Git link https://github.com/mdazaz/capastone-medicare

MEDICARE

A FULL STACK DEVELOPMENT CAPSTONE PROJECT

MOHAMMAD AZAZ

Internal Use - Confidential

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- PROJECT MANAGEMENT -JIRA STORIES
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- TESTING AND DEVOPS USING JENKINS.
- PROJECT SCREENS

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TECHNOLOGIES USED

CATEGORY	TECHONOLOGY
FRONTEND. + PROJECT MANAGEMENT	HTML 5, CSS 3
	BOOTSTRAP 4
	ANGULAR
	JIRA
BACKEND	Java Programming, JPA, Spring Boot, LOMBOK
EDITOR, TESTING & DevOps	IntelliJ, Eclipse
	Selenium, TestNG, Jenkins, GitHub, Docker

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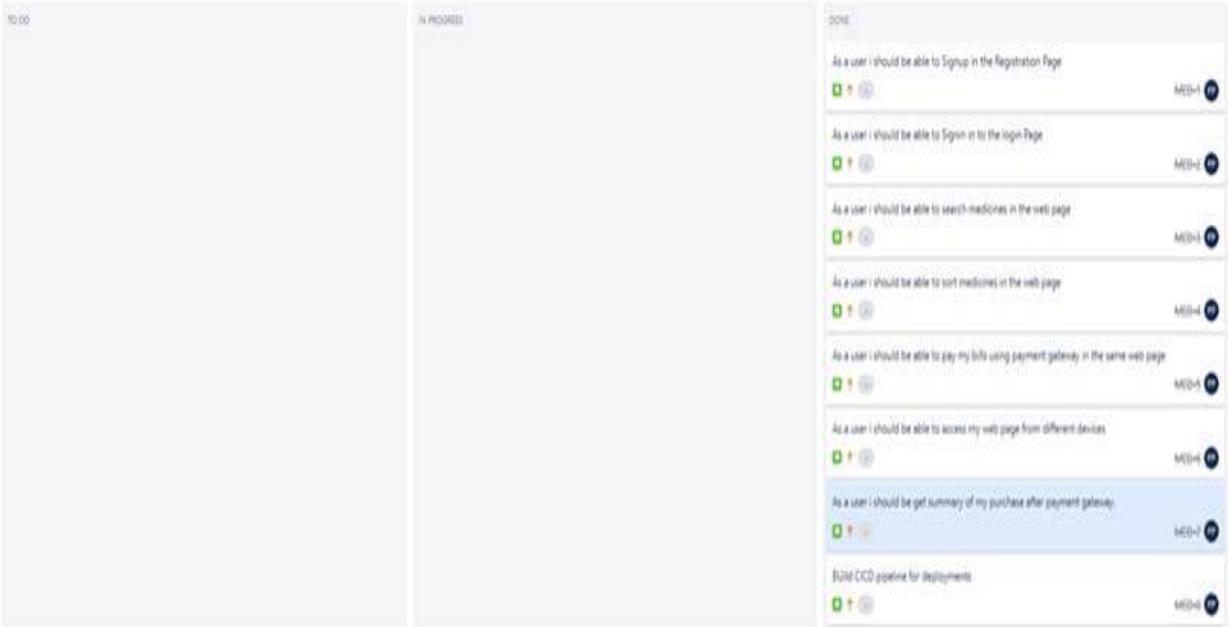
PROJECT MANAGEMENT JIRA STORIES

Sprint User stories:

Active Sprint:



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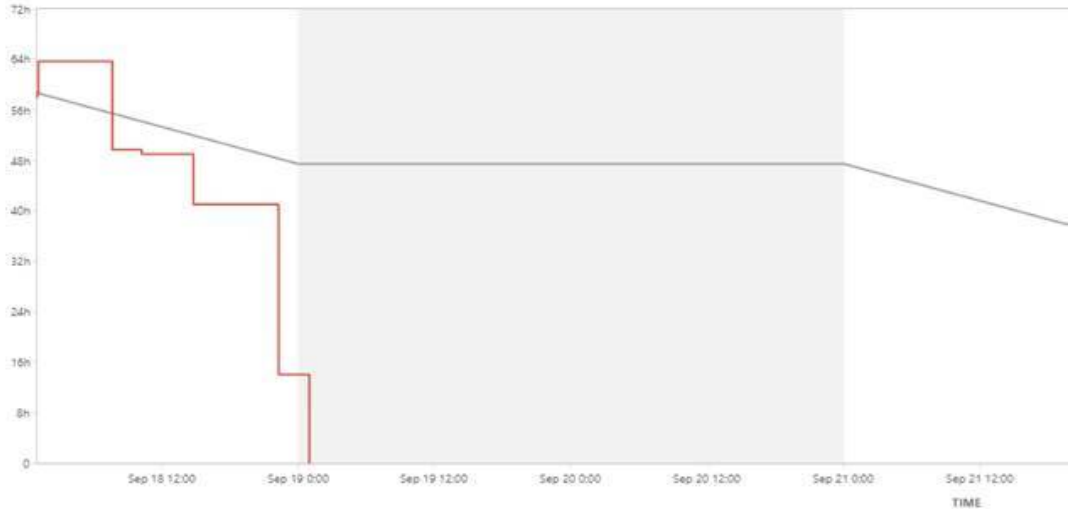
Burn-Down Chart:



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DATABASE DESIGN AND SETUP

Create: User:

- User name: ecommerceapp
- Password: ecommerceapp

```sql
CREATE USER 'ecommerceapp'@'localhost' IDENTIFIED BY 'ecommerceapp';

GRANT ALL PRIVILEGES ON * . * TO 'ecommerceapp'@'localhost';

#
# Starting with MySQL 8.0.4, the MySQL team changed the
# default authentication plugin for MySQL server
# from mysql_native_password to caching_sha2_password.
#
# The command below will make the appropriate updates for your user account.
#
# See the MySQL Reference Manual for details:
# https://dev.mysql.com/doc/refman/8.0/en/caching-sha2-pluggable-authentication.html
#
ALTER USER 'ecommerceapp'@'localhost' IDENTIFIED WITH mysql_native_password BY 'ecommerceapp';
```


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Create DB and Table

```sql
-- -----------------------------------------------------
-- Schema full-stack-ecommerce
-- -----------------------------------------------------
DROP SCHEMA IF EXISTS `full-stack-ecommerce`;

CREATE SCHEMA `full-stack-ecommerce`;
USE `full-stack-ecommerce` ;

-- -----------------------------------------------------
-- Table `full-stack-ecommerce`.`product_category`
-- -----------------------------------------------------
CREATE TABLE IF NOT EXISTS `full-stack-ecommerce`.`product_category` (
  `id` BIGINT(20) NOT NULL AUTO_INCREMENT,
  `category_name` VARCHAR(255) NULL DEFAULT NULL,
  PRIMARY KEY (`id`))
ENGINE=InnoDB
AUTO_INCREMENT = 1;
```


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```sql
-- ----------------------------------------------------
-- Table `full-stack-ecommerce`.`product`
-- ----------------------------------------------------
CREATE TABLE IF NOT EXISTS `full-stack-ecommerce`.`product` (
  `id` BIGINT(20) NOT NULL AUTO_INCREMENT,
  `sku` VARCHAR(255) DEFAULT NULL,
  `name` VARCHAR(255) DEFAULT NULL,
  `description` VARCHAR(255) DEFAULT NULL,
  `unit_price` DECIMAL(13,2) DEFAULT NULL,
  `image_url` VARCHAR(255) DEFAULT NULL,
  `active` BIT DEFAULT 1,
  `units_in_stock` INT(11) DEFAULT NULL,
  `date_created` DATETIME(6) DEFAULT NULL,
  `last_updated` DATETIME(6) DEFAULT NULL,
  `category_id` BIGINT(20) NOT NULL,
  PRIMARY KEY (`id`),
  KEY `fk_category` (`category_id`),
  CONSTRAINT `fk_category` FOREIGN KEY (`category_id`) REFERENCES `product_category` (`id`)
)
ENGINE=InnoDB
AUTO_INCREMENT = 1;

-- ----------------------------------------------------
-- Categories
-- ----------------------------------------------------
INSERT INTO PRODUCT_CATEGORY(CATEGORY_NAME) VALUES ('Pills');
INSERT INTO PRODUCT_CATEGORY(CATEGORY_NAME) VALUES ('Syrups');
```

Add some Dummy Data

```sql
-- ----------------------------------------------------
-- Pills
-- ----------------------------------------------------
INSERT INTO PRODUCT (SKU, NAME, DESCRIPTION, IMAGE_URL, ACTIVE, UNITS_IN_STOCK, UNIT_PRICE, CATEGORY_ID,DATE_CREATED) VALUES ('Pill-1000', 'Ibu
INSERT INTO PRODUCT (SKU, NAME, DESCRIPTION, IMAGE_URL, ACTIVE, UNITS_IN_STOCK, UNIT_PRICE, CATEGORY_ID,DATE_CREATED) VALUES ('Pill-1001', 'Dipl
INSERT INTO PRODUCT (SKU, NAME, DESCRIPTION, IMAGE_URL, ACTIVE, UNITS_IN_STOCK, UNIT_PRICE, CATEGORY_ID,DATE_CREATED) VALUES ('Pill-1002', 'Phe
INSERT INTO PRODUCT (SKU, NAME, DESCRIPTION, IMAGE_URL, ACTIVE, UNITS_IN_STOCK, UNIT_PRICE, CATEGORY_ID,DATE_CREATED) VALUES ('Pill-1003', 'Ibu
INSERT INTO PRODUCT (SKU, NAME, DESCRIPTION, IMAGE_URL, ACTIVE, UNITS_IN_STOCK, UNIT_PRICE, CATEGORY_ID,DATE_CREATED) VALUES ('Pill-1004', 'Dex
INSERT INTO PRODUCT (SKU, NAME, DESCRIPTION, IMAGE_URL, ACTIVE, UNITS_IN_STOCK, UNIT_PRICE, CATEGORY_ID,DATE_CREATED) VALUES ('Pill-1005', 'Ace

-- ----------------------------------------------------
-- Syrups
-- ----------------------------------------------------
INSERT INTO PRODUCT (SKU, NAME, DESCRIPTION, IMAGE_URL, ACTIVE, UNITS_IN_STOCK, UNIT_PRICE, CATEGORY_ID,DATE_CREATED) VALUES ('Syrups-1000', 'M
INSERT INTO PRODUCT (SKU, NAME, DESCRIPTION, IMAGE_URL, ACTIVE, UNITS_IN_STOCK, UNIT_PRICE, CATEGORY_ID,DATE_CREATED) VALUES ('Syrups-1001', 'N
INSERT INTO PRODUCT (SKU, NAME, DESCRIPTION, IMAGE_URL, ACTIVE, UNITS_IN_STOCK, UNIT_PRICE, CATEGORY_ID,DATE_CREATED) VALUES ('Syrups-1002', 'R
INSERT INTO PRODUCT (SKU, NAME, DESCRIPTION, IMAGE_URL, ACTIVE, UNITS_IN_STOCK, UNIT_PRICE, CATEGORY_ID,DATE_CREATED) VALUES ('Syrups-1003', 'L
INSERT INTO PRODUCT (SKU, NAME, DESCRIPTION, IMAGE_URL, ACTIVE, UNITS_IN_STOCK, UNIT_PRICE, CATEGORY_ID,DATE_CREATED) VALUES ('Syrups-1004', 'H
INSERT INTO PRODUCT (SKU, NAME, DESCRIPTION, IMAGE_URL, ACTIVE, UNITS_IN_STOCK, UNIT_PRICE, CATEGORY_ID,DATE_CREATED) VALUES ('Syrups-1005', 'T
```


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Data Result Set

```
SELECT * FROM `full-stack-ecommerce`.product;
```

Result Grid

id	sku	name	description	unit_price	image_url	active	units_in_stock	date_created
1	Pill-1000	Ibuprofen	This tablet can be used for Sinus headache	14.99	assets/images/products/pills/pill1.png	1	100	2020-09-10 17:31:48.
2	Pill-1001	Diphenhydramine	This tablet can be used for Sinus Runny nose	20.99	assets/images/products/pills/pill2.png	1	100	2020-09-10 17:31:48.
3	Pill-1002	Phenylephrine	This tablet can be used for Stuffy nose	14.99	assets/images/products/pills/pill3.png	1	100	2020-09-10 17:31:48.
4	Pill-1003	Ibuprofen	This tablet can be used for Fever and aches	13.99	assets/images/products/pills/pill4.png	1	100	2020-09-10 17:31:48.
5	Pill-1004	Dextromethorphan	This tablet can be used for Sore throat and cou...	18.99	assets/images/products/pills/pill5.png	1	100	2020-09-10 17:31:48.
6	Pill-1005	Acetaminophen	This tablet can be used for body pains	23.99	assets/images/products/pills/pill6.png	1	100	2020-09-10 17:31:48.
7	Syrups-1000	Maple Syrup	Syrup for Medicinal Purposes	18.99	assets/images/products/syrups/syrup1.png	1	100	2020-09-10 17:31:48.
8	Syrups-1001	Neuromack Syrup	Syrup for Medicinal Purposes	18.99	assets/images/products/syrups/syrup2.png	1	100	2020-09-10 17:31:48.
9	Syrups-1002	Ranitis Syrup	Syrup for Medicinal Purposes	18.99	assets/images/products/syrups/syrup3.png	1	100	2020-09-10 17:31:48.
10	Syrups-1003	Lacsyp	Syrup for Medicinal Purposes	18.99	assets/images/products/Syrups/syrup4.png	1	100	2020-09-10 17:31:48.
11	Syrups-1004	Hhcepo 50	Syrup for Medicinal Purposes	18.99	assets/images/products/syrups/syrup5.png	1	100	2020-09-10 17:31:48.
12	Syrups-1005	Torque Ticeph	Syrup for Medicinal Purposes	18.99	assets/images/products/syrups/syrup6.png	1	100	2020-09-10 17:31:48.
NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

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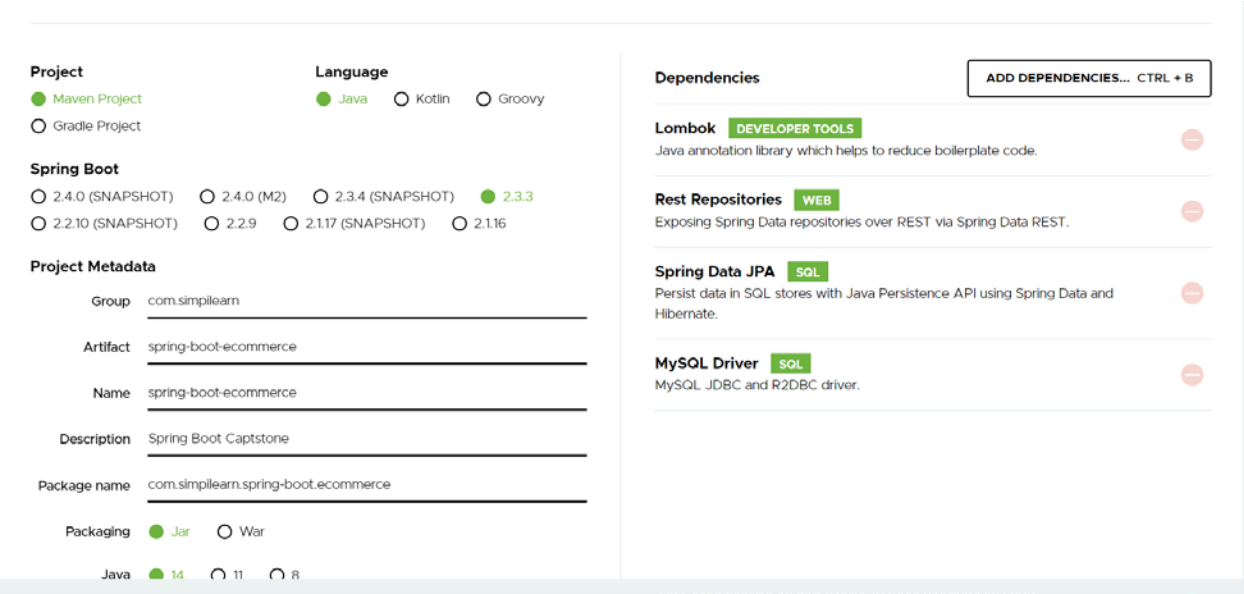
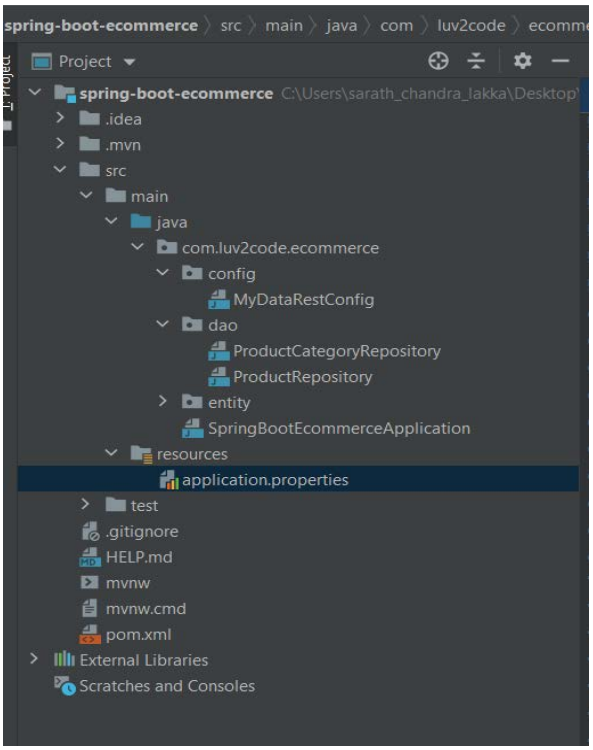
BACKEND REST API DEVELOPMENT

SPRING STARTER



Spring Project Structure



Internal Use - Confidential

Product Entity

```java
package com.luv2code.ecommerce.config;

import com.luv2code.ecommerce.entity.Product;
import com.luv2code.ecommerce.entity.ProductCategory;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.context.annotation.Configuration;
import org.springframework.data.rest.core.config.RepositoryRestConfiguration;
import org.springframework.data.rest.webmvc.config.RepositoryRestConfigurer;
import org.springframework.http.HttpMethod;

import javax.persistence.EntityManager;
import javax.persistence.metamodel.EntityType;
import java.util.ArrayList;
import java.util.List;
import java.util.Set;

@Configuration
public class MyDataRestConfig implements RepositoryRestConfigurer {

    private EntityManager entityManager;

    @Autowired
    public MyDataRestConfig(EntityManager theEntityManager) { entityManager = theEntityManager; }


    @Override
    public void configureRepositoryRestConfiguration(RepositoryRestConfiguration config) {

        HttpMethod[] theUnsupportedActions = {HttpMethod.PUT, HttpMethod.POST, HttpMethod.DELETE};
```


Internal Use - Confidential

```java
@Override
public void configureRepositoryRestConfiguration(RepositoryRestConfiguration config) {

    HttpMethod[] theUnsupportedActions = {HttpMethod.PUT, HttpMethod.POST, HttpMethod.DELETE};

    // disable HTTP methods for Product: PUT, POST and DELETE
    config.getExposureConfiguration()
            .forDomainType(Product.class)
            .withItemExposure((metdata, httpMethods) -> httpMethods.disable(theUnsupportedActions))
            .withCollectionExposure((metdata, httpMethods) -> httpMethods.disable(theUnsupportedActions));

    // disable HTTP methods for ProductCategory: PUT, POST and DELETE
    config.getExposureConfiguration()
            .forDomainType(ProductCategory.class)
            .withItemExposure((metdata, httpMethods) -> httpMethods.disable(theUnsupportedActions))
            .withCollectionExposure((metdata, httpMethods) -> httpMethods.disable(theUnsupportedActions));

    // call an internal helper method
    exposeIds(config);
}
```

```java
    private void exposeIds(RepositoryRestConfiguration config) {

        // expose entity ids
        //

        // - get a list of all entity classes from the entity manager
        Set<EntityType<?>> entities = entityManager.getMetamodel().getEntities();

        // - create an array of the entity types
        List<Class> entityClasses = new ArrayList<>();

        // - get the entity types for the entities
        for (EntityType tempEntityType : entities) {
            entityClasses.add(tempEntityType.getJavaType());
        }

        // - expose the entity ids for the array of entity/domain types
        Class[] domainTypes = entityClasses.toArray(new Class[0]);
        config.exposeIdsFor(domainTypes);
    }
}
```


Internal Use - Confidential

Product Category Entity

Product.java ProductCategory.java

JDK "13" is missing

```java
package com.luv2code.ecommerce.entity;

import lombok.Getter;
import lombok.Setter;

import javax.persistence.*;
import java.util.Set;

@Entity
@Table(name="product_category")
// @Data -- known bug
@Getter
@Setter
public class ProductCategory {

    @Id
    @GeneratedValue(strategy = GenerationType.IDENTITY)
    @Column(name = "id")
    private Long id;

    @Column(name = "category_name")
    private String categoryName;

    @OneToMany(cascade = CascadeType.ALL, mappedBy = "category")
    private Set<Product> products;

```


Internal Use - Confidential

Product Repository

```
package com.luv2code.ecommerce.dao;

import ...

@CrossOrigin("http://localhost:4200")
public interface ProductRepository extends JpaRepository<Product, Long> {

    Page<Product> findByCategoryId(@RequestParam("id") Long id, Pageable pageable);

}
```

Product Category Repository

```
package com.luv2code.ecommerce.dao;

import ...

@CrossOrigin("http://localhost:4200")
@RepositoryRestResource(collectionResourceRel = "productCategory", path = "product-category")
public interface ProductCategoryRepository extends JpaRepository<ProductCategory, Long> {
}
```


Internal Use - Confidential

RestConfig

```java
package com.luv2code.ecommerce.config;

import com.luv2code.ecommerce.entity.Product;
import com.luv2code.ecommerce.entity.ProductCategory;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.context.annotation.Configuration;
import org.springframework.data.rest.core.config.RepositoryRestConfiguration;
import org.springframework.data.rest.webmvc.config.RepositoryRestConfigurer;
import org.springframework.http.HttpMethod;

import javax.persistence.EntityManager;
import javax.persistence.metamodel.EntityType;
import java.util.ArrayList;
import java.util.List;
import java.util.Set;

@Configuration
public class MyDataRestConfig implements RepositoryRestConfigurer {

    private EntityManager entityManager;

    @Autowired
    public MyDataRestConfig(EntityManager theEntityManager) { entityManager = theEntityManager; }
```

```java
    @Override
    public void configureRepositoryRestConfiguration(RepositoryRestConfiguration config) {

        HttpMethod[] theUnsupportedActions = {HttpMethod.PUT, HttpMethod.POST, HttpMethod.DELETE};

        // disable HTTP methods for Product: PUT, POST and DELETE
        config.getExposureConfiguration()
                .forDomainType(Product.class)
                .withItemExposure((metdata, httpMethods) -> httpMethods.disable(theUnsupportedActions))
                .withCollectionExposure((metdata, httpMethods) -> httpMethods.disable(theUnsupportedActions));

        // disable HTTP methods for ProductCategory: PUT, POST and DELETE
        config.getExposureConfiguration()
                .forDomainType(ProductCategory.class)
                .withItemExposure((metdata, httpMethods) -> httpMethods.disable(theUnsupportedActions))
                .withCollectionExposure((metdata, httpMethods) -> httpMethods.disable(theUnsupportedActions));

        // call an internal helper method
        exposeIds(config);
    }

    private void exposeIds(RepositoryRestConfiguration config) {

        // expose entity ids
        //

        // - get a list of all entity classes from the entity manager
        Set<EntityType<?>> entities = entityManager.getMetamodel().getEntities();

        // - create an array of the entity types
        List<Class> entityClasses = new ArrayList<>();
```


Internal Use - Confidential

```java
        // - get a list of all entity classes from the entity manager
        Set<EntityType<?>> entities = entityManager.getMetamodel().getEntities();

        // - create an array of the entity types
        List<Class> entityClasses = new ArrayList<>();

        // - get the entity types for the entities
        for (EntityType tempEntityType : entities) {
            entityClasses.add(tempEntityType.getJavaType());
        }

        // - expose the entity ids for the array of entity/domain types
        Class[] domainTypes = entityClasses.toArray(new Class[0]);
        config.exposeIdsFor(domainTypes);
    }
}
```


Internal Use - Confidential

POM_XML

pom.xml (spring-boot-ecommerce)

```xml
<?xml version="1.0" encoding="UTF-8"?>
<project xmlns="http://maven.apache.org/POM/4.0.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xsi:schemaLocation="http://maven.apache.org/POM/4.0.0 https://maven.apache.org/xsd/maven-4.0.0.xsd">
    <modelVersion>4.0.0</modelVersion>
    <parent>
        <groupId>org.springframework.boot</groupId>
        <artifactId>spring-boot-starter-parent</artifactId>
        <version>2.2.1.RELEASE</version>
        <relativePath/> <!-- lookup parent from repository -->
    </parent>
    <groupId>com.luv2code</groupId>
    <artifactId>spring-boot-ecommerce</artifactId>
    <version>0.0.1-SNAPSHOT</version>
    <name>spring-boot-ecommerce</name>
    <description>Spring Boot Ecommerce Project</description>

    <properties>
        <java.version>13</java.version>
    </properties>
```

pom.xml (spring-boot-ecommerce)

```xml
    <dependencies>
        <dependency>
            <groupId>org.springframework.boot</groupId>
            <artifactId>spring-boot-starter-data-jpa</artifactId>
        </dependency>
        <dependency>
            <groupId>org.springframework.boot</groupId>
            <artifactId>spring-boot-starter-data-rest</artifactId>
        </dependency>

        <dependency>
            <groupId>mysql</groupId>
            <artifactId>mysql-connector-java</artifactId>
            <scope>runtime</scope>
        </dependency>
        <dependency>
            <groupId>org.projectlombok</groupId>
            <artifactId>lombok</artifactId>
            <optional>true</optional>
        </dependency>
        <dependency>
            <groupId>org.springframework.boot</groupId>
            <artifactId>spring-boot-starter-test</artifactId>
            <scope>test</scope>
            <exclusions>
                <exclusion>
                    <groupId>org.junit.vintage</groupId>
                    <artifactId>junit-vintage-engine</artifactId>
                </exclusion>
            </exclusions>
        </dependency>
    </dependencies>
```

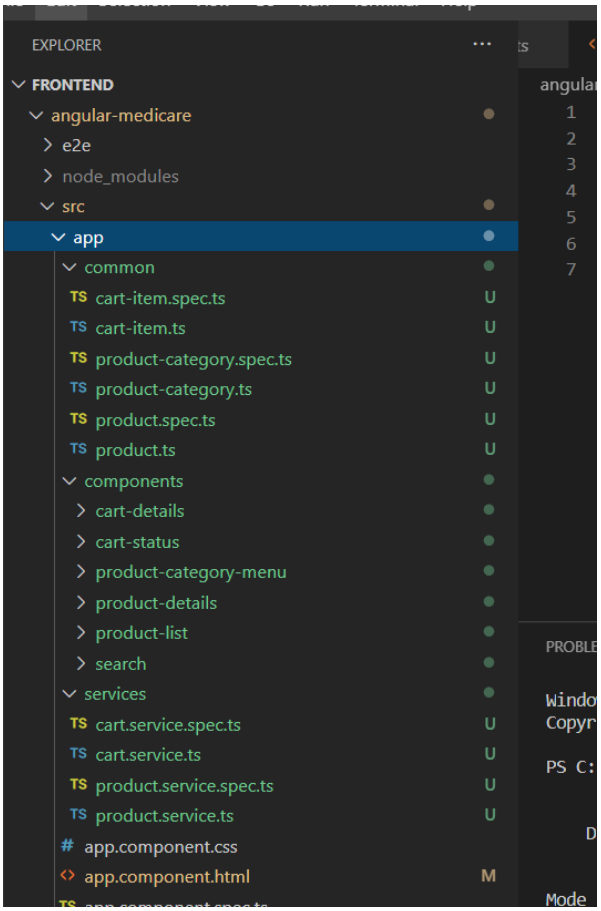

Internal Use - Confidential

```
54      <build>
55          <plugins>
56              <plugin>
57                  <groupId>org.springframework.boot</groupId>
58                  <artifactId>spring-boot-maven-plugin</artifactId>
59              </plugin>
60          </plugins>
61      </build>
62
63  </project>
64
```


Internal Use - Confidential

FRONEND DEVELOPMENT

Angular Frontend Structure



Internal Use - Confidential

AppModule:

```
TS app.module.ts ×
angular-medicare > src > app > TS app.module.ts > AppModule
import { BrowserModule } from '@angular/platform-browser';
import { NgModule } from '@angular/core';

import { AppComponent } from './app.component';
import { ProductListComponent } from './components/product-list/product-list.component';
import { HttpClientModule } from '@angular/common/http';
import { ProductService } from './services/product.service';
import { Routes, RouterModule } from '@angular/router';
import { ProductCategoryMenuComponent } from './components/product-category-menu/product-category-menu.component';
import { SearchComponent } from './components/search/search.component';
import { ProductDetailsComponent } from './components/product-details/product-details.component';

import { NgbModule } from '@ng-bootstrap/ng-bootstrap';
import { CartStatusComponent } from './components/cart-status/cart-status.component';
import { CartDetailsComponent } from './components/cart-details/cart-details.component';
import { CheckoutComponent } from './components/checkout/checkout.component';
import { ReactiveFormsModule } from '@angular/forms';

const routes: Routes = [
  { path: 'checkout', component: CheckoutComponent },
  { path: 'cart-details', component: CartDetailsComponent },
  { path: 'products/:id', component: ProductDetailsComponent },
  { path: 'search/:keyword', component: ProductListComponent },
  { path: 'category/:id', component: ProductListComponent },
  { path: 'category', component: ProductListComponent },
  { path: 'products', component: ProductListComponent },
  { path: '', redirectTo: '/products', pathMatch: 'full' },
  { path: '**', redirectTo: '/products', pathMatch: 'full' },
```

```
TS app.module.ts ×
angular-medicare > src > app > TS app.module.ts > AppModule
  { path: '', redirectTo: '/products', pathMatch: 'full' },
  { path: '**', redirectTo: '/products', pathMatch: 'full' },
];

@NgModule({
  declarations: [
    AppComponent,
    ProductListComponent,
    ProductCategoryMenuComponent,
    SearchComponent,
    ProductDetailsComponent,
    CartStatusComponent,
    CartDetailsComponent,
    CheckoutComponent,
  ],
  imports: [
    RouterModule.forRoot(routes),
    BrowserModule,
    HttpClientModule,
    NgbModule,
    ReactiveFormsModule,
  ],
  providers: [ProductService],
  bootstrap: [AppComponent],
})
export class AppModule {}
```


Internal Use - Confidential

AppComponent.html

app.component.html

angular-medicare > src > app > app.component.html > div.page-wrapper > div.page-container > header.header-desktop

```html
<!-- MENU SIDEBAR-->
<div class="page-wrapper">
  <aside class="menu-sidebar d-none d-lg-block">
    <div class="logo">
      <a routerLink="/products">
        <img src="assets/images/logo.png" alt="luv2shop" class="img-responsive">
      </a>
    </div>
    <app-product-category-menu></app-product-category-menu>

  </aside>
  <!-- END MENU SIDEBAR-->


  <!-- PAGE CONTAINER-->
  <div class="page-container">
    <!-- HEADER DESKTOP-->
    <header class="header-desktop">
      <div class="section-content section-content-p30">
        <div class="container-fluid">
          <div class="header-wrap">

            <app-search></app-search>

            <app-cart-status></app-cart-status>
```

angular-medicare > src > app > app.component.html > div.page-wrapper > div.page-container > header.header-desktop

```html
            <!-- PAGE

            CONTAINER-->



          </div>
          <div class="account-wrap"></div>
        </div>
      </div>
    </header>
    <!-- END HEADER DESKTOP-->




    <!-- MAIN CONTENT-->
    <router-outlet> </router-outlet>
    <!-- <app-product-list></app-product-list>-->

  </div>
</div>

<!-- END PAGE CONTAINER-->
```


Internal Use - Confidential

```html
<!-- END PAGE CONTAINER-->


<footer>
  <ul>
    <li><a href="#">About Us</a></li>
    <li><a href="#">Contact Us</a></li>
    <li><a href="#">Help</a></li>
  </ul>
</footer>

```

COMPONENTS

PRODUCT-LIST

product-list-grid.component.html

angular-medicare > src > app > components > product-list > product-list-grid.component.html > div.main-content > div.section-content.section-content-p30 >

```html
<div class="main-content">
  <div class="section-content section-content-p30">
    <div class="container-fluid">
      <div class="row">
        <!--Loop over the collection of products-->

        <div *ngFor="let tempProduct of products" class="col-md-3">

          <div class="product-box">

            <a routerLink="/products/{{tempProduct.id}}">
              <img src="{{tempProduct.imageUrl}}" class="img-responsive">
            </a>
            <br>

            <a routerLink="/products/{{tempProduct.id}}">
              <h1>{{tempProduct.name}}</h1>
            </a>

            <div class="price">{{tempProduct.unitPrice | currency:'USD'}}</div>
            <button (click)="addToCart(tempProduct)" class="btn btn-primary btn-sm">Add to Cart</button>
          </div>

        </div>

        <!--If products are not found-->
```


Internal Use - Confidential

angular-medicare > src > app > components > product-list > product-list-grid.component.html > div.main-content > div.section-content.section-content-p30 >

```
<!--If products are not found-->
<div *ngIf="products?.length==0" class="alert alert-warning col-md-12" role="alert">
  No Products Found

</div>

</div>

<!--begin footer-->
<div class="footer-pagination">
  <div class="row">
    <div class="col-md-6"></div>

    <div class="col-md-6">
      <div class="row">
        <div class="col-md-9" style="padding-left:30%">



          <ngb-pagination [(page)]="thePageNumber" [(pageSize)]="thePageSize" [collectionSize]="theTotalElements"
            [maxSize]="5" (pageChange)="listProducts()">
          </ngb-pagination>

        </div>

        <div class="col-md-3 mt-2" style="text-align: right;">
          <span class="mr-2">Page Size</span>
```

angular-medicare > src > app > components > product-list > product-list-grid.component.html > div.main-content > div.section-content.section-content-p30 >

```
          <select (change)="updatePageSize($event.target.value)">
            <option>2</option>
            <option selected="true">5</option>
            <option>10</option>
            <option>20</option>
            <option>50</option>
          </select>
        </div>
      </div>
    </div>
  </div>
</div>
<!--end footer-->
</div>
</div>
</div>
```


Internal Use - Confidential

Product-List.ts

```
TS product-list.component.ts ×
angular-medicare > src > app > components > product-list > TS product-list.component.ts > ProductListComponent
1  import { Component, OnInit } from '@angular/core';
2  import { ProductService } from 'src/app/services/product.service';
3  import { Product } from 'src/app/common/product';
4  import { ActivatedRoute } from '@angular/router';
5  import { CartItem } from 'src/app/common/cart-item';
6  import { CartService } from 'src/app/services/cart.service';
7
8  @Component({
9    selector: 'app-product-list',
10   templateUrl: './product-list-grid.component.html',
11   styleUrls: ['./product-list.component.css'],
12 })
13 export class ProductListComponent implements OnInit {
14   products: Product[];
15   currentCategoryId: number = 1;
16   previousCategoryId: number = 1;
17   searchMode: boolean = false;
18
19   //new properties for Pagenation
20   thePageNumber: number = 1;
21   thePageSize: number = 5;
22   theTotalElements: number = 0;
23
24   previousKeyword: String = null;
25
26   constructor(
27     private productService: ProductService,
28     private cartService: CartService,
```


Internal Use - Confidential

TS product-list.component.ts ×

angular-medicare > src > app > components > product-list > TS product-list.component.ts > ProductListComponent

```
    private route: ActivatedRoute
  ) {}

  ngOnInit(): void {
    this.route.paramMap.subscribe(() => {
      this.listProducts();
    });
  }

  listProducts() {
    //check if "id" paramenter is available
    this.searchMode = this.route.snapshot.paramMap.has('keyword');
    if (this.searchMode) {
      this.handleSearchProducts();
    } else {
      this.handleListProducts();
    }
  }

  handleSearchProducts() {
    const theKeyword: string = this.route.snapshot.paramMap.get('keyword');

    //if we have a different keyword then set the page number to 1
    if (this.previousKeyword != theKeyword) {
      this.thePageNumber = 1;
    }

    this.previousKeyword = theKeyword;
```

TS product-list.component.ts ×

angular-medicare > src > app > components > product-list > TS product-list.component.ts > ProductListComponent > handleListProducts

```
    console.log(`keyword=${theKeyword},thePageNumber=${this.thePageNumber}`);

    //search for the products using the given keyword
    this.productService
      .SearchProductsPaginate(
        this.thePageNumber - 1,
        this.thePageSize,
        theKeyword
      )
      .subscribe(this.processResult());
  }

  handleListProducts() {
    const hasCategoryId: boolean = this.route.snapshot.paramMap.has('id');

    if (hasCategoryId) {
      //get the "id" param String. convert string to a number using the "+" symbol
      this.currentCategoryId = +this.route.snapshot.paramMap.get('id');
    } else {
      //no category id available, use default id as 1
      this.currentCategoryId = 1;
    }

    //check if we have different catetory than previous
    //Note:Angular will reuse a component if it's currently being viewed

    if (this.previousCategoryId != this.currentCategoryId) {
      this.thePageNumber = 1;
```


Internal Use - Confidential

product-list.component.ts

angular-medicare > src > app > components > product-list > product-list.component.ts > ProductListComponent > handleListProducts

```
    }

    this.previousCategoryId = this.currentCategoryId;
    console.log(
      `currentCategoryId=${this.currentCategoryId},thePageNumber=${this.thePageNumber}`
    );

    //get the products for given category id.
    this.productService
      .getProductListPaginate(
        this.thePageNumber - 1,
        this.thePageSize,
        this.currentCategoryId
      )
      .subscribe(this.processResult());
  }
  processResult() {
    return (data) => {
      this.products = data._embedded.products;
      this.thePageNumber = data.page.number + 1;
      this.thePageSize = data.page.size;
      this.theTotalElements = data.page.totalElements;
    };
  }

  updatePageSize(pageSize: number) {
    this.thePageSize = pageSize;
    this.thePageNumber = 1;
```

product-list.component.ts

angular-medicare > src > app > components > product-list > product-list.component.ts > ProductListComponent > har

```
    this.listProducts();
  }

  addToCart(theProduct: Product) {
    console.log(`Adding to cart:${theProduct.name}, ${theProduct.unitPrice}`);

    const theCartItem = new CartItem(theProduct);
    this.cartService.addToCart(theCartItem);
  }
}
```


Internal Use - Confidential

Product-Details.html:

product-details.component.html

angular-medicare > src > app > components > product-details > product-details.component.html > ...

```html
<div class="detail-section">
  <div class="container-fluid">
    <p style="margin-top: 100px">{{ product.name }}</p>
    <img src="{{ product.imageUrl }}" class="detail-img" />
    <h3>{{ product.name }}</h3>
    <div class="price">{{ product.unitPrice | currency: "USD" }}</div>
    <button (click)="addToCart()" class="btn btn-primary btn-sm">Add to cart</button>

    <hr />
    <h4>Description</h4>
    <p>{{ product.description }}</p>

    <a routerLink="/products" class="mt-5 back">Back to Product List</a>
  </div>
</div>
```

Productdetails.ts

product-details.component.ts

angular-medicare > src > app > components > product-details > product-details.component.ts > ...

```ts
import { Component, OnInit } from '@angular/core';
import { ActivatedRoute } from '@angular/router';
import { CartItem } from 'src/app/common/cart-item';
import { Product } from 'src/app/common/product';
import { CartService } from 'src/app/services/cart.service';
import { ProductService } from 'src/app/services/product.service';

@Component({
  selector: 'app-product-details',
  templateUrl: './product-details.component.html',
  styleUrls: ['./product-details.component.css'],
})
export class ProductDetailsComponent implements OnInit {
  product: Product = new Product();

  constructor(
    private productService: ProductService,
    private cartService: CartService,
    private route: ActivatedRoute
  ) {}

  ngOnInit(): void {
    this.route.paramMap.subscribe(() => {
      this.handleProductDetails();
    });
  }
  handleProductDetails() {
    //get the id parameter and convert to a number
```


Internal Use - Confidential

TS product-details.component.ts ×

angular-medicare > src > app > components > product-details > TS product-details.component.ts > ...

```
    const theProductId: number = +this.route.snapshot.paramMap.get('id');
    this.productService.getProduct(theProductId).subscribe((data) => {
      this.product = data;
    });
  }

  addToCart() {
    console.log(
      `Adding to cart:${this.product.name},${this.product.unitPrice}`
    );
    const theCartItem = new CartItem(this.product);
    this.cartService.addToCart(theCartItem);
  }
}
```

PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE 1: powershell

```
----                -------------         ------ ----
d-----        9/11/2020   1:00 PM                angular-medicare


PS C:\Users\sarath_chandra_lakka\Desktop\ecommerce\frontend> cd angular-medicare
PS C:\Users\sarath_chandra_lakka\Desktop\ecommerce\frontend\angular-medicare> ng g class common/product-category
CREATE src/app/common/product-category.spec.ts (191 bytes)
CREATE src/app/common/product-category.ts (33 bytes)
PS C:\Users\sarath_chandra_lakka\Desktop\ecommerce\frontend\angular-medicare>
PS C:\Users\sarath_chandra_lakka\Desktop\ecommerce\frontend\angular-medicare> ng g c components/product-category-menu
CREATE src/app/components/product-category-menu/product-category-menu.component.html (36 bytes)
CREATE src/app/components/product-category-menu/product-category-menu.component.spec.ts (721 bytes)
CREATE src/app/components/product-category-menu/product-category-menu.component.ts (333 bytes)
CREATE src/app/components/product-category-menu/product-category-menu.component.css (0 bytes)
UPDATE src/app/app.module.ts (1116 bytes)
PS C:\Users\sarath_chandra_lakka\Desktop\ecommerce\frontend\angular-medicare>
```


Internal Use - Confidential

Product-Category.html

product-category-menu.component.html

angular-medicare > src > app > components > product-category-menu > product-category-menu.component.html > div.menu

```html
<div class="menu-sidebar-content js-scrollbar1">
  <nav class="navbar-sidebar">
    <ul class="list-unstyled navbar-list">

      <li *ngFor="let tempProductCategory of productCategories">
        <a routerLink="/category/{{tempProductCategory.id}}"
          routerLinkActive="active-link">{{tempProductCategory.categoryName}}</a>
      </li>

    </ul>
  </nav>
</div>
```

ProductCategory.ts

product-category-menu.component.ts

angular-medicare > src > app > components > product-category-menu > product-category-menu.component.ts

```typescript
import { Component, OnInit } from '@angular/core';
import { ProductCategory } from 'src/app/common/product-category';
import { ProductService } from 'src/app/services/product.service';

@Component({
  selector: 'app-product-category-menu',
  templateUrl: './product-category-menu.component.html',
  styleUrls: ['./product-category-menu.component.css'],
})
export class ProductCategoryMenuComponent implements OnInit {
  productCategories: ProductCategory[];
  constructor(private productService: ProductService) {}

  ngOnInit() {
    this.listProductCategories();
  }
  listProductCategories() {
    this.productService.getProductCategories().subscribe((data) => {
      console.log('Product Categories=' + JSON.stringify(data));
      this.productCategories = data;
    });
  }
}
```


Internal Use - Confidential

CartDetails

cart-details.component.html

angular-medicare > src > app > components > cart-details > cart-details.component.html > div.main-content > div.section-content.sec

```html
<div class="main-content">
  <div class="section-content section-content-p30">
    <div class="container-fluid">


      <div *ngIf="cartItems.length>0">
        <table class="table table-bordered">
          <tr>
            <th width="20%">Product Image</th>
            <th width="50%">Product Detail</th>
            <th width="30%"></th>
          </tr>

          <tr *ngFor="let tempCartItem of cartItems">
            <td>
              <img src="{{ tempCartItem.imageUrl }}" class="img-responsive" width="150px" />
            </td>

            <td>
              <p>{{ tempCartItem.name }}</p>
              <p>{{ tempCartItem.unitPrice | currency: "USD" }}</p>
            </td>

            <td>
              <div class="items">
                <label>Quantity:</label>

                <div class="row no-gutters">
```

cart-details.component.html

angular-medicare > src > app > components > cart-details > cart-details.component.html > div.main-content > div.section-content.section-content

```html
                <div>
                  <button (click)="incrementQuantity(tempCartItem)" class="btn btn-primary btn-sm">
                    <i class="fas fa-plus"></i>
                  </button>
                </div>

                <div class="col ml-4 mr-2">
                  {{tempCartItem.quantity}}
                </div>

                <div>
                  <button (click)="decrementQuantity(tempCartItem)" class="btn btn-primary btn-sm">
                    <i class="fas fa-minus"></i>
                  </button>
                </div>

                <div class="col-8"></div>

              </div>
            </div>


            <button (click)="remove(tempCartItem)" class="btn btn-primary btn-sm mt-2">Remove</button>

            <p class="mt-2">
              Subtotal:{{
              tempCartItem.quantity * tempCartItem.unitPrice | currency: "USD"
            }}
```


Internal Use - Confidential

cart-details.component.html

angular-medicare > src > app > components > cart-details > cart-details.component.html > div.main-content > div.section-conte

```html
            </p>
          </td>
        </tr>

        <tr>
          <td colspan="2"></td>
          <td style="font-weight: bold">
            <p>Total Quantity:{{ totalQuantity }}</p>
            <p>Shipping: FREE</p>
            <p>Total Price:{{ totalPrice | currency: "USD" }}</p>
            <a routerLink="/checkout" class="btn btn-primary">Checkout</a>
          </td>
        </tr>
      </table>
    </div>

    <div *ngIf="cartItems.length==0" class="alert alert-warning col-md-12" role="alert">
      Your Shopping cart is empty
    </div>



  </div>
 </div>
</div>
```

CartDetails.ts

cart-details.component.ts

angular-medicare > src > app > components > cart-details > cart-details.component.ts > CartDetailsComponent

```ts
import { Component, OnInit } from '@angular/core';
import { CartItem } from 'src/app/common/cart-item';
import { CartService } from 'src/app/services/cart.service';

@Component({
  selector: 'app-cart-details',
  templateUrl: './cart-details.component.html',
  styleUrls: ['./cart-details.component.css'],
})
export class CartDetailsComponent implements OnInit {
  cartItems: CartItem[] = [];
  totalPrice: number = 0;
  totalQuantity: number = 0;

  constructor(private cartService: CartService) {}

  ngOnInit(): void {
    this.listCartDetails();
  }
  listCartDetails() {
    //get a handle to the cart items
    this.cartItems = this.cartService.cartItems;

    //Subscribe to the cart totalPrice
    this.cartService.totalPrice.subscribe((data) => (this.totalPrice = data));

    //Subscribe to the cart totalQuantity
    this.cartService.totalQuantity.subscribe(
```


Internal Use - Confidential

```
TS cart-details.component.ts ×
angular-medicare > src > app > components > cart-details > TS cart-details.component.ts > CartDetailsComponent
29          (data) => (this.totalQuantity = data)
30        );
31
32        //compute cart total price and Quantity
33        this.cartService.computeCartTotals();
34      }
35
36      incrementQuantity(theCartItem: CartItem) {
37        this.cartService.addToCart(theCartItem);
38      }
39
40      decrementQuantity(theCartItem: CartItem) {
41        this.cartService.decrementQuantity(theCartItem);
42      }
43
44      remove(theCartItem: CartItem) {
45        this.cartService.remove(theCartItem);
46      }
47    }
48
```

CartStatus.html

```
cart-status.component.html ×
angular-medicare > src > app > components > cart-status > cart-status.component.html > ...
1  <div class="cart-area d-n">
2    <a routerLink="/cart-details">
3      <div class="total">{{totalPrice | currency:'USD'}}<span>{{totalQuantity}}</span> </div>
4      <i class="fa fa-shopping-cart" aria-hidden="true"></i>
5    </a>
6  </div>
7
```


Internal Use - Confidential

CartStatus.components.ts

```
TS cart-status.component.ts ×
angular-medicare > src > app > components > cart-status > TS cart-status.component.ts > CartStatusComponent
1  import { Component, OnInit } from '@angular/core';
2  import { CartService } from 'src/app/services/cart.service';
3
4  @Component({
5    selector: 'app-cart-status',
6    templateUrl: './cart-status.component.html',
7    styleUrls: ['./cart-status.component.css'],
8  })
9  export class CartStatusComponent implements OnInit {
10   totalPrice: number = 0.0;
11   totalQuantity: number = 0;
12
13   constructor(private cartService: CartService) {}
14
15   ngOnInit(): void {
16     this.updateCartStatus();
17   }
18   updateCartStatus() {
19     //Subscribe to the cart totalPrice
20     this.cartService.totalPrice.subscribe((data) => (this.totalPrice = data));
21
22     //Subscribe to the cart totalQuantity
23     this.cartService.totalQuantity.subscribe(
24       (data) => (this.totalQuantity = data)
25     );
26   }
27 }
```

```
PROBLEMS   OUTPUT   TERMINAL   DEBUG CONSOLE                    2: powershell

PS C:\Users\sarath_chandra_lakka\Desktop\ecommerce\frontend> cd angular-medicare
PS C:\Users\sarath_chandra_lakka\Desktop\ecommerce\frontend\angular-medicare> ng g c components/checkout
CREATE src/app/components/checkout/checkout.component.html (23 bytes)
CREATE src/app/components/checkout/checkout.component.spec.ts (642 bytes)
CREATE src/app/components/checkout/checkout.component.ts (283 bytes)
CREATE src/app/components/checkout/checkout.component.css (0 bytes)
UPDATE src/app/app.module.ts (1958 bytes)
PS C:\Users\sarath_chandra_lakka\Desktop\ecommerce\frontend\angular-medicare> ng g s services/Luv2ShopForm
CREATE src/app/services/luv2-shop-form.service.spec.ts (389 bytes)
CREATE src/app/services/luv2-shop-form.service.ts (141 bytes)
PS C:\Users\sarath_chandra_lakka\Desktop\ecommerce\frontend\angular-medicare>
```


Internal Use - Confidential

Checkout.component.html

checkout.component.html

angular-medicare > src > app > components > checkout > checkout.component.html > div.main-content.page-m > div.section-co

```html
<div class="main-content page-m">
  <div class="section-content section-content-p30">
    <div class="continer-fluid">


      <form [formGroup]="checkoutFormGroup" (ngSubmit)="onSubmit()">

        <!--- customer form group-->
        <div formGroupName="customer" class="form-area">
          <h3>Customer</h3>

          <div class="row">
            <div class="col-md-2"> <label>First Name</label></div>
            <div class="col-md-9">
              <div class="input-space">
                <input formControlName="firstName" type="text">
              </div>
            </div>
          </div>


          <div class="row">
            <div class="col-md-2"> <label>Last Name</label></div>
            <div class="col-md-9">
              <div class="input-space">
                <input formControlName="lastName" type="text">
              </div>
            </div>
```

checkout.component.html

angular-medicare > src > app > components > checkout > checkout.component.html > div.main-content.page-m > div.sectio

```html
          </div>


          <div class="row">
            <div class="col-md-2"> <label>Email</label></div>
            <div class="col-md-9">
              <div class="input-space">
                <input formControlName="email" type="text">
              </div>
            </div>
          </div>

        </div>


        <!--Shipping Address-->
        <div formGroupName="shippingAddress" class="form-area">
          <h3>Shipping Address</h3>

          <div class="row">
            <div class="col-md-2"> <label>Country</label></div>
            <div class="col-md-9">
              <div class="input-space">
                <select formControlName="country">
                  <option>To DO</option>
                </select>
              </div>
            </div>
```


Internal Use - Confidential

```
57          </div>
58
59
60          <div class="row">
61            <div class="col-md-2"> <label>Street</label></div>
62            <div class="col-md-9">
63              <div class="input-space">
64                <input formControlName="street" type="text">
65              </div>
66            </div>
67          </div>
68
69
70          <div class="row">
71            <div class="col-md-2"> <label>City</label></div>
72            <div class="col-md-9">
73              <div class="input-space">
74                <input formControlName="city" type="text">
75              </div>
76            </div>
77          </div>
78
79          <div class="row">
80            <div class="col-md-2"> <label>State</label></div>
81            <div class="col-md-9">
82              <div class="input-space">
83                <select formControlName="state">
84                  <option>To DO</option>
```

```
85                </select>
86              </div>
87            </div>
88          </div>
89
90          <div class="row">
91            <div class="col-md-2"> <label>Zip Code</label></div>
92            <div class="col-md-9">
93              <div class="input-space">
94                <input formControlName="zipCode" type="text">
95              </div>
96            </div>
97          </div>
98        </div>
99
100       <!--Add checkbox to copy shipping to billing-->
101       <div class="input-space">
102         <label class="au-checkbox">
103           <input type="checkbox" (change)="copyShippingAddressToBillingAddress($event)">
104           <span class="au-checkmark"></span>Billing Address Same as Shipping Address
105
106         </label>
107
108       </div>
109
110
111       <!--Billing Address-->
```


Internal Use - Confidential

```
<div formGroupName="billingAddress" class="form-area">
  <h3>Billing Address</h3>

  <div class="row">
    <div class="col-md-2"> <label>Country</label></div>
    <div class="col-md-9">
      <div class="input-space">
        <select formControlName="country">
          <option>To DO</option>
        </select>
      </div>
    </div>
  </div>


  <div class="row">
    <div class="col-md-2"> <label>Street</label></div>
    <div class="col-md-9">
      <div class="input-space">
        <input formControlName="street" type="text">
      </div>
    </div>
  </div>


  <div class="row">
    <div class="col-md-2"> <label>City</label></div>
    <div class="col-md-9">
      <div class="input-space">
        <input formControlName="city" type="text">
      </div>
    </div>
  </div>

  <div class="row">
    <div class="col-md-2"> <label>State</label></div>
    <div class="col-md-9">
      <div class="input-space">
        <select formControlName="state">
          <option>To DO</option>
        </select>
      </div>
    </div>
  </div>

  <div class="row">
    <div class="col-md-2"> <label>Zip Code</label></div>
    <div class="col-md-9">
      <div class="input-space">
        <input formControlName="zipCode" type="text">
      </div>
    </div>
  </div>
</div>
```


Internal Use - Confidential

Checkout.component.ts

TS checkout.component.ts ×

angular-medicare > src > app > components > checkout > TS checkout.component.ts > CheckoutComponent > handleMonthsA

```
import { Component, OnInit } from '@angular/core';
import { FormBuilder, FormGroup } from '@angular/forms';
import { Luv2ShopFormService } from 'src/app/services/luv2-shop-form.service';

@Component({
  selector: 'app-checkout',
  templateUrl: './checkout.component.html',
  styleUrls: ['./checkout.component.css'],
})
export class CheckoutComponent implements OnInit {
  checkoutFormGroup: FormGroup;

  totalPrice: number = 0;
  totalQuantity: number = 0;

  creditCardYears: number[] = [];
  creditCardMonths: number[] = [];

  constructor(
    private formBuilder: FormBuilder,
    private luv2ShopFormService: Luv2ShopFormService
  ) {}

  ngOnInit(): void {
    this.checkoutFormGroup = this.formBuilder.group({
      customer: this.formBuilder.group({
        firstName: [''],
        lastName: [''],
        email: [''],
      }),
      shippingAddress: this.formBuilder.group({
        street: [''],
        city: [''],
        state: [''],
        country: [''],
        zipCode: [''],
      }),

      billingAddress: this.formBuilder.group({
        street: [''],
        city: [''],
        state: [''],
        country: [''],
        zipCode: [''],
      }),
      creditCard: this.formBuilder.group({
        cardType: [''],
        nameOnCard: [''],
        cardNumber: [''],
        securityCode: [''],
        expirationMonth: [''],
        expirationYear: [''],
      }),
    });
```


Internal Use - Confidential

```
55
56      //populate credit card months
57      const startMonth: number = new Date().getMonth() + 1;
58      console.log('startMonth:' + startMonth);
59
60      this.luv2ShopFormService
61        .getCreditCardMonths(startMonth)
62        .subscribe((data) => {
63          console.log('Retrieved credit card months: ' + JSON.stringify(data));
64          this.creditCardMonths = data;
65        });
66
67      //populate credit card years
68      this.luv2ShopFormService.getCreditCardYears().subscribe((data) => {
69        console.log('Retrieved credit card years: ' + JSON.stringify(data));
70        this.creditCardYears = data;
71      });
72    }
73
74    copyShippingAddressToBillingAddress(event) {
75      if (event.target.checked) {
76        this.checkoutFormGroup.controls.billingAddress.setValue(
77          this.checkoutFormGroup.controls.shippingAddress.value
78        );
79      } else {
80        this.checkoutFormGroup.controls.billingAddress.reset();
81      }
82    }
```

```
83
84    onSubmit() {
85      console.log('Handling the submit Button');
86      console.log(this.checkoutFormGroup.get('customer').value);
87      console.log(
88        'The email address is ' +
89          this.checkoutFormGroup.get('customer').value.email
90      );
91    }
92
93    handleMonthsAndYears() {
94      const creditCardFormGroup = this.checkoutFormGroup.get('creditCard');
95      const currentYear: number = new Date().getFullYear();
96      const selectedYear: number = Number(
97        creditCardFormGroup.value.expirationYear
98      );
99      let startMonth: number;
100     if (currentYear === selectedYear) {
101       startMonth = new Date().getMonth() + 1;
102     } else {
103       startMonth = 1;
104     }
105
106     this.luv2ShopFormService
107       .getCreditCardMonths(startMonth)
108       .subscribe((data) => {
109         console.log('Retrieved credit card months:' + JSON.stringify(data));
110         this.creditCardMonths = data;
```


Internal Use - Confidential

```
111        });
112      }
113    }
114
```

SERVICES-SECTION:

CartService.ts

```
TS cart.service.ts ×
angular-medicare > src > app > services > TS cart.service.ts > CartService > decrementQuantity
1   import { Injectable } from '@angular/core';
2   import { Subject } from 'rxjs';
3   import { CartItem } from '../common/cart-item';
4
5   @Injectable({
6     providedIn: 'root',
7   })
8   export class CartService {
9     cartItems: CartItem[] = [];
10
11    totalPrice: Subject<number> = new Subject<number>();
12    totalQuantity: Subject<number> = new Subject<number>();
13
14    constructor() {}
15
16    addToCart(theCartItem: CartItem) {
17      //Check if we already have the item in the cart
18      let alreadyExisitsInCart: boolean = false;
19      let existingCartItem: CartItem = undefined;
20
21      if (this.cartItems.length > 0) {
22        //Find the item in the cart based on the item id
23        existingCartItem = this.cartItems.find(
24          (tempCartItem) => tempCartItem.id === theCartItem.id
25        );
26
27        //Check if we found it
28        alreadyExisitsInCart = existingCartItem != undefined;
```


Internal Use - Confidential

```
29        }
30
31        if (alreadyExisitsInCart) {
32          existingCartItem.quantity++;
33        } else {
34          this.cartItems.push(theCartItem);
35        }
36
37        //compute cart total price and total quantity
38        this.computeCartTotals();
39      }
40      computeCartTotals() {
41        let totalPriceValue: number = 0;
42        let totalQuantityValue: number = 0;
43
44        for (let currentCartItem of this.cartItems) {
45          totalPriceValue += currentCartItem.quantity * currentCartItem.unitPrice;
46          totalQuantityValue += currentCartItem.quantity;
47        }
48
49        //publish the new values : All Subscribers will receive the new data
50        this.totalPrice.next(totalPriceValue);
51        this.totalQuantity.next(totalQuantityValue);
52
53        //log cart data just for debugging purposes
54        this.logCartData(totalPriceValue, totalQuantityValue);
55      }
56      logCartData(totalPriceValue: number, totalQuantityValue: number) {
```

```
57        console.log('contents of the cart');
58        for (let tempCartItem of this.cartItems) {
59          const subTotalPrice = tempCartItem.quantity * tempCartItem.unitPrice;
60          console.log(
61            `name:${tempCartItem.name},quantity=${tempCartItem.quantity},unitPrice=${tempCartItem.unitPrice},subTotalPrice=${s
62          );
63        }
64
65        console.log(
66          `totalPrice:${totalPriceValue.toFixed(
67            2
68          )},totalQuantity:${totalQuantityValue}`
69        );
70        console.log('-------');
71      }
72
73      decrementQuantity(theCartItem: CartItem) {
74        theCartItem.quantity--;
75        if (theCartItem.quantity === 0) {
76          this.remove(theCartItem);
77        } else {
78          this.computeCartTotals();
79        }
80      }
81      remove(theCartItem: CartItem) {
82        //get index of item in the array
83        const itemIndex = this.cartItems.findIndex(
84          (tempCartItem) => tempCartItem.id === theCartItem.id
```


Internal Use - Confidential

```
    );

    //if found, remove the item from the arrray at the given index.
    if (itemIndex > -1) {
      this.cartItems.splice(itemIndex, 1);
      this, this.computeCartTotals();
    }
  }
}

```

Luv2ShopForm.ts

```
TS luv2-shop-form.service.ts ×
angular-medicare > src > app > services > TS luv2-shop-form.service.ts > Luv2ShopFormService > getCreditCardYears
import { Injectable } from '@angular/core';
import { Observable, of } from 'rxjs';

@Injectable({
  providedIn: 'root',
})
export class Luv2ShopFormService {
  constructor() {}

  getCreditCardMonths(startMonth: number): Observable<number[]> {
    let data: number[] = [];

    //build an array for "Month" dropdown list
    //-start at current month and loop

    for (let theMonth = startMonth; theMonth <= 12; theMonth++) {
      data.push(theMonth);
    }

    return of(data);
  }

  getCreditCardYears(): Observable<number[]> {
    let data: number[] = [];

    //build an array for "year" dropdown list
    //-start at current Year and loop for the next 10 years
    const startYear: number = new Date().getFullYear();
    const endYear: number = startYear + 10;

    for (let theYear = startYear; theYear <= endYear; theYear++) {
      data.push(theYear);
    }
    return of(data);
  }
}

```


Internal Use - Confidential

ProductService.ts

TS product.service.ts ×

angular-medicare > src > app > services > TS product.service.ts > ProductService > SearchProductsPaginate > searchUrl

```
1   import { Injectable } from '@angular/core';
2   import { HttpClient } from '@angular/common/http';
3   import { Product } from '../common/product';
4   import { Observable } from 'rxjs';
5   import { map } from 'rxjs/operators';
6   import { ProductCategory } from '../common/product-category';
7
8   @Injectable({
9     providedIn: 'root',
10  })
11  export class ProductService {
12    private baseUrl = 'http://localhost:8080/api/products';
13
14    private categoryUrl = 'http://localhost:8080/api/product-category';
15
16    constructor(private httpClient: HttpClient) {}
17
18    getProduct(theProductId: number): Observable<Product> {
19      //throw new Error('Method not implemented.');
20      //build the URL based on the product id
21      const productUrl = `${this.baseUrl}/${theProductId}`;
22      return this.httpClient.get<Product>(productUrl);
23    }
24
25    getProductListPaginate(
26      thePage: number,
27      thePageSize: number,
28      theCategoryId: number
```


Internal Use - Confidential

```
29  ): Observable<GetResponseProducts> {
30    const searchUrl =
31      `${this.baseUrl}/search/findByCategoryId?id=${theCategoryId}` +
32      `&page=${thePage}&size=${thePageSize}`;
33
34    return this.httpClient.get<GetResponseProducts>(searchUrl);
35  }
36
37  getProductList(theCategoryId: number): Observable<Product[]> {
38    const searchUrl = `${this.baseUrl}/search/findByCategoryId?id=${theCategoryId}`;
39
40    return this.getProducts(searchUrl);
41  }
42
43  searchProducts(theKeyword: string): Observable<Product[]> {
44    const searchUrl = `${this.baseUrl}/search/findByNameContaining?name=${theKeyword}`;
45
46    return this.getProducts(searchUrl);
47  }
48
49  SearchProductsPaginate(
50    thePage: number,
51    thePageSize: number,
52    theKeyword: String
53  ): Observable<GetResponseProducts> {
54    const searchUrl =
55      `${this.baseUrl}/search/findByNameContaining?name=${theKeyword}` +
56      `&page=${thePage}&size=${thePageSize}`;
```


Internal Use - Confidential

```
    return this.httpClient.get<GetResponseProducts>(searchUrl);
  }

  private getProducts(searchUrl: string): Observable<Product[]> {
    return this.httpClient
      .get<GetResponseProducts>(searchUrl)
      .pipe(map((response) => response._embedded.products));
  }

  getProductCategories(): Observable<ProductCategory[]> {
    return this.httpClient
      .get<GetResponseProductCategory>(this.categoryUrl)
      .pipe(map((response) => response._embedded.productCategory));
  }
}

interface GetResponseProducts {
  _embedded: {
    products: Product[];
  };
  page: {
    size: number;
    totalElements: number;
    totalPages: number;
    number: number;
  };
}

interface GetResponseProductCategory {
  _embedded: {
    productCategory: ProductCategory[];
  };
}
```

AppComponent.ts

```
TS app.component.ts ×
angular-medicare > src > app > TS app.component.ts > ...
import { Component } from '@angular/core';

@Component({
  selector: 'app-root',
  templateUrl: './app.component.html',
  styleUrls: ['./app.component.css']
})
export class AppComponent {
  title = 'angular-medicare';
}
```


Internal Use - Confidential

Index.html

index.html

angular-medicare > src > index.html > html > head

```html
<!doctype html>
<html lang="en">

<head>
  <meta charset="utf-8">

  <meta name="viewport" content="width=device-width, initial-scale=1, shrink-to-fit=no">

  <!-- Bootstrap CSS -->

  <title>AngularMedicare</title>
  <base href="/">
  <link rel="icon" type="image/x-icon" href="favicon.ico">
</head>

<body>
  <app-root></app-root>
</body>

</html>
```


Internal Use - Confidential

Spring Output

```
Project
springbootecommerce C:\Users\sarathi_chandra_jakka\Desktop
.mvn
.settings
src
main
Run: SpringbootecommerceApplication
"C:\Program Files\Java\jdk-14\bin\java.exe" ...

  .   ____          _            __ _ _
 /\\ / ___'_ __ _ _(_)_ __  __ _ \ \ \ \
( ( )\___ | '_ | '_| | '_ \/ _` | \ \ \ \
 \\/  ___)| |_)| | | | | || (_| |  ) ) ) )
  '  |____| .__|_| |_|_| |_\__, | / / / /
 =========|_|==============|___/=/_/_/_/
 :: Spring Boot ::        (v2.3.2.RELEASE)

2020-09-10 17:20:06.226  INFO 6308 --- [           main] c.s.s.SpringbootecommerceApplication     : Starting SpringbootecommerceApplication on W104CHYHR2 with PID 6308 (C:\Users\
2020-09-10 17:20:06.233  INFO 6308 --- [           main] c.s.s.SpringbootecommerceApplication     : No active profile set, falling back to default profiles: default
2020-09-10 17:20:07.820  INFO 6308 --- [           main] .s.d.r.c.RepositoryConfigurationDelegate : Bootstrapping Spring Data JPA repositories in DEFERRED mode.
2020-09-10 17:20:07.976  INFO 6308 --- [           main] .s.d.r.c.RepositoryConfigurationDelegate : Finished Spring Data repository scanning in 137ms. Found 2 JPA repository inte
2020-09-10 17:20:09.150  INFO 6308 --- [           main] o.s.b.w.embedded.tomcat.TomcatWebServer  : Tomcat initialized with port(s): 8080 (http)
2020-09-10 17:20:09.162  INFO 6308 --- [           main] o.apache.catalina.core.StandardService   : Starting service [Tomcat]
2020-09-10 17:20:09.163  INFO 6308 --- [           main] org.apache.catalina.core.StandardEngine  : Starting Servlet engine: [Apache Tomcat/9.0.37]
2020-09-10 17:20:09.402  INFO 6308 --- [           main] o.a.c.c.C.[Tomcat].[localhost].[/]       : Initializing Spring embedded WebApplicationContext
2020-09-10 17:20:09.402  INFO 6308 --- [           main] w.s.c.ServletWebServerApplicationContext : Root WebApplicationContext: initialization completed in 3047 ms
2020-09-10 17:20:09.919  INFO 6308 --- [           main] o.s.s.concurrent.ThreadPoolTaskExecutor  : Initializing ExecutorService 'applicationTaskExecutor'
2020-09-10 17:20:09.951  INFO 6308 --- [           main] com.zaxxer.hikari.HikariDataSource       : HikariPool-1 - Starting...
2020-09-10 17:20:10.310  INFO 6308 --- [           main] com.zaxxer.hikari.HikariDataSource       : HikariPool-1 - Start completed.
2020-09-10 17:20:10.439  INFO 6308 --- [         task-1] o.hibernate.jpa.internal.util.LogHelper  : HHH000204: Processing PersistenceUnitInfo [name: default]
2020-09-10 17:20:10.635  INFO 6308 --- [         task-1] org.hibernate.Version                    : HHH000412: Hibernate ORM core version 5.4.18.Final
2020-09-10 17:20:11.052  INFO 6308 --- [         task-1] o.hibernate.annotations.common.Version   : HCANN000001: Hibernate Commons Annotations {5.1.0.Final}
2020-09-10 17:20:11.333  INFO 6308 --- [         task-1] org.hibernate.dialect.Dialect            : HHH000400: Using dialect: org.hibernate.dialect.MySQL8Dialect
2020-09-10 17:20:13.011  INFO 6308 --- [         task-1] o.h.e.t.j.p.i.JtaPlatformInitiator       : HHH000490: Using JtaPlatform implementation: [org.hibernate.engine.transaction
```

```
Run: SpringbootecommerceApplication
2020-09-10 17:20:06.233  INFO 6308 --- [           main] c.s.s.SpringbootecommerceApplication     : No active profile set, falling back to default profiles: default
2020-09-10 17:20:07.820  INFO 6308 --- [           main] .s.d.r.c.RepositoryConfigurationDelegate : Bootstrapping Spring Data JPA repositories in DEFERRED mode.
2020-09-10 17:20:07.976  INFO 6308 --- [           main] .s.d.r.c.RepositoryConfigurationDelegate : Finished Spring Data repository scanning in 137ms. Found 2 JPA repository inte
2020-09-10 17:20:09.150  INFO 6308 --- [           main] o.s.b.w.embedded.tomcat.TomcatWebServer  : Tomcat initialized with port(s): 8080 (http)
2020-09-10 17:20:09.162  INFO 6308 --- [           main] o.apache.catalina.core.StandardService   : Starting service [Tomcat]
2020-09-10 17:20:09.163  INFO 6308 --- [           main] org.apache.catalina.core.StandardEngine  : Starting Servlet engine: [Apache Tomcat/9.0.37]
2020-09-10 17:20:09.402  INFO 6308 --- [           main] o.a.c.c.C.[Tomcat].[localhost].[/]       : Initializing Spring embedded WebApplicationContext
2020-09-10 17:20:09.402  INFO 6308 --- [           main] w.s.c.ServletWebServerApplicationContext : Root WebApplicationContext: initialization completed in 3047 ms
2020-09-10 17:20:09.919  INFO 6308 --- [           main] o.s.s.concurrent.ThreadPoolTaskExecutor  : Initializing ExecutorService 'applicationTaskExecutor'
2020-09-10 17:20:09.951  INFO 6308 --- [           main] com.zaxxer.hikari.HikariDataSource       : HikariPool-1 - Starting...
2020-09-10 17:20:10.310  INFO 6308 --- [           main] com.zaxxer.hikari.HikariDataSource       : HikariPool-1 - Start completed.
2020-09-10 17:20:10.439  INFO 6308 --- [         task-1] o.hibernate.jpa.internal.util.LogHelper  : HHH000204: Processing PersistenceUnitInfo [name: default]
2020-09-10 17:20:10.635  INFO 6308 --- [         task-1] org.hibernate.Version                    : HHH000412: Hibernate ORM core version 5.4.18.Final
2020-09-10 17:20:11.052  INFO 6308 --- [         task-1] o.hibernate.annotations.common.Version   : HCANN000001: Hibernate Commons Annotations {5.1.0.Final}
2020-09-10 17:20:11.333  INFO 6308 --- [         task-1] org.hibernate.dialect.Dialect            : HHH000400: Using dialect: org.hibernate.dialect.MySQL8Dialect
2020-09-10 17:20:13.811  INFO 6308 --- [         task-1] o.h.e.t.j.p.i.JtaPlatformInitiator       : HHH000490: Using JtaPlatform implementation: [org.hibernate.engine.transaction
2020-09-10 17:20:13.825  INFO 6308 --- [         task-1] j.LocalContainerEntityManagerFactoryBean : Initialized JPA EntityManagerFactory for persistence unit 'default'
2020-09-10 17:20:13.769  WARN 6308 --- [           main] JpaBaseConfiguration$JpaWebConfiguration : spring.jpa.open-in-view is enabled by default. Therefore, database queries may
2020-09-10 17:20:14.945  INFO 6308 --- [           main] o.s.b.w.embedded.tomcat.TomcatWebServer  : Tomcat started on port(s): 8080 (http) with context path ''
2020-09-10 17:20:14.947  INFO 6308 --- [           main] DeferredRepositoryInitializationListener : Triggering deferred initialization of Spring Data repositories…
2020-09-10 17:20:15.037  INFO 6308 --- [           main] DeferredRepositoryInitializationListener : Spring Data repositories initialized!
2020-09-10 17:20:15.049  INFO 6308 --- [           main] c.s.s.SpringbootecommerceApplication     : Started SpringbootecommerceApplication in 9.72 seconds (JVM running for 11.026
2020-09-10 17:20:20.899  INFO 6308 --- [nio-8080-exec-1] o.a.c.c.C.[Tomcat].[localhost].[/]       : Initializing Spring DispatcherServlet 'dispatcherServlet'
2020-09-10 17:20:20.899  INFO 6308 --- [nio-8080-exec-1] o.s.web.servlet.DispatcherServlet        : Initializing Servlet 'dispatcherServlet'
2020-09-10 17:20:20.940  INFO 6308 --- [nio-8080-exec-1] o.s.web.servlet.DispatcherServlet        : Completed initialization in 41 ms
```


Internal Use - Confidential

http://localhost:8080/api

localhost:8080/api | localhost:8080/api/product-cate | localhost:8080/api/products | localhost:8080/api/products

localhost:8080/api


```
{
  "_links" : {
    "productCategory" : {
      "href" : "http://localhost:8080/api/product-category{?page,size,sort}",
      "templated" : true
    },
    "products" : {
      "href" : "http://localhost:8080/api/products{?page,size,sort}",
      "templated" : true
    },
    "profile" : {
      "href" : "http://localhost:8080/api/profile"
    }
  }
```


Json Url: http://localhost:8080/api/product-category

localhost:8080/api | localhost:8080/api/product-cate | localhost:8080/

localhost:8080/api/product-category


```
{
  "_embedded" : {
    "productCategory" : [ {
      "categoryName" : "Pills",
      "_links" : {
        "self" : {
          "href" : "http://localhost:8080/api/product-category/1"
        },
        "productCategory" : {
          "href" : "http://localhost:8080/api/product-category/1"
        },
        "products" : {
          "href" : "http://localhost:8080/api/product-category/1/products"
        }
      }
    }, {
      "categoryName" : "Syrups",
      "_links" : {
        "self" : {
          "href" : "http://localhost:8080/api/product-category/2"
        },
        "productCategory" : {
          "href" : "http://localhost:8080/api/product-category/2"
        },
        "products" : {
          "href" : "http://localhost:8080/api/product-category/2/products"
        }
      }
    } ]
  },
  "_links" : {
    "self" : {
      "href" : "http://localhost:8080/api/product-category"
    },
    "profile" : {
      "href" : "http://localhost:8080/api/profile/product-category"
    }
  },
  "page" : {
    "size" : 20,
    "totalElements" : 2,
    "totalPages" : 1,
    "number" : 0
  }
}
```


Internal Use - Confidential

localhost:8080/api/product-category


```
{
  "_embedded" : {
    "productCategory" : [ {
      "id" : 1,
      "categoryName" : "Pills",
      "_links" : {
        "self" : {
          "href" : "http://localhost:8080/api/product-category/1"
        },
        "productCategory" : {
          "href" : "http://localhost:8080/api/product-category/1"
        },
        "products" : {
          "href" : "http://localhost:8080/api/product-category/1/products"
        }
      }
    }, {
      "id" : 2,
      "categoryName" : "Syrups",
      "_links" : {
        "self" : {
          "href" : "http://localhost:8080/api/product-category/2"
        },
        "productCategory" : {
          "href" : "http://localhost:8080/api/product-category/2"
        },
        "products" : {
          "href" : "http://localhost:8080/api/product-category/2/products"
        }
      }
    } ]
  },
  "_links" : {
    "self" : {
      "href" : "http://localhost:8080/api/product-category"
    },
    "profile" : {
      "href" : "http://localhost:8080/api/profile/product-category"
    }
  },
  "page" : {
    "size" : 20,
    "totalElements" : 2,
    "totalPages" : 1,
    "number" : 0
  }
```


Internal Use - Confidential

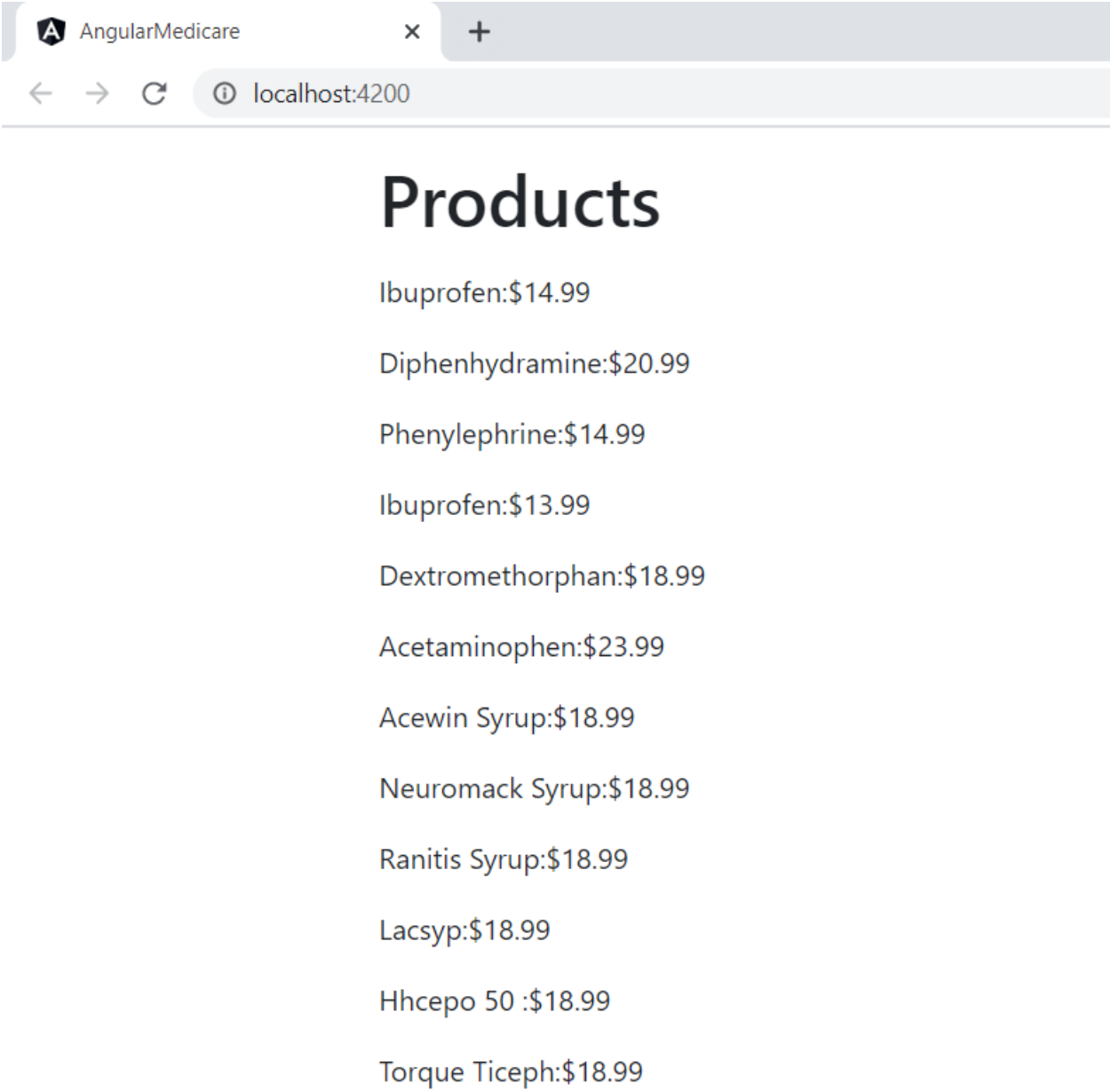
http://localhost:8080/api/products

localhost:8080/api/products


```
{
  "_embedded" : {
    "products" : [ {
      "sku" : "Pill-1000",
      "name" : "Ibuprofen",
      "description" : "This tablet can be used for Sinus headache",
      "unitPrice" : 14.99,
      "imageUrl" : "assets/images/products/pills/pill1.png",
      "active" : true,
      "unitsInStock" : 100,
      "dateCreated" : "2020-09-10T16:01:11.000+00:00",
      "lastUpdated" : null,
      "_links" : {
        "self" : {
          "href" : "http://localhost:8080/api/products/1"
        },
        "product" : {
          "href" : "http://localhost:8080/api/products/1"
        },
        "category" : {
          "href" : "http://localhost:8080/api/products/1/category"
        }
      }
    }, {
      "sku" : "Pill-1001",
      "name" : "Diphenhydramine",
      "description" : "This tablet can be used for Sinus Runny nose",
      "unitPrice" : 20.99,
      "imageUrl" : "assets/images/products/pills/pill2.png",
      "active" : true,
      "unitsInStock" : 100,
      "dateCreated" : "2020-09-10T16:01:11.000+00:00",
      "lastUpdated" : null,
      "_links" : {
        "self" : {
          "href" : "http://localhost:8080/api/products/2"
        },
        "product" : {
          "href" : "http://localhost:8080/api/products/2"
        },
        "category" : {
          "href" : "http://localhost:8080/api/products/2/category"
        }
      }
    }, {
      "sku" : "Pill-1002",
      "name" : "Phenylephrine",
      "description" : "This tablet can be used for Stuffy nose",
      "unitPrice" : 14.99.
```


Internal Use - Confidential

Angular Output (Simple)



Internal Use - Confidential

localhost:4200

Products

Name	Price	UnitsInStock
Ibuprofen	14.99	100
Diphenhydramine	20.99	100
Phenylephrine	14.99	100
Ibuprofen	13.99	100
Dextromethorphan	18.99	100
Acetaminophen	23.99	100
Maple Syrup	18.99	100
Neuromack Syrup	18.99	100
Ranitis Syrup	18.99	100
Lacsyp	18.99	100
Hhcepo 50	18.99	100
Torque Ticeph	18.99	100

Internal Use - Confidential

http://localhost:8080/api/products/search/findByCategoryId?id=1

localhost:8080/api/products/search/findByCategoryId?id=1


```
{
  "_embedded" : {
    "products" : [ {
      "sku" : "Pill-1000",
      "name" : "Ibuprofen",
      "description" : "This tablet can be used for Sinus headache",
      "unitPrice" : 14.99,
      "imageUrl" : "assets/images/products/pills/pill1.png",
      "active" : true,
      "unitsInStock" : 100,
      "dateCreated" : "2020-09-11T15:14:50.000+00:00",
      "lastUpdated" : null,
      "_links" : {
        "self" : {
          "href" : "http://localhost:8080/api/products/1"
        },
        "product" : {
          "href" : "http://localhost:8080/api/products/1"
        },
        "category" : {
          "href" : "http://localhost:8080/api/products/1/category"
        }
      }
    }, {
      "sku" : "Pill-1001",
      "name" : "Diphenhydramine",
      "description" : "This tablet can be used for Sinus Runny nose",
      "unitPrice" : 20.99,
      "imageUrl" : "assets/images/products/pills/pill2.png",
      "active" : true,
      "unitsInStock" : 100,
      "dateCreated" : "2020-09-11T15:14:50.000+00:00",
      "lastUpdated" : null,
      "_links" : {
        "self" : {
          "href" : "http://localhost:8080/api/products/2"
        },
        "product" : {
          "href" : "http://localhost:8080/api/products/2"
        },
        "category" : {
          "href" : "http://localhost:8080/api/products/2/category"
        }
      }
    }, {
      "sku" : "Pill-1002",
      "name" : "Phenylephrine",
      "description" : "This tablet can be used for Stuffy nose"
```


Internal Use - Confidential

http://localhost:8080/api/products/search/findByCategoryId?id=2

localhost:8080/api/products/search/findByCategoryId?id=2


```
{
  "_embedded" : {
    "products" : [ {
      "sku" : "Syrups-1000",
      "name" : "Maple Syrup",
      "description" : "Syrup for Medicinal Purposes",
      "unitPrice" : 18.99,
      "imageUrl" : "assets/images/products/syrups/syrup1.png",
      "active" : true,
      "unitsInStock" : 100,
      "dateCreated" : "2020-09-11T15:14:50.000+00:00",
      "lastUpdated" : null,
      "_links" : {
        "self" : {
          "href" : "http://localhost:8080/api/products/11"
        },
        "product" : {
          "href" : "http://localhost:8080/api/products/11"
        },
        "category" : {
          "href" : "http://localhost:8080/api/products/11/category"
        }
      }
    }, {
      "sku" : "Syrups-1001",
      "name" : "Neuromack Syrup",
      "description" : "Syrup for Medicinal Purposes",
      "unitPrice" : 18.99,
      "imageUrl" : "assets/images/products/syrups/syrup2.png",
      "active" : true,
      "unitsInStock" : 100,
      "dateCreated" : "2020-09-11T15:14:50.000+00:00",
      "lastUpdated" : null,
      "_links" : {
        "self" : {
          "href" : "http://localhost:8080/api/products/12"
        },
        "product" : {
          "href" : "http://localhost:8080/api/products/12"
        },
        "category" : {
          "href" : "http://localhost:8080/api/products/12/category"
        }
      }
    }, {
      "sku" : "Syrups-1002",
      "name" : "Ranitis Syrup",
      "description" : "Syrup for Medicinal Purposes",
      "unitPrice" : 18.99,
```


Internal Use - Confidential

FindByNameContaining

http://localhost:8080/api/products/search/findByNameContaining?name=Neuromack%20Syrup

localhost:8080/api/products/search/findByNameContaining?name=Neuromack%20Syrup


```
{
  "_embedded" : {
    "products" : [ {
      "id" : 12,
      "sku" : "Syrups-1001",
      "name" : "Neuromack Syrup",
      "description" : "Syrup for Medicinal Purposes",
      "unitPrice" : 18.99,
      "imageUrl" : "assets/images/products/syrups/syrup2.png",
      "active" : true,
      "unitsInStock" : 100,
      "dateCreated" : "2020-09-11T15:14:50.000+00:00",
      "lastUpdated" : null,
      "_links" : {
        "self" : {
          "href" : "http://localhost:8080/api/products/12"
        },
        "product" : {
          "href" : "http://localhost:8080/api/products/12"
        },
        "category" : {
          "href" : "http://localhost:8080/api/products/12/category"
        }
      }
    } ]
  },
  "_links" : {
    "self" : {
      "href" : "http://localhost:8080/api/products/search/findByNameContaining?name=Neuromack%20Syrup&page=0&size=20"
    }
  },
  "page" : {
    "size" : 20,
    "totalElements" : 1,
    "totalPages" : 1,
    "number" : 0
  }
}
```


Internal Use - Confidential

TESTING AND DEVOPS USING JENKINS

Jenkins Build triggered successfully:

Jenkins › Capstone_Medi7 › #1

- Back to Project
- Status
- Changes
- Console Output
- View as plain text
- Edit Build Information
- Delete build '#1'
- Git Build Data
- No Tags

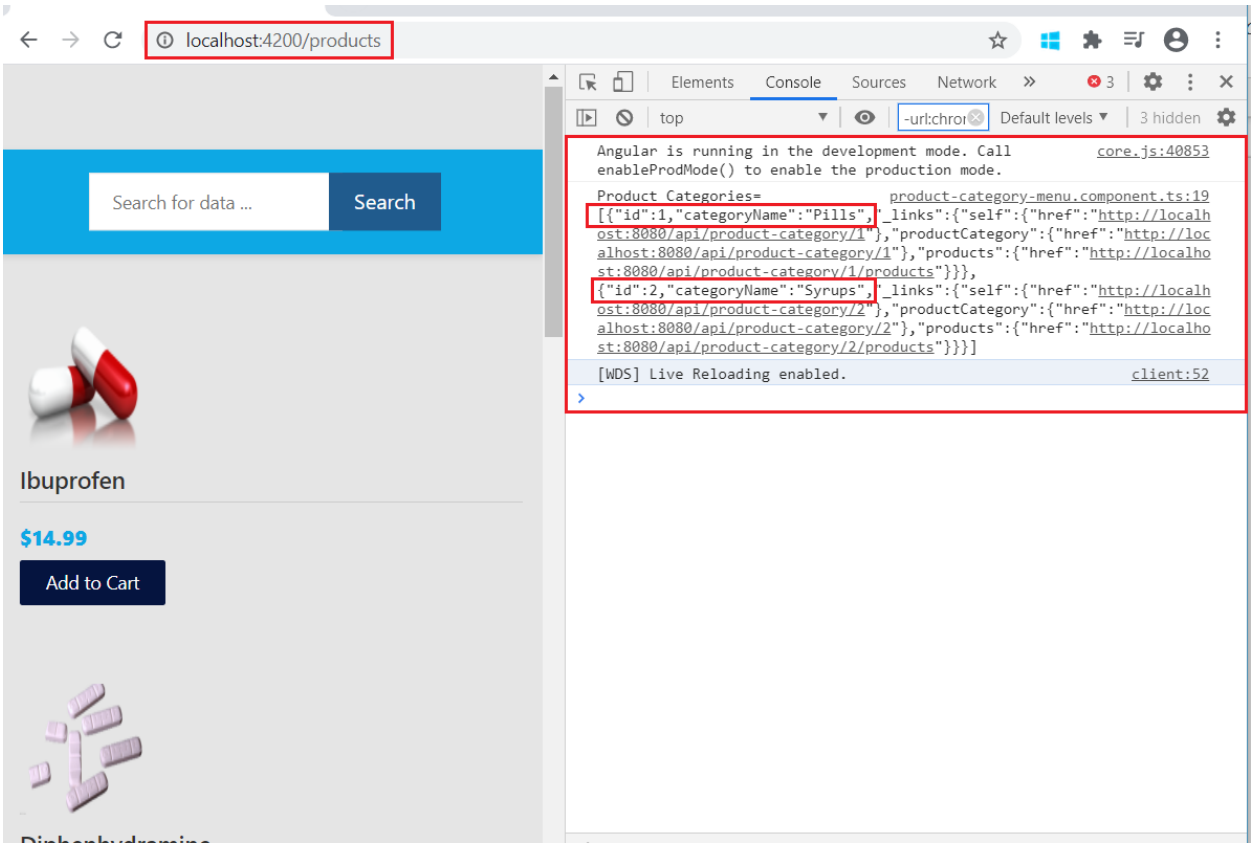
Console Output

```
Started by user admin
Running as SYSTEM
Building in workspace /var/lib/jenkins/workspace/Capstone_Medi7
The recommended git tool is: NONE
using credential GithubCredentials
Cloning the remote Git repository
Cloning repository https://github.com/Gowri37/springbootecommerce.git
 > /usr/bin/git init /var/lib/jenkins/workspace/Capstone_Medi7 # timeout=10
Fetching upstream changes from https://github.com/Gowri37/springbootecommerce.git
 > /usr/bin/git --version # timeout=10
 > git --version # 'git version 2.7.4'
using GIT_ASKPASS to set credentials git
 > /usr/bin/git fetch --tags --progress https://github.com/Gowri37/springbootecommerce.git +refs/heads/*:refs/remotes/origin/* # timeout=10
 > /usr/bin/git config remote.origin.url https://github.com/Gowri37/springbootecommerce.git # timeout=10
 > /usr/bin/git config --add remote.origin.fetch +refs/heads/*:refs/remotes/origin/* # timeout=10
Avoid second fetch
 > /usr/bin/git rev-parse refs/remotes/origin/master^{commit} # timeout=10
 > /usr/bin/git rev-parse refs/remotes/origin/origin/master^{commit} # timeout=10
Checking out Revision 8914b894b83cd162aa096b45b9438c6b574515eb (refs/remotes/origin/master)
 > /usr/bin/git config core.sparsecheckout # timeout=10
 > /usr/bin/git checkout -f 8914b894b83cd162aa096b45b9438c6b574515eb # timeout=10
Commit message: "fix syntax"
First time build. Skipping changelog.
[Capstone_Medi7] $ /usr/share/maven/bin/mvn clean package
[INFO] Scanning for projects...
[INFO]
[INFO] ------------------------------------------------------------------------
[INFO] Building springbootecommerce 0.0.1-SNAPSHOT
[INFO] ------------------------------------------------------------------------
Downloading: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-compiler-plugin/3.5.1/maven-compiler-plugin-3.5.1.pom
2/10 KB
3/10 KB
```


Internal Use - Confidential

```
Downloaded: https://repo.maven.apache.org/maven2/net/java/dev/jna/jna-platform/5.5.0/jna-platform-5.5.0.jar (2620 KB at 8878.2 KB/sec)
[INFO] Replacing main artifact with repackaged archive
[INFO] ------------------------------------------------------------------------
[INFO] BUILD SUCCESS
[INFO] ------------------------------------------------------------------------
[INFO] Total time: 30.121 s
[INFO] Finished at: 2020-09-19T18:26:12+00:00
[INFO] Final Memory: 38M/319M
[INFO] ------------------------------------------------------------------------
Finished: SUCCESS
```

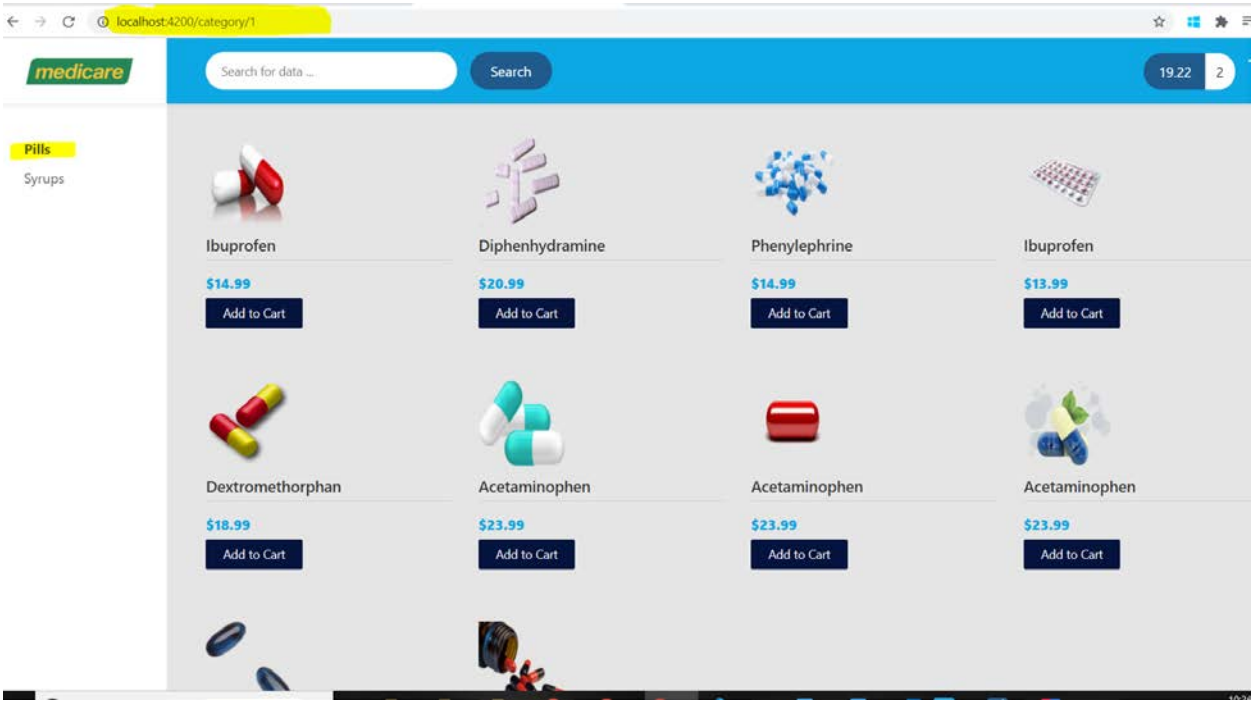
PROJECT SCREENS POST TESTING AND JENKINS DEPLOYMENT



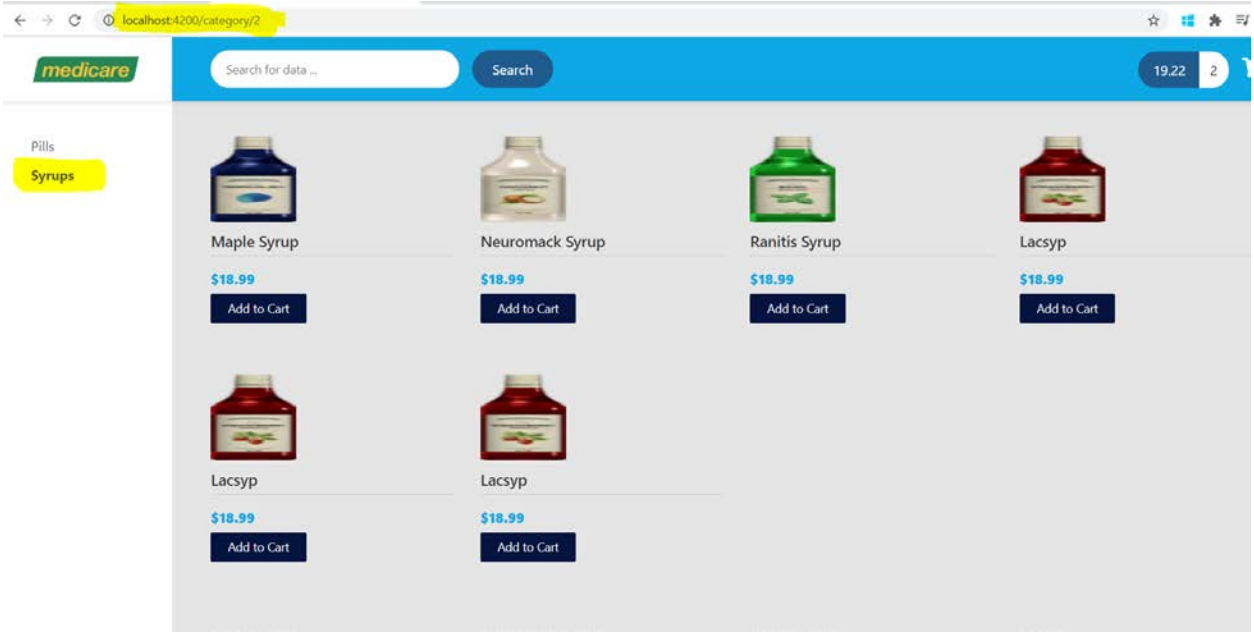
Internal Use - Confidential

Category base Searching

http://localhost:4200/category/1

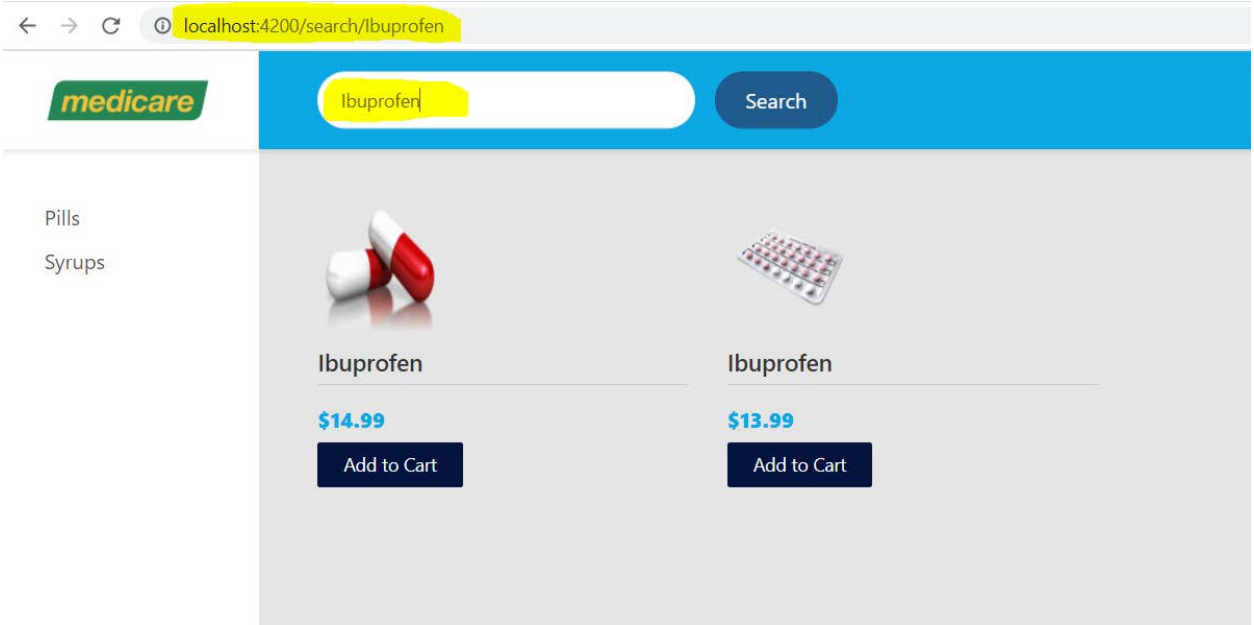


http://localhost:4200/category/2

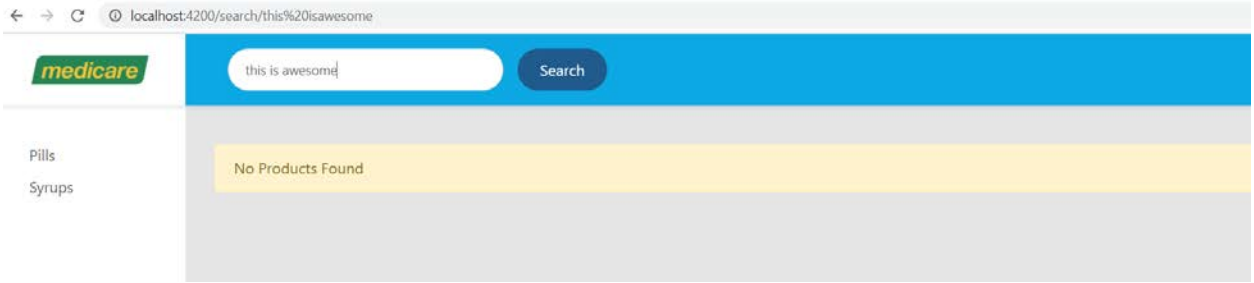


Internal Use - Confidential

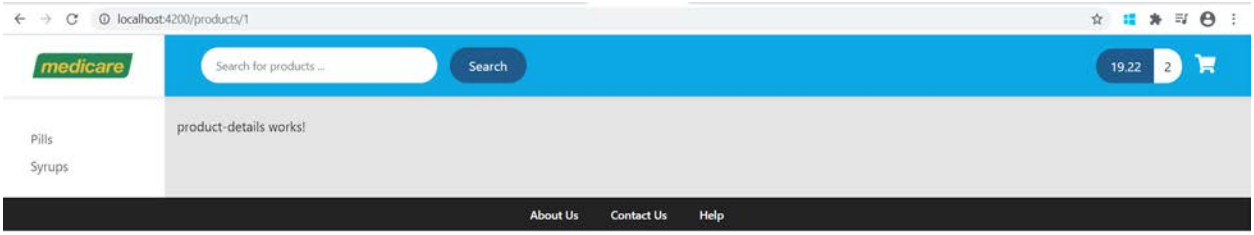
Search by Products



If No Products are found

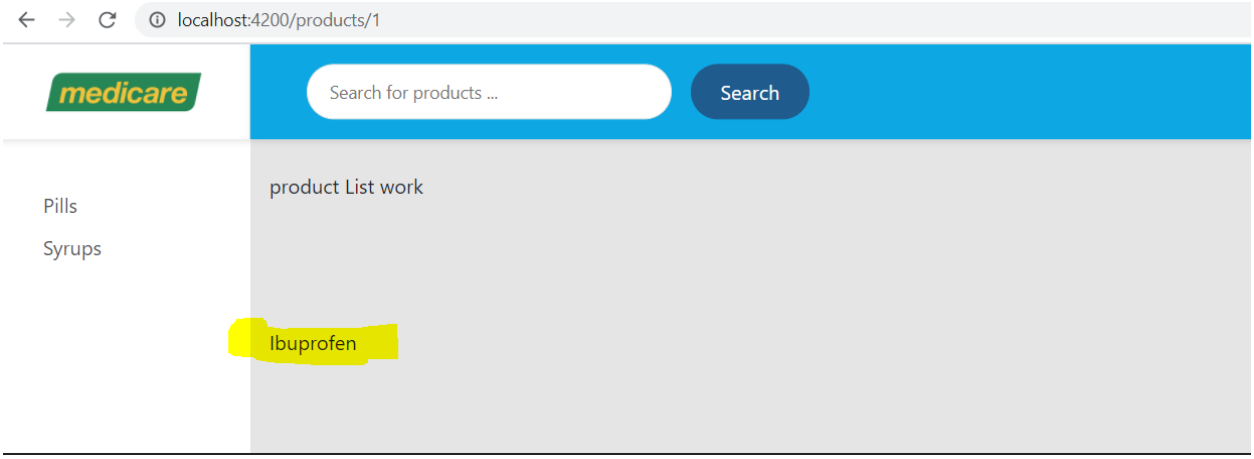


Product details: initial

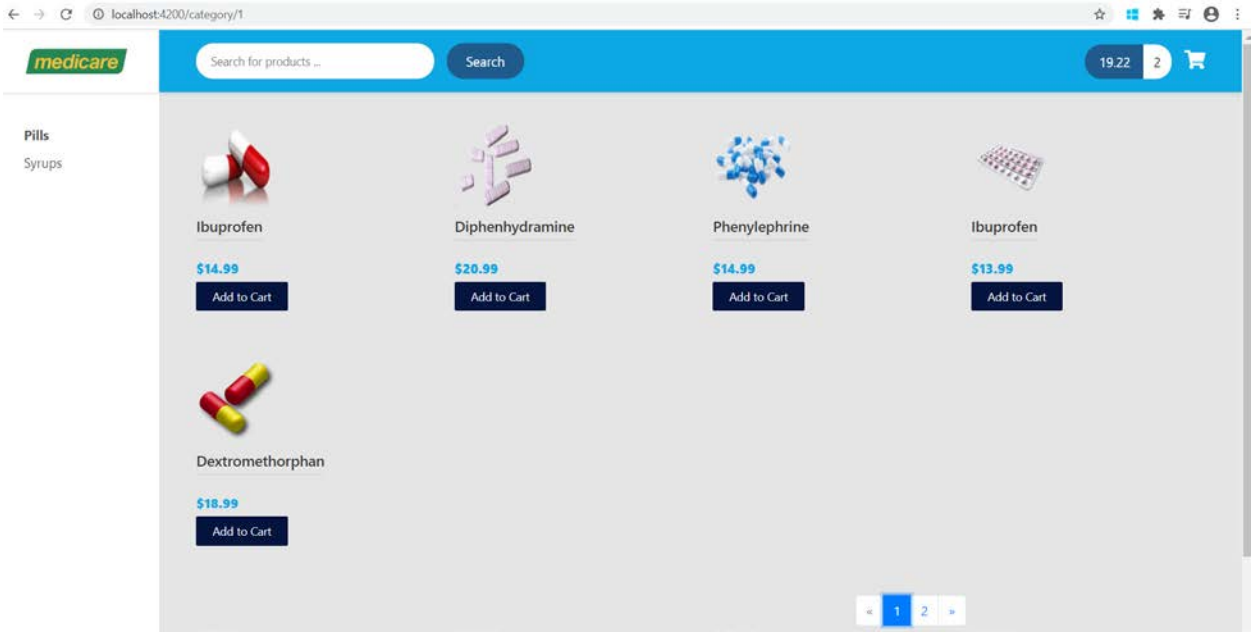


Internal Use - Confidential

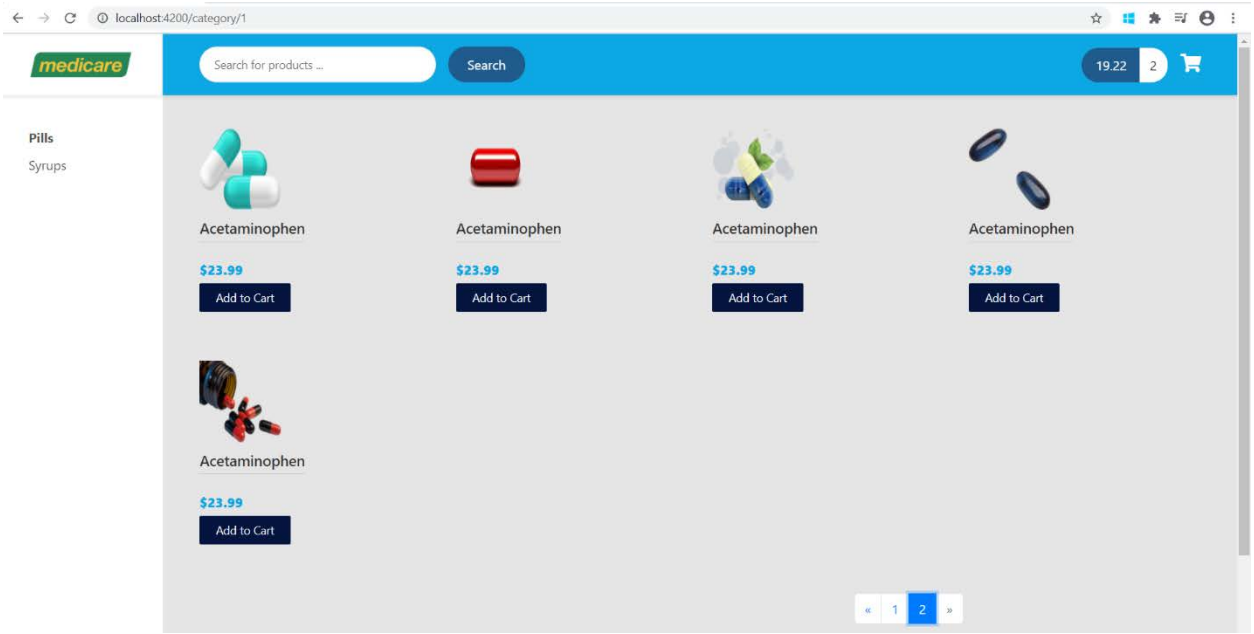
Selected product output



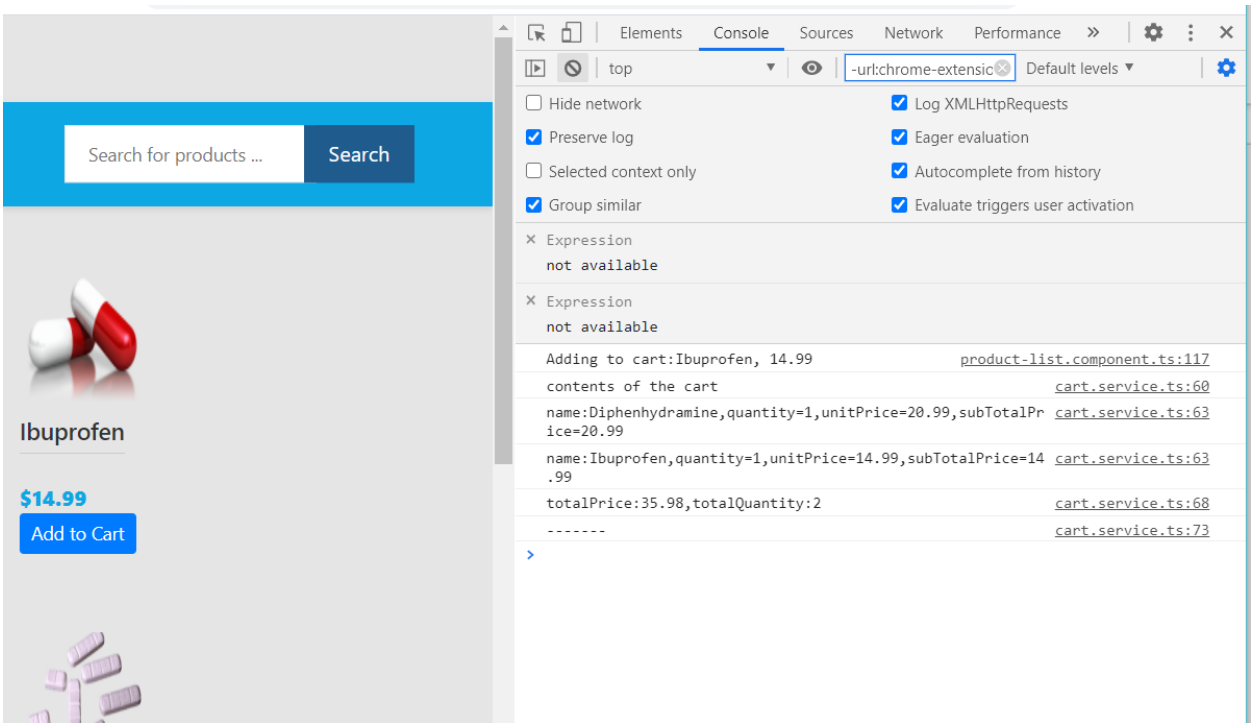
Pagination:



Internal Use - Confidential

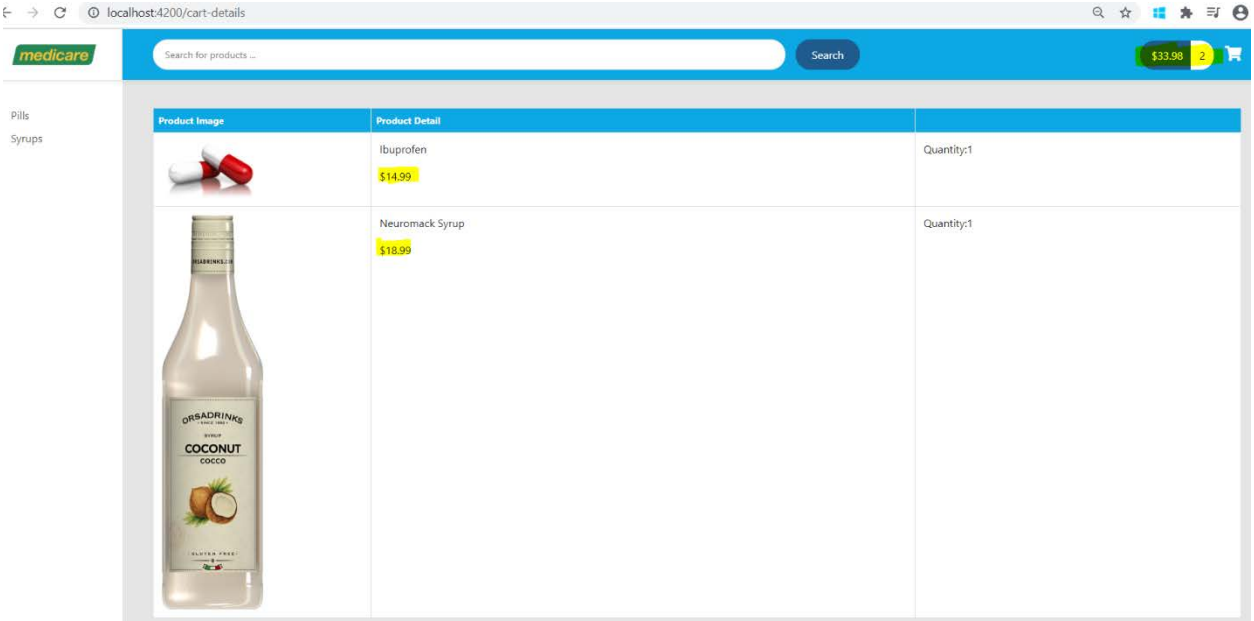


Add to Cart

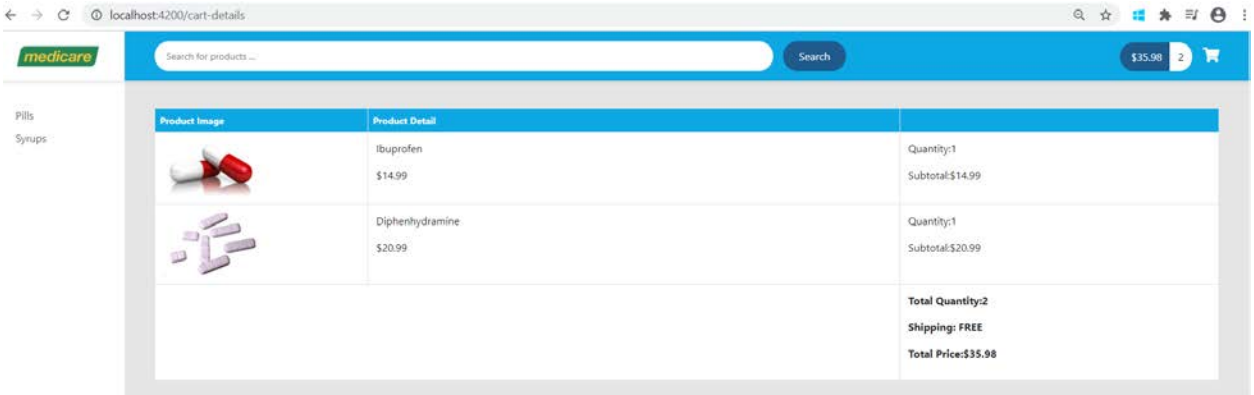


Internal Use - Confidential

Cart Details

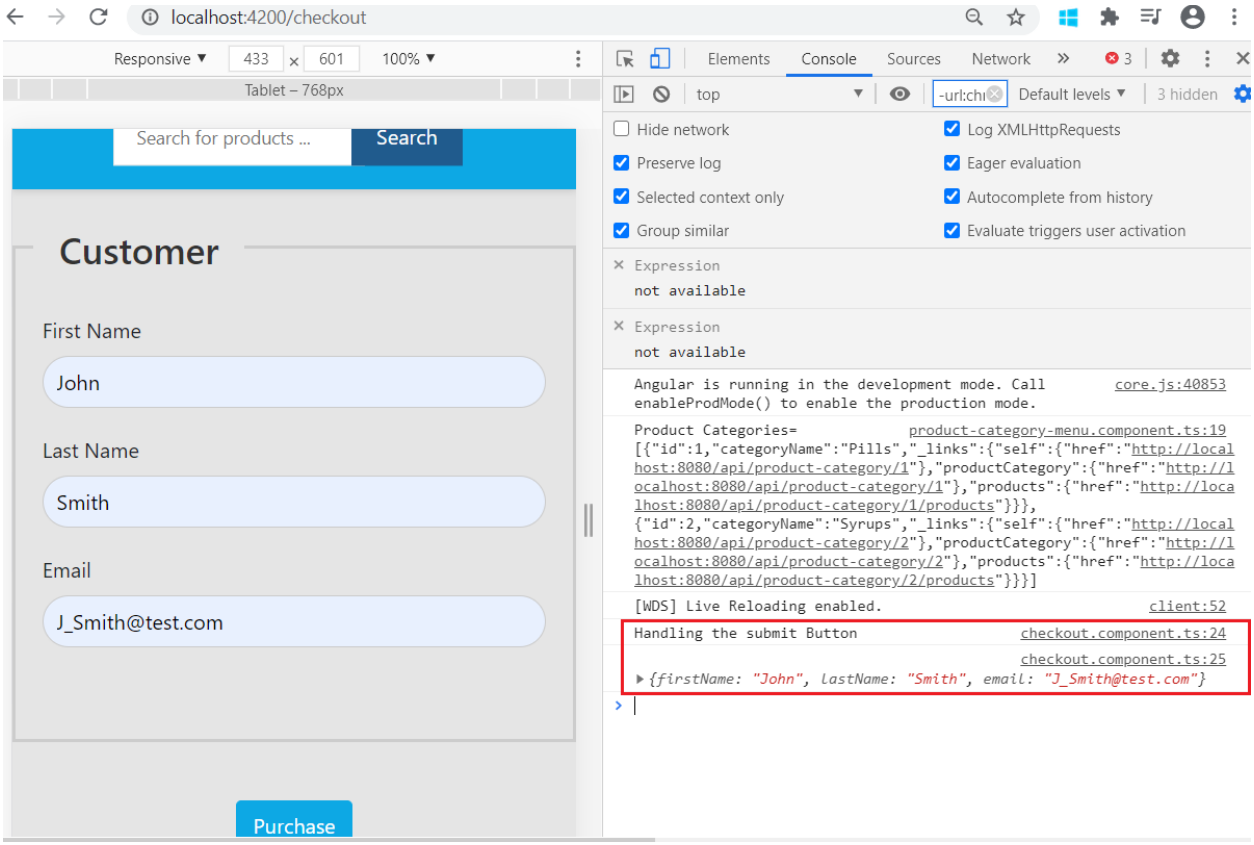


Shopping Summary



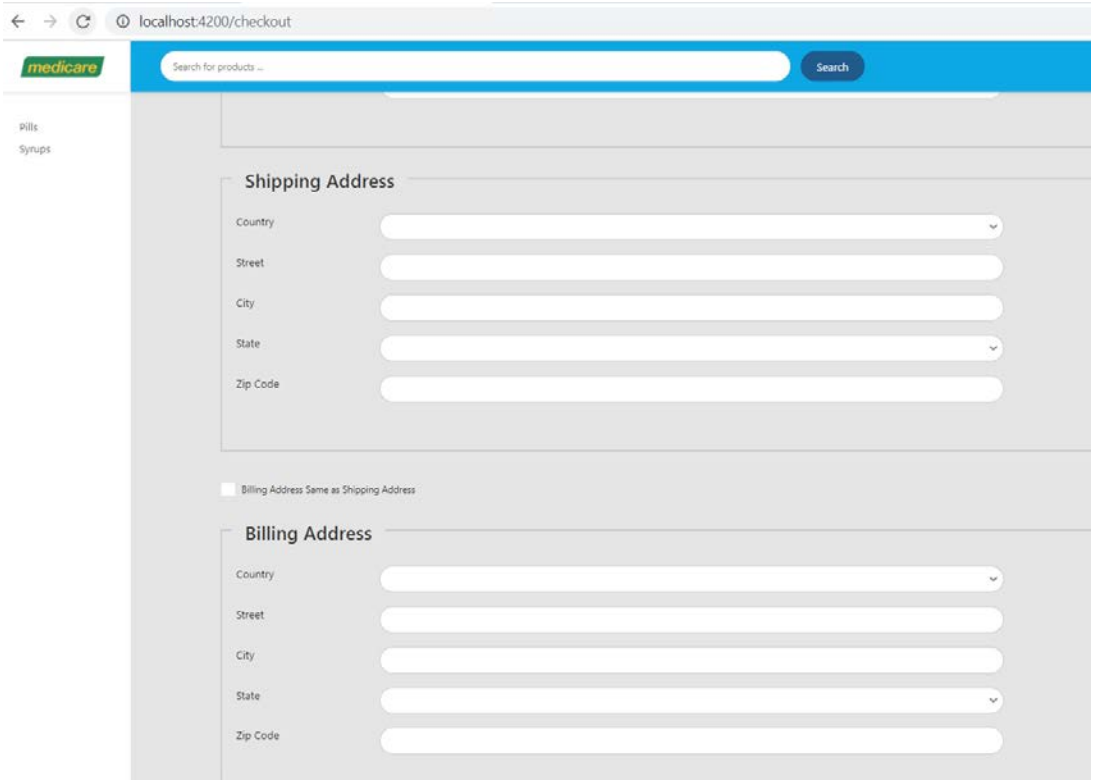
Internal Use - Confidential

Checkout:

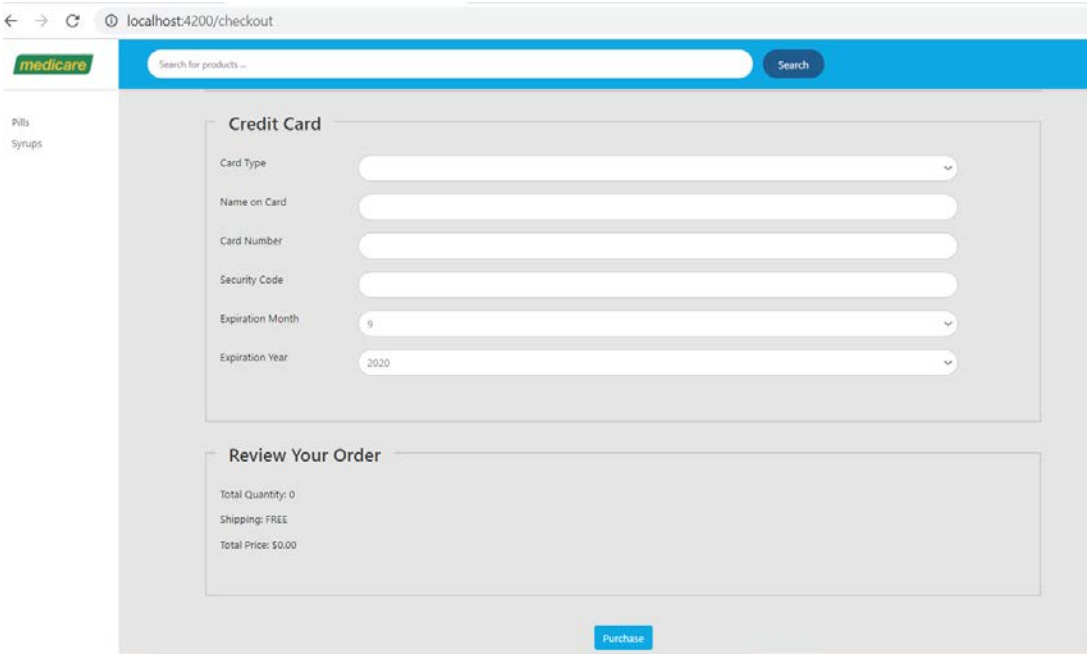


Internal Use - Confidential

Shipping & Billing Section



Credit Card & Order Review Section



Internal Use - Confidential

Git Push :

SPRING-Backend

```
Sarath_Chandra_Lakka@W104CHYHR2 MINGW64 ~/Desktop/ecommerce/backend1
$ git init
Initialized empty Git repository in C:/Users/sarath_chandra_lakka/Desktop/ecomme
rce/backend1/.git/

Sarath_Chandra_Lakka@W104CHYHR2 MINGW64 ~/Desktop/ecommerce/backend1 (master)
$ git status
On branch master

No commits yet

Untracked files:
  (use "git add <file>..." to include in what will be committed)
        springbootecommerce/

nothing added to commit but untracked files present (use "git add" to track)

Sarath_Chandra_Lakka@W104CHYHR2 MINGW64 ~/Desktop/ecommerce/backend1 (master)
$ git add .
warning: LF will be replaced by CRLF in springbootecommerce/springbootecommerce/
.gitignore.
The file will have its original line endings in your working directory
warning: LF will be replaced by CRLF in springbootecommerce/springbootecommerce/
.mvn/wrapper/MavenWrapperDownloader.java.
The file will have its original line endings in your working directory
warning: LF will be replaced by CRLF in springbootecommerce/springbootecommerce/
.mvn/wrapper/maven-wrapper.properties.
The file will have its original line endings in your working directory
warning: LF will be replaced by CRLF in springbootecommerce/springbootecommerce/
mvnw.
The file will have its original line endings in your working directory
warning: LF will be replaced by CRLF in springbootecommerce/springbootecommerce/
mvnw.cmd.
The file will have its original line endings in your working directory
warning: LF will be replaced by CRLF in springbootecommerce/springbootecommerce/
pom.xml.
The file will have its original line endings in your working directory
warning: LF will be replaced by CRLF in springbootecommerce/springbootecommerce/
src/main/java/com/simplilearn/springbootecommerce/SpringbootecommerceApplication
.java.
The file will have its original line endings in your working directory
warning: LF will be replaced by CRLF in springbootecommerce/springbootecommerce/
src/main/resources/application.properties.
The file will have its original line endings in your working directory
warning: LF will be replaced by CRLF in springbootecommerce/springbootecommerce/
src/test/java/com/simplilearn/springbootecommerce/SpringbootecommerceApplication
Tests.java.
The file will have its original line endings in your working directory

Sarath_Chandra_Lakka@W104CHYHR2 MINGW64 ~/Desktop/ecommerce/backend1 (master)
$ git commit -m "first commit for Java"
[master (root-commit) a7d5212] first commit for Java
 117 files changed, 2224 insertions(+)
 create mode 100644 springbootecommerce/.idea/.gitignore
 create mode 100644 springbootecommerce/.idea/compiler.xml
 create mode 100644 springbootecommerce/.idea/encodings.xml
 create mode 100644 springbootecommerce/.idea/jarRepositories.xml
```


Internal Use - Confidential

MINGW64:/c/Users/sarath_chandra_lakka/Desktop/ecommerce/backend1

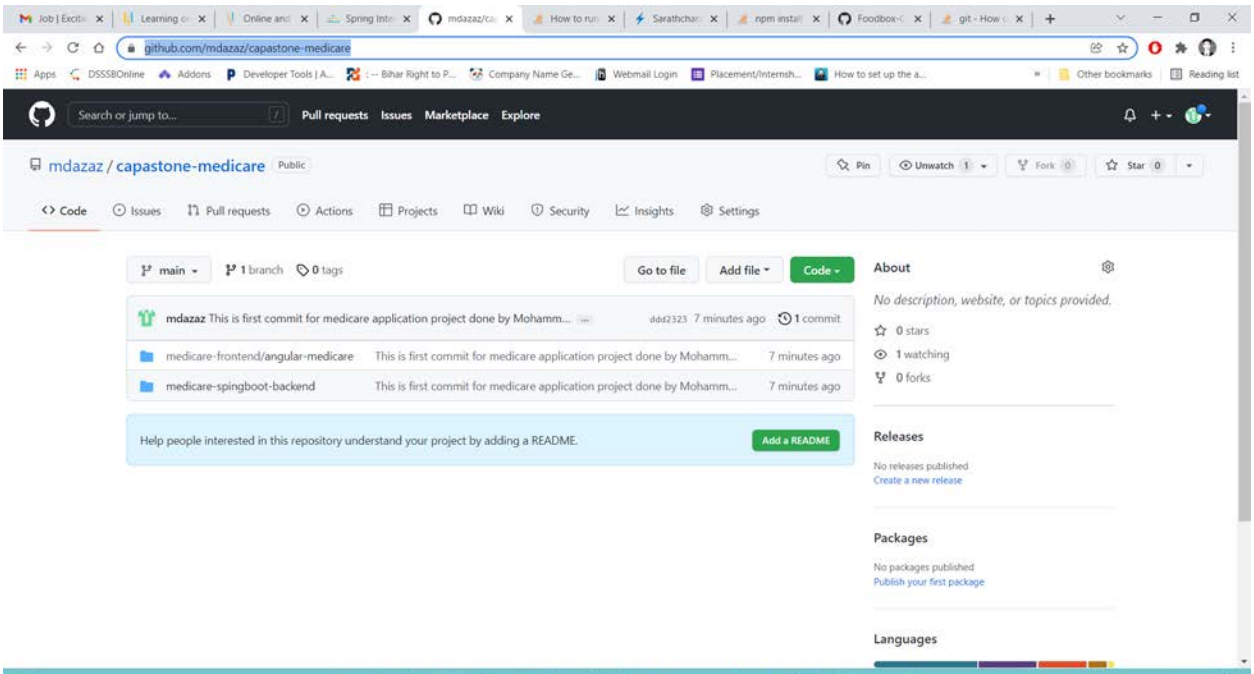
```
create mode 100644 springbootecommerce/.idea/jarRepositories.xml
create mode 100644 springbootecommerce/.idea/libraries/Maven__antlr_antlr_2_7_7.xml
create mode 100644 springbootecommerce/.idea/libraries/Maven__ch_qos_logback_logback_classic_1_2_3.xml
create mode 100644 springbootecommerce/.idea/libraries/Maven__ch_qos_logback_logback_core_1_2_3.xml
create mode 100644 springbootecommerce/.idea/libraries/Maven__com_fasterxml_classmate_1_5_1.xml
create mode 100644 springbootecommerce/.idea/libraries/Maven__com_fasterxml_jackson_core_jackson_annotations_2_11_1.xml
create mode 100644 springbootecommerce/.idea/libraries/Maven__com_fasterxml_jackson_core_jackson_core_2_11_1.xml
create mode 100644 springbootecommerce/.idea/libraries/Maven__com_fasterxml_jackson_core_jackson_databind_2_11_1.xml
create mode 100644 springbootecommerce/.idea/libraries/Maven__com_fasterxml_jackson_datatype_jackson_datatype_jdk8_2_11_1.xml
create mode 100644 springbootecommerce/.idea/libraries/Maven__com_fasterxml_jackson_datatype_jackson_datatype_jsr310_2_11_1.xml
create mode 100644 springbootecommerce/.idea/libraries/Maven__com_fasterxml_jackson_module_jackson_module_parameter_names_2_11_1.xml
create mode 100644 springbootecommerce/.idea/libraries/Maven__com_jayway_jsonpath_json_path_2_4_0.xml
create mode 100644 springbootecommerce/.idea/libraries/Maven__com_sun_activation_jakarta_activation_1_2_2.xml
create mode 100644 springbootecommerce/.idea/libraries/Maven__com_sun_istack_istack_commons_runtime_3_0_11.xml
create mode 100644 springbootecommerce/.idea/libraries/Maven__com_vaadin_external_google_android_json_0_0_20131108_vaadin1.xml
create mode 100644 springbootecommerce/.idea/libraries/Maven__com_zaxxer_HikariCP_3_4_5.xml
create mode 100644 springbootecommerce/.idea/libraries/Maven__jakarta_activation_jakarta_activation_api_1_2_2.xml
create mode 100644 springbootecommerce/.idea/libraries/Maven__jakarta_annotation_jakarta_annotation_api_1_3_5.xml
create mode 100644 springbootecommerce/.idea/libraries/Maven__jakarta_persistence_jakarta_persistence_api_2_2_3.xml
create mode 100644 springbootecommerce/.idea/libraries/Maven__jakarta_transaction_jakarta_transaction_api_1_3_3.xml
create mode 100644 springbootecommerce/.idea/libraries/Maven__jakarta_xml_bind_jakarta_xml_bind_api_2_3_3.xml
create mode 100644 springbootecommerce/.idea/libraries/Maven__mysql_mysql_connector_java_8_0_21.xml
create mode 100644 springbootecommerce/.idea/libraries/Maven__net_bytebuddy_byte_buddy_1_10_13.xml
create mode 100644 springbootecommerce/.idea/libraries/Maven__net_bytebuddy_byte_buddy_agent_1_10_13.xml
create mode 100644 springbootecommerce/.idea/libraries/Maven__net_minidev_accessors_smart_1_2.xml
create mode 100644 springbootecommerce/.idea/libraries/Maven__net_minidev_json_smart_2_3.xml
create mode 100644 springbootecommerce/.idea/libraries/Maven__org_apache_logging_log4j_log4j_api_2_13_3.xml
create mode 100644 springbootecommerce/.idea/libraries/Maven__org_apache_logging_log4j_log4j_to_slf4j_2_13_3.xml
create mode 100644 springbootecommerce/.idea/libraries/Maven__org_apache_tomcat_embed_tomcat_embed_core_9_0_37.xml
create mode 100644 springbootecommerce/.idea/libraries/Maven__org_apache_tomcat_embed_tomcat_embed_websocket_9_0_37.xml
create mode 100644 springbootecommerce/.idea/libraries/Maven__org_apiguardian_apiguardian_api_1_1_0.xml
create mode 100644 springbootecommerce/.idea/libraries/Maven__org_aspectj_aspectjweaver_1_9_6.xml
create mode 100644 springbootecommerce/.idea/libraries/Maven__org_assertj_assertj_core_3_16_1.xml
create mode 100644 springbootecommerce/.idea/libraries/Maven__org_atteo_evo_inflector_1_2_2.xml
create mode 100644 springbootecommerce/.idea/libraries/Maven__org_dom4j_dom4j_2_1_3.xml
create mode 100644 springbootecommerce/.idea/libraries/Maven__org_glassfish_jakarta_el_3_0_3.xml
create mode 100644 springbootecommerce/.idea/libraries/Maven__org_glassfish_jaxb_jaxb_runtime_2_3_3.xml
create mode 100644 springbootecommerce/.idea/libraries/Maven__org_glassfish_jaxb_txw2_2_3_3.xml
create mode 100644 springbootecommerce/.idea/libraries/Maven__org_hamcrest_hamcrest_2_2.xml
create mode 100644 springbootecommerce/.idea/libraries/Maven__org_hibernate_common_hibernate_commons_annotations_5_1_0_Final.xml
create mode 100644 springbootecommerce/.idea/libraries/Maven__org_hibernate_hibernate_core_5_4_18_Final.xml
create mode 100644 springbootecommerce/.idea/libraries/Maven__org_javassist_javassist_3_24_0_GA.xml
create mode 100644 springbootecommerce/.idea/libraries/Maven__org_jboss_jandex_2_1_3_Final.xml
create mode 100644 springbootecommerce/.idea/libraries/Maven__org_jboss_logging_jboss_logging_3_4_1_Final.xml
create mode 100644 springbootecommerce/.idea/libraries/Maven__org_junit_jupiter_junit_jupiter_5_6_2.xml
create mode 100644 springbootecommerce/.idea/libraries/Maven__org_junit_jupiter_junit_jupiter_api_5_6_2.xml
create mode 100644 springbootecommerce/.idea/libraries/Maven__org_junit_jupiter_junit_jupiter_engine_5_6_2.xml
create mode 100644 springbootecommerce/.idea/libraries/Maven__org_junit_jupiter_junit_jupiter_params_5_6_2.xml
create mode 100644 springbootecommerce/.idea/libraries/Maven__org_junit_platform_junit_platform_commons_1_6_2.xml
create mode 100644 springbootecommerce/.idea/libraries/Maven__org_junit_platform_junit_platform_engine_1_6_2.xml
create mode 100644 springbootecommerce/.idea/libraries/Maven__org_mockito_mockito_core_3_3_3.xml
create mode 100644 springbootecommerce/.idea/libraries/Maven__org_mockito_mockito_junit_jupiter_3_3_3.xml
create mode 100644 springbootecommerce/.idea/libraries/Maven__org_objenesis_objenesis_2_6.xml
create mode 100644 springbootecommerce/.idea/libraries/Maven__org_opentest4j_opentest4j_1_2_0.xml
create mode 100644 springbootecommerce/.idea/libraries/Maven__org_ow2_asm_asm_5_0_4.xml
create mode 100644 springbootecommerce/.idea/libraries/Maven__org_projectlombok_lombok_1_18_12.xml
create mode 100644 springbootecommerce/.idea/libraries/Maven__org_skyscreamer_jsonassert_1_5_0.xml
create mode 100644 springbootecommerce/.idea/libraries/Maven__org_slf4j_jul_to_slf4j_1_7_30.xml
```

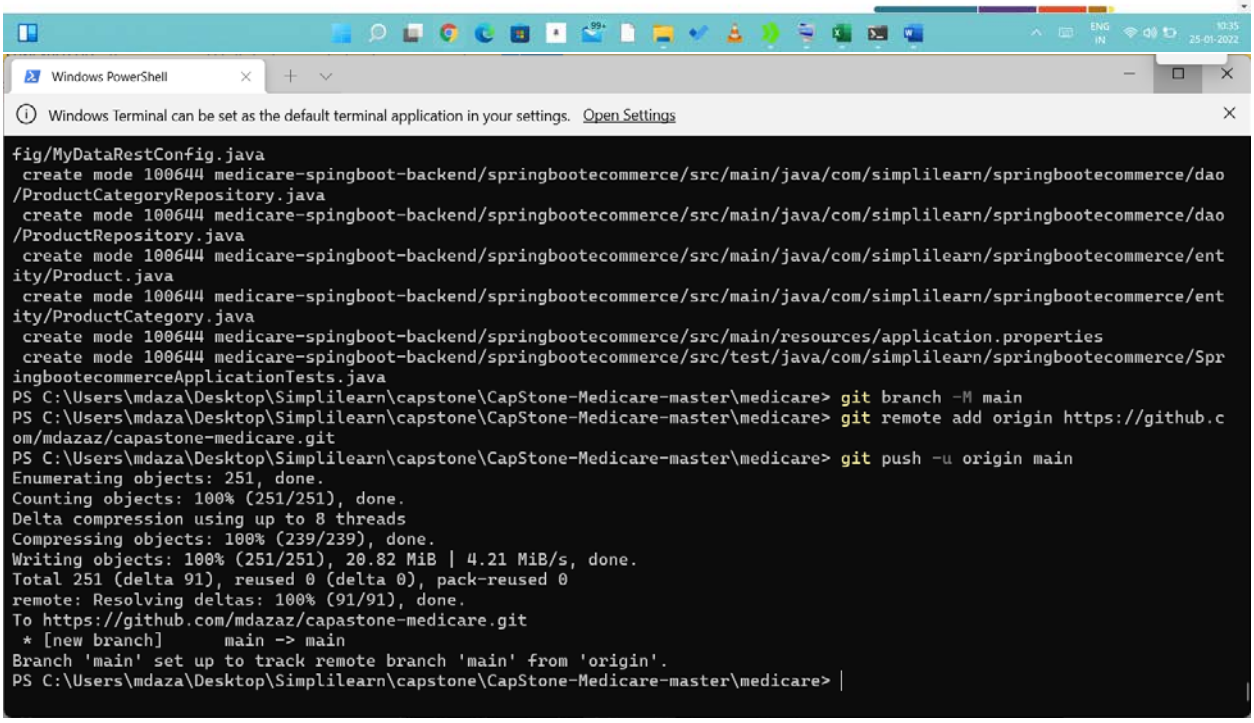

Internal Use - Confidential

```
MINGW64:/c/Users/sarath_chandra_lakka/Desktop/ecommerce/backend1
 create mode 100644 springbootecommerce/.idea/libraries/Maven__org_springframework_data_spring_data_rest_core_3_3_2_RELEASE.xml
 create mode 100644 springbootecommerce/.idea/libraries/Maven__org_springframework_data_spring_data_rest_webmvc_3_3_2_RELEASE.xml
 create mode 100644 springbootecommerce/.idea/libraries/Maven__org_springframework_hateoas_spring_hateoas_1_1_0_RELEASE.xml
 create mode 100644 springbootecommerce/.idea/libraries/Maven__org_springframework_plugin_spring_plugin_core_2_0_0_RELEASE.xml
 create mode 100644 springbootecommerce/.idea/libraries/Maven__org_springframework_spring_aop_5_2_8_RELEASE.xml
 create mode 100644 springbootecommerce/.idea/libraries/Maven__org_springframework_spring_aspects_5_2_8_RELEASE.xml
 create mode 100644 springbootecommerce/.idea/libraries/Maven__org_springframework_spring_beans_5_2_8_RELEASE.xml
 create mode 100644 springbootecommerce/.idea/libraries/Maven__org_springframework_spring_context_5_2_8_RELEASE.xml
 create mode 100644 springbootecommerce/.idea/libraries/Maven__org_springframework_spring_core_5_2_8_RELEASE.xml
 create mode 100644 springbootecommerce/.idea/libraries/Maven__org_springframework_spring_expression_5_2_8_RELEASE.xml
 create mode 100644 springbootecommerce/.idea/libraries/Maven__org_springframework_spring_jcl_5_2_8_RELEASE.xml
 create mode 100644 springbootecommerce/.idea/libraries/Maven__org_springframework_spring_jdbc_5_2_8_RELEASE.xml
 create mode 100644 springbootecommerce/.idea/libraries/Maven__org_springframework_spring_orm_5_2_8_RELEASE.xml
 create mode 100644 springbootecommerce/.idea/libraries/Maven__org_springframework_spring_test_5_2_8_RELEASE.xml
 create mode 100644 springbootecommerce/.idea/libraries/Maven__org_springframework_spring_tx_5_2_8_RELEASE.xml
 create mode 100644 springbootecommerce/.idea/libraries/Maven__org_springframework_spring_web_5_2_8_RELEASE.xml
 create mode 100644 springbootecommerce/.idea/libraries/Maven__org_springframework_spring_webmvc_5_2_8_RELEASE.xml
 create mode 100644 springbootecommerce/.idea/libraries/Maven__org_xmlunit_xmlunit_core_2_7_0.xml
 create mode 100644 springbootecommerce/.idea/libraries/Maven__org_yaml_snakeyaml_1_26.xml
 create mode 100644 springbootecommerce/.idea/misc.xml
 create mode 100644 springbootecommerce/.idea/modules.xml
 create mode 100644 springbootecommerce/.idea/springbootecommerce.iml
 create mode 100644 springbootecommerce/.idea/vcs.xml
 create mode 100644 springbootecommerce/.project
 create mode 100644 springbootecommerce/springbootecommerce/.gitignore
 create mode 100644 springbootecommerce/springbootecommerce/.mvn/wrapper/MavenWrapperDownloader.java
 create mode 100644 springbootecommerce/springbootecommerce/.mvn/wrapper/maven-wrapper.jar
 create mode 100644 springbootecommerce/springbootecommerce/.mvn/wrapper/maven-wrapper.properties
 create mode 100644 springbootecommerce/springbootecommerce/mvnw
 create mode 100644 springbootecommerce/springbootecommerce/mvnw.cmd
 create mode 100644 springbootecommerce/springbootecommerce/pom.xml
 create mode 100644 springbootecommerce/springbootecommerce/src/main/java/com/simplilearn/springbootecommerce/SpringbootecommerceApplication.java
 create mode 100644 springbootecommerce/springbootecommerce/src/main/java/com/simplilearn/springbootecommerce/config/MyDataRestConfig.java
 create mode 100644 springbootecommerce/springbootecommerce/src/main/java/com/simplilearn/springbootecommerce/dao/ProductCategoryRepository.java
 create mode 100644 springbootecommerce/springbootecommerce/src/main/java/com/simplilearn/springbootecommerce/dao/ProductRepository.java
 create mode 100644 springbootecommerce/springbootecommerce/src/main/java/com/simplilearn/springbootecommerce/entity/Product.java
 create mode 100644 springbootecommerce/springbootecommerce/src/main/java/com/simplilearn/springbootecommerce/entity/ProductCategory.java
 create mode 100644 springbootecommerce/springbootecommerce/src/main/resources/application.properties
 create mode 100644 springbootecommerce/springbootecommerce/src/test/java/com/simplilearn/springbootecommerce/SpringbootecommerceApplicationTests.java

Sarath_Chandra_Lakka@W104CHYHR2 MINGW64 ~/Desktop/ecommerce/backend1 (master)
$ git remote add origin https://github.com/sarathchandralakka/CapStone-Medicare.git

Sarath_Chandra_Lakka@W104CHYHR2 MINGW64 ~/Desktop/ecommerce/backend1 (master)
$ git push -u origin master
Enumerating objects: 140, done.
Counting objects: 100% (140/140), done.
Delta compression using up to 8 threads
Compressing objects: 100% (129/129), done.
Writing objects: 100% (140/140), 68.07 KiB | 1.48 MiB/s, done.
Total 140 (delta 82), reused 0 (delta 0)
remote: Resolving deltas: 100% (82/82), done.
To https://github.com/sarathchandralakka/CapStone-Medicare.git
 * [new branch]      master -> master
Branch 'master' set up to track remote branch 'master' from 'origin'.

Sarath_Chandra_Lakka@W104CHYHR2 MINGW64 ~/Desktop/ecommerce/backend1 (master)
$ |
```

Git Link: https://github.com/mdazaz/capastone-medicare

Internal Use - Confidential





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