Product catalog application

Created Spring boot application with following dependencies.

1. Spring boot with version 2.1.9.RELEASE
2. Java 1.8 version
3. For testing spring-boot-starter-test and junit-jupiter-engine (Junit5)
4. For creating REST webservices used spring-boot-starter-web
5. Spring-boot-data-jpa for data persistence
6. Opencsv dependency to parse CSV file to trigger db update
7. H2 database for in-memory database

Database name: product\_catalog\_db

Table created: products

Table contents: product\_code (SKU), brand, category, size, color, price, seller

Table schema is created by spring-boot-data-jpa based on Product entity class defined in model package.

Initial values are inserted to products table using data.sql script defined in classpath (src/main/resources)

To trigger database update for every 8 hours, used Timer Task. The data needs to inserted to db is placed in CSV file (system location). As part of task, we retrieve product information from CSV file and map it to Product entity class and save it to database. This task will be repeated for every 8 hours. We update CSV file with new product details based on new brands/sellers. Task details are available in MainApplication.class

As part of this application, exposed below REST endpoints to search product catalog

1. Group by brand

/api/v1/products/getProducts/brand/{brand}

1. Group by price (retrieves products with price less than or equal to given price)

/api/v1/products/getProducts/price/{price}

1. Group by color

/api/v1/products/getProducts/color/{color}

1. Group by size

/api/v1/products/getProducts/size/{size}

1. Get by SKU (SKU is nothing but product code)

/api/v1/products/getProducts/SKU/{SKU}

1. Available products by seller

/api/v1/products/getProducts/seller/{seller}

1. Available number of products by seller

/api/v1/products/getProducts/seller/{seller}/count