

# Assignment Delivery Note

Ajay Darshanala 27-Aug-20

**Assignment** – Build solution for maintaining customer details.

**About Document:** Describes the solution development and delivery high-level overview, below.

**1.1 Screen shots :** Swagger API Documentation, Spring boot startup console , postman - results , Junit results


**1.2 Framework and Technologies**

**1.3 Web Services Info**

**1.4 GIT hub repository path clone :** <https://github.com/ajaydarshanala/customerdata.git>

**1.1 Screen shots:** <http://localhost:8080/swagger-ui.html#/customer-data-controller>

localhost:8080/swagger-ui.html#/customer-data-controller

 **swagger**

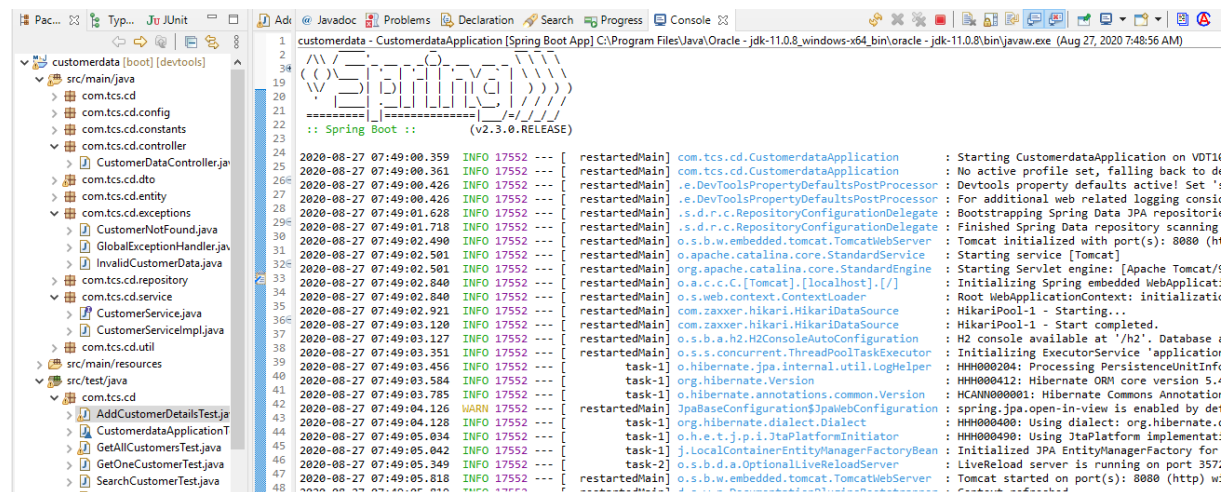
default (v2/api-docs) Explore

## Customer Data Service Test Assignment Ajay Darshanala

Service is to maintain customer data

**customer-data-controller : Customer Data Controller** Show/Hide List Operations Expand Operations

POST	/customerdetails/add	Add a new customer
GET	/customerdetails/all	Retrieve all customers
GET	/customerdetails/customer/{customerid}	Retrieve one customer by it's identifier
PUT	/customerdetails/customer/{customerid}/address	Update the living address
GET	/customerdetails/search	Search customers by first name and/or last name



The screenshot shows an IDE with the project structure on the left and the console output on the right. The project structure includes:

- customerdata [boot] [devtools]
  - src/main/java
    - com.tcs.cd
      - com.tcs.cd.config
      - com.tcs.cd.constants
      - com.tcs.cd.controller
        - CustomerDataController.java
      - com.tcs.cd.dto
      - com.tcs.cd.entity
        - CustomerNotFoundException.java
        - GlobalExceptionHandler.java
        - InvalidCustomerData.java
      - com.tcs.cd.repository
        - CustomerService.java
        - CustomerServiceImpl.java
      - com.tcs.cd.util
    - src/main/resources
    - com.tcs.cd

The console output shows the following logs:

```
2020-08-27 07:49:00.359 INFO 17552 --- [ restartedMain] com.tcs.cd.CustomerdataApplication : Starting CustomerdataApplication on VDT14
2020-08-27 07:49:00.361 INFO 17552 --- [ restartedMain] com.tcs.cd.CustomerdataApplication : No active profile set, falling back to de
2020-08-27 07:49:00.426 INFO 17552 --- [ restartedMain] .e.DevToolsPropertyDefaultsPostProcessor : Devtools property defaults active! Set '
2020-08-27 07:49:00.426 INFO 17552 --- [ restartedMain] .e.DevToolsPropertyDefaultsPostProcessor : For additional web related logging consi
2020-08-27 07:49:01.628 INFO 17552 --- [ restartedMain] .s.d.r.c.RepositoryConfigurationDelegate : Bootstrapping Spring Data JPA repositio
2020-08-27 07:49:01.718 INFO 17552 --- [ restartedMain] .s.d.r.c.RepositoryConfigurationDelegate : Finished Spring Data repository scanning
2020-08-27 07:49:02.490 INFO 17552 --- [ restartedMain] o.apache.catalina.core.StandardService : Tomcat initialized with port(s): 8080 (ht
2020-08-27 07:49:02.501 INFO 17552 --- [ restartedMain] org.apache.catalina.core.StandardEngine : Starting service [Tomcat]
2020-08-27 07:49:02.501 INFO 17552 --- [ restartedMain] org.apache.catalina.core.StandardEngine : Starting Servlet engine: [Apache Tomcat/
2020-08-27 07:49:02.840 INFO 17552 --- [ restartedMain] o.a.c.c.C.[Tomcat].[localhost].[/] : Initializing Spring embedded Webapplicat
2020-08-27 07:49:02.840 INFO 17552 --- [ restartedMain] o.s.web.context.ContextLoader : Root WebApplicationContext: initializati
2020-08-27 07:49:02.921 INFO 17552 --- [ restartedMain] com.zaxxer.hikari.HikariDataSource : HikariPool-1 - Starting...
2020-08-27 07:49:03.120 INFO 17552 --- [ restartedMain] com.zaxxer.hikari.HikariDataSource : HikariPool-1 - Start completed.
2020-08-27 07:49:03.127 INFO 17552 --- [ restartedMain] o.s.b.a.h2.H2ConsoleAutoConfiguration : H2 console available at '/h2'. Database
2020-08-27 07:49:03.351 INFO 17552 --- [ restartedMain] o.s.s.concurrent.ThreadPoolTaskExecutor : Initializing ExecutorService 'applicati
2020-08-27 07:49:03.456 INFO 17552 --- [ task-1] o.hibernate.jpa.internal.util.LogHelper : HH0000204: Processing PersistenceUnitInfi
2020-08-27 07:49:03.584 INFO 17552 --- [ task-1] o.hibernate.Version : HHH0000412: Hibernate ORM core version 5.4
2020-08-27 07:49:03.785 INFO 17552 --- [ task-1] o.hibernate.annotations.common.Version : HCANN000001: Hibernate Commons Annotati
2020-08-27 07:49:04.126 WARN 17552 --- [ restartedMain] jpaBaseConfiguration$JpaWebConfiguration : spring.jpa.open-in-view is enabled by def
2020-08-27 07:49:04.128 INFO 17552 --- [ task-1] o.hibernate.dialect.Dialect : HHH000400: Using dialect: org.hibernate.c
2020-08-27 07:49:05.034 INFO 17552 --- [ task-1] o.h.e.t.j.p.i.JtaPlatformInitiator : HHH000490: Using JtaPlatform implementat
2020-08-27 07:49:05.042 INFO 17552 --- [ task-1] j.LocalContainerEntityManagerFactoryBean : Initialized JPA EntityManagerFactory for
2020-08-27 07:49:05.349 INFO 17552 --- [ task-2] o.s.b.d.a.OptionalLiveReloadServer : LiveReload server is running on port 357
2020-08-27 07:49:05.818 INFO 17552 --- [ restartedMain] o.s.b.w.e.tomcat.TomcatWebServer : Tomcat started on port(s): 8080 (http) w
```

► Add customerdata

POST

localhost:8080/customerdetails/add

Params

Authorization

Headers (9)

Body

Pre-request Script

Tests

Settings

☐ none

☐ form-data

☐ x-www-form-urlencoded

☒ raw

☐ binary

☐ GraphQL

JSON

```
1 {
2   "firstname": "JAMES",
3   "lastname": "SMITH",
4   "age": 30,
5   "address": {
6     "houzenumber": "60-M",
7     "street": "KERKLAAN",
8     "postcode": "1011KB",
9     "city": "AMSTERDAM"
10  }
11 }
```

Body

Cookies

Headers (5)

Test Results

Status: 200 OK

Pretty

Raw

Preview

Visualize

JSON

```
1 {
2   "customerid": 1006,
3   "firstname": "JAMES",
4   "lastname": "SMITH",
5   "age": 30,
6   "address": {
7     "houzenumber": "60-M",
```

► Retrieve one customer by it's identifier

GET

localhost:8080/customerdetails/customer/1006

Params

Authorization

Headers (7)

Body

Pre-request Script

Tests

Settings

Body

Cookies

Headers (5)

Test Results

Status: 200 OK

Pretty

Raw

Preview

Visualize

JSON

```
1 {
2   "customerid": 1006,
3   "firstname": "JAMES",
4   "lastname": "SMITH",
5   "age": 30,
6   "address": {
7     "houzenumber": "60-M",
8     "street": "KERKLAAN",
9     "postcode": "1011KB",
10    "city": "AMSTERDAM"
11  }
12 }
```

► Retrive All Customers

GET localhost:8080/customerdetails/all

Params Authorization Headers (7) Body Pre-request Script Tests Settings

Body Cookies Headers (5) Test Results

Status: 200 OK

Pretty Raw Preview Visualize

JSON



```
1 [
2   {
3     "customerid": 1001,
4     "firstname": "STEFAN",
5     "lastname": "ALEX",
6     "age": 25,
7     "address": {
8       "housenumber": "11H",
9       "street": "SIRW",
10      "postcode": "2516AA",
11      "city": "DENHAAG"
12    }
13  },
14  {
15    "customerid": 1002,
16    "firstname": "RENE",
17    "lastname": "KARGH",
```

► findByName

GET localhost:8080/customerdetails/search?firstname=JAMES&&lastname=SMITH

Params Authorization Headers (7) Body Pre-request Script Tests Settings

Body Cookies Headers (5) Test Results

Status: 200 OK

Pretty Raw Preview Visualize

JSON



```
1 [
2   {
3     "customerid": 1006,
4     "firstname": "JAMES",
5     "lastname": "SMITH",
6     "age": 30,
7     "address": {
8       "housenumber": "60-M",
9       "street": "KERKLAAN",
10      "postcode": "1011KB",
11      "city": "AMSTERDAM"
12    }
13  }
14 ]
```


► updateaddress


PUT localhost:8080/customerdetails/customer/1006/address

Params Authorization Headers (9) **Body** Pre-request Script Tests Settings

none form-data x-www-form-urlencoded **raw** binary GraphQL JSON ▼

```
1 {
2   "houseNumber": "70-M",
3   "street": "BLAAK",
4   "postcode": "2011KB",
5   "city": "ROTTERDAM"
6 }
```

Body Cookies Headers (5) Test Results  Status: 200 OK

Pretty Raw Preview Visualize JSON ▼ 

```
1 {
2   "customerId": 1006,
3   "firstName": "JAMES",
4   "lastName": "SMITH",
5   "age": 30,
6   "address": {
7     "houseNumber": "70-M",
8     "street": "BLAAK",
9     "postcode": "2011KB",
10    "city": "ROTTERDAM"
11  }
12 }
```


## Unit Test cases :

Package Ex... Type Hierar... JUnit

Finished after 12.941 seconds

Runs: 19/19 Errors: 0 Failures: 0

- ▼ AddCustomerDetailsTest [Runner: JUnit 5] (0.341 s)
  - ageCannotBeZero (0.276 s)
  - addressCannotBeNull (0.004 s)
  - firstNameLastNameBothCannotBeNull (0.061 s)
- ▼ GetAllCustomersTest [Runner: JUnit 5] (0.238 s)
  - whenCustomerDataExist (0.217 s)
  - whenNOCustomerDataExist (0.021 s)
- > UpdateCustomerTest [Runner: JUnit 5] (0.292 s)
- ▼ GetOneCustomerTest [Runner: JUnit 5] (0.087 s)
  - whenCustomerIdNotExist (0.016 s)
  - whenCustomerIdEmptyOrWhitespace (0.004 s)
  - whenCustomerIdExist (0.023 s)
  - whenCustomerIdNumberOnly (0.043 s)
- ▼ SearchCustomerTest [Runner: JUnit 5] (0.163 s)
  - searchWithFirstNamesAsBlank (0.042 s)
  - searchWithNullNames (0.007 s)
  - whenBothNamesareValid (0.110 s)
  - searchWithLastNamesAsBlank (0.004 s)

Failure Trace 

## **1.2 Framework and Technologies:**

- SpringBoot version 2.3.0 , Java11, Spring data jpa, DevTools
- In memory H2 database and console enabled (path : /h2)
- Spring REST API validations, Spring Exception handling
- On application bootstrap , test data load using data.sql
- Junit test cases, Application properties Yaml
- Java - Optional, Lambda functions, foreach Iterable
- JavaX Persistence - JPQL ,Criteria builder, , Entity manager

## **1.3 Web Services Info:**

- Webservice – RESTful, Request, Response payload : JSON Format
- Path Variables, Query Parameters
- HTTP Methods : GET, POST, PUT. HTTP Status codes : 2XX, 4XX, 5XX

## **1.4 GIT hub repository path clone : <https://github.com/ajaydarshanala/customerdata.git>**