcpogf ██████████
Password	ke68n28 ██████████
Port	3306
Database	ebp6gq2544v5gcpc

POST Params

Authorization Headers **Body** Pre-request Script Tests

form-data x-www-form-urlencoded raw binary

```
1 {"username":"admin", "password":"admin"}
```

Body Cookies (1) **Headers (14)** Test Results Status: 200 OK Time: 320 ms

Access-Control-Expose-Headers → Authorization

Authorization → Bearer eyJhbGciOiJIUzUxMiJ9.eyJzdWUiOiJhZG1pbilzImV4cCI6MTUyNzQxODcxOX0.rX7wvSb1KfV54-KBkLioMN0X1jy_aG4vtBKWCKohXB5TfKbsuPaGmi8Ww6s_NpXr5R0Z8vi0P4pTs5aUJHud2A

Cache-Control → no-cache, no-store, max-age=0, must-revalidate

Connection → keep-alive

Content-Length → 0

File Edit Search Tools Go to Help

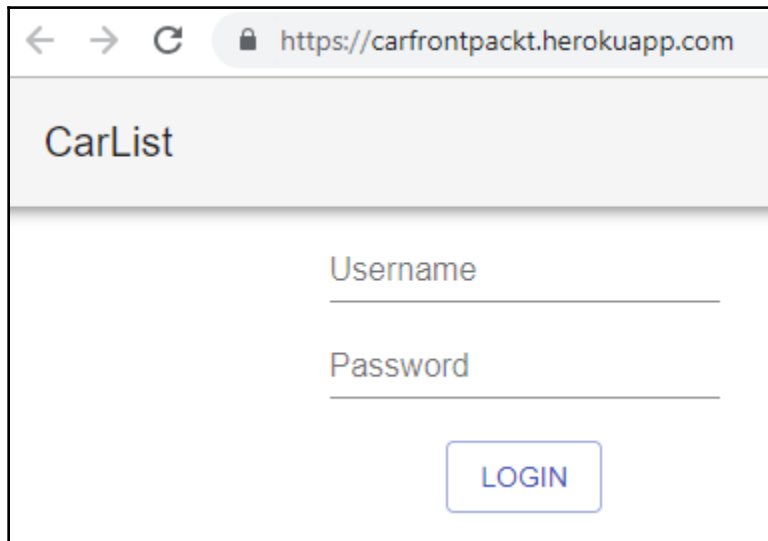
Database filter Table filter Host: n7qmptgs6baip9z.ch... Database: ebp6gq2544v5gcpc Query

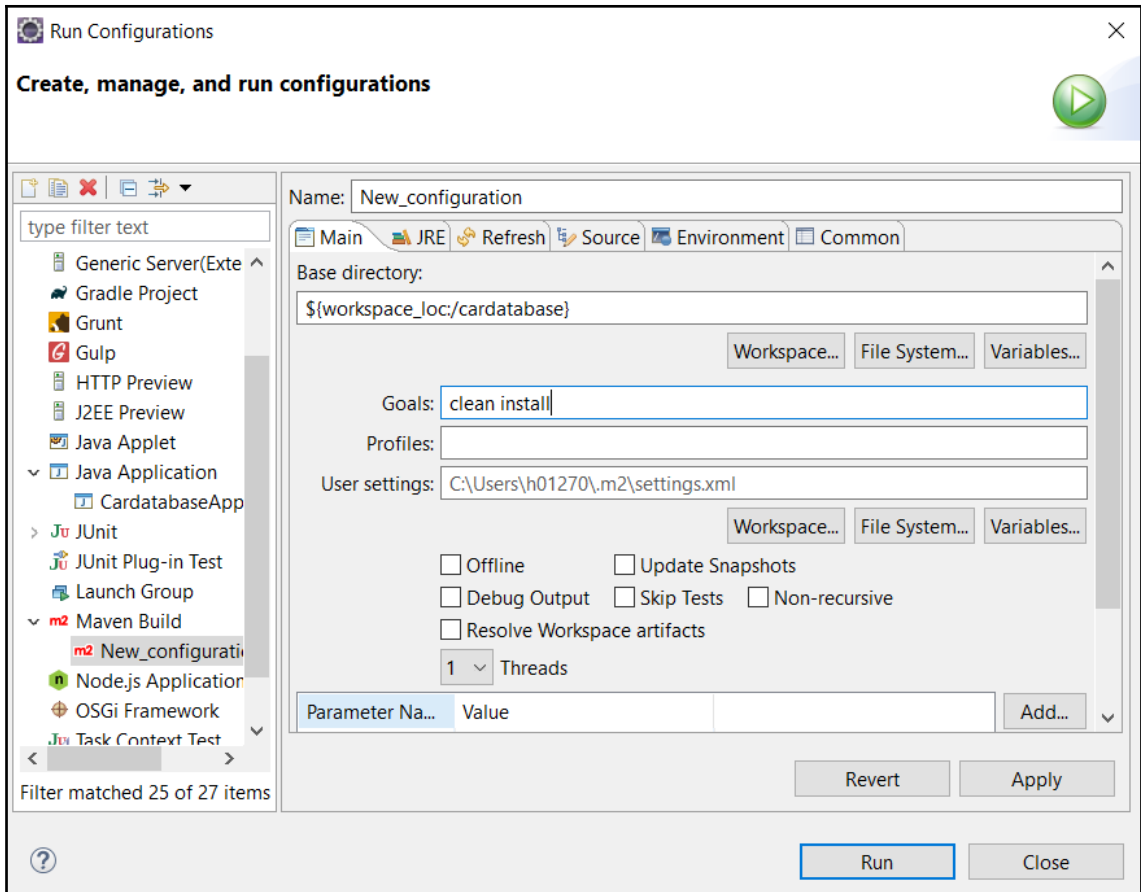
Name ^	Rows	Size	Created	Updated	Engine
car	0	1,0 KiB	2018-05-26 11:07:56	2018-05-26 11:07:56	MyISAM
hibernate_sequ...	2	1,0 KiB	2018-05-26 11:07:56	2018-05-26 11:07:56	MyISAM
owner	0	1,0 KiB	2018-05-26 11:07:56	2018-05-26 11:07:56	MyISAM
user	0	4,0 KiB	2018-05-26 11:07:56	2018-05-26 11:07:56	MyISAM


```

remote:
remote: The build folder is ready to be deployed.
remote: You may serve it with a static server:
remote:
remote:   yarn global add serve
remote:   serve -s build
remote:
remote: Find out more about deployment here:
remote:
remote:   http://bit.ly/2vY88Kr
remote:
remote: =====> Downloading Buildpack: https://github.com/heroku/heroku-buildpack-static.git
remote: =====> Detected Framework: Static HTML
remote:   % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
remote:                               Dload  Upload  Total  Spent  Left  Speed
remote: 100 838k 100 838k    0     0 5894k    0  ---:---  ---:---  ---:--- 5905k
remote: -----> Installed directory to /app/bin
remote: Using release configuration from last framework (Static HTML).
remote: -----> Discovering process types
remote:   Procfile declares types    -> (none)
remote:   Default types for buildpack -> web
remote:
remote: -----> Compressing...
remote:   Done: 47.6M
remote: -----> Launching...
remote:   Released v4
remote:   https://carfront.herokuapp.com/ deployed to Heroku
remote:
remote: Verifying deploy... done.
To https://git.heroku.com/carfront.git
   32a5ecd..4565486  master -> master

```





classes	21.4.2019 16:30	File folder
generated-sources	21.4.2019 16:30	File folder
generated-test-sources	21.4.2019 16:30	File folder
maven-archiver	21.4.2019 16:30	File folder
maven-status	21.4.2019 16:30	File folder
surefire-reports	21.4.2019 16:30	File folder
test-classes	21.4.2019 16:30	File folder
cardatabase-0.0.1-SNAPSHOT.jar	21.4.2019 16:31	Executable Jar File

```
s): 8080 (http) with context path ''
2018-05-27 12:48:34.234 INFO 1 --- [main] c.p.cardatabase.CardatabaseApplication : Started CardatabaseApplic
ation in 6.67 seconds (JVM running for 7.3)
Hibernate: select next_val as id_val from hibernate_sequence for update
Hibernate: update hibernate_sequence set next_val= ? where next_val=?
Hibernate: insert into owner (firstname, lastname, ownerid) values (?, ?, ?)
Hibernate: select next_val as id_val from hibernate_sequence for update
Hibernate: update hibernate_sequence set next_val= ? where next_val=?
Hibernate: insert into owner (firstname, lastname, ownerid) values (?, ?, ?)
Hibernate: select next_val as id_val from hibernate_sequence for update
Hibernate: update hibernate_sequence set next_val= ? where next_val=?
Hibernate: insert into car (brand, color, model, owner, price, register_number, year, id) values (?, ?, ?, ?, ?, ?, ?, ?
)
Hibernate: select next_val as id_val from hibernate_sequence for update
Hibernate: update hibernate_sequence set next_val= ? where next_val=?
Hibernate: insert into car (brand, color, model, owner, price, register_number, year, id) values (?, ?, ?, ?, ?, ?, ?, ?
)
Hibernate: select next_val as id_val from hibernate_sequence for update
Hibernate: update hibernate_sequence set next_val= ? where next_val=?
Hibernate: insert into car (brand, color, model, owner, price, register_number, year, id) values (?, ?, ?, ?, ?, ?, ?, ?
)
Hibernate: insert into user (password, role, username) values (?, ?, ?)
Hibernate: insert into user (password, role, username) values (?, ?, ?)
```

Chapter 16: Best Practices

No images