

My Retail Application Design Document

Version	1.0
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Change Log:

Author	Date of Change	Description of Change
Lesin	12/21/2019	Initial Draft

Introduction

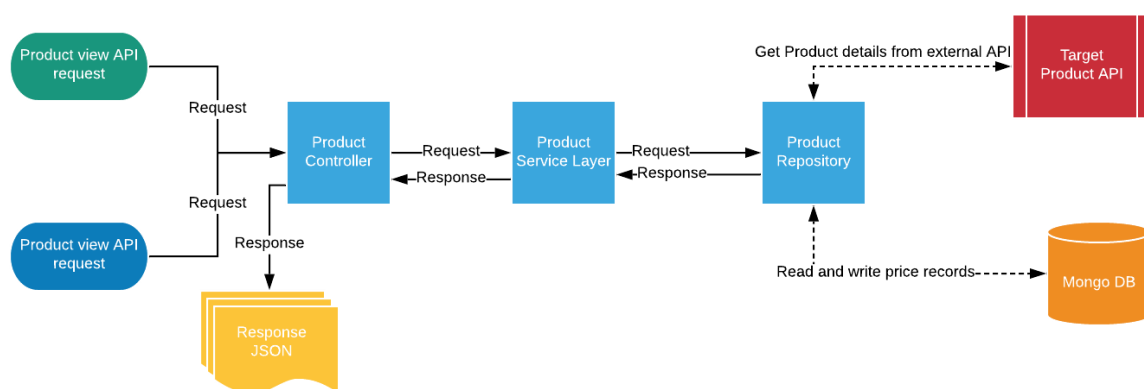
This document tracks the design component for my retail application. Document covers integration and code level changes implemented part of this rest application.

Source Control Repository : <https://github.com/LesinSurendran/CodeRepo>

Design Overview

My retail application is a spring boot based rest api implementation. The application uses a No SQL database (MongoDB) for storing the price records and invokes the target redsky API for retrieving other product details.

Flow Diagram:



Major Design Components:

<code>/myretail/src/main/java/com/myretail/controller/ProductController.java</code>	<p>This is the controller class and the first entry point for the REST API. The class has the URI mapping as <code>v1/products/<product-id></code>. Both update price and get product details calls reaches this controller</p> <p>Main Methods:</p> <p>findProductById - Gets the product id and invokes the service layer to get the product details.</p> <p>updatePrice- Gets the product id and invokes the service layer to update the price.</p> <p>handleProductNotFound - Handles the product not found exception scenarios and returns error in a user readable message</p>
<code>/myretail/src/main/java/com/myretail/service</code>	<p>This is the common service layer command used for both get products and update price. The service</p>

ce/ProductServiceImpl.java	<p>implementation will access both database and external API to complete the actions.</p> <p>Main Methods:</p> <p>findProductById - Gets the product id and invokes the repository to get the price details and invokes the Target redsky API to get the product description details.</p> <p>updatePrice- Gets the product id and invokes the repository layer to update the price.</p>
/myretail/src/main/java/com/myretail/repository/ProductRepository.java	The repository is used to update any database actions and is extending the MongoRepository.
/myretail/src/main/resources/application- <i><env></i> .properties	This files saves the configuration level details of the application.
/myretail/src/main/java/com/myretail/model/Offer.java	This is the java mongo document physical entity that is used to reflect the OFFER table
/myretail/src/main/java/com/myretail/constants/MyRetailConstants.java	This files has the common constants which are used in the application.
/myretail/pom.xml	This file contains project level configuration and dependency mapping associated with this project.

Database Specifications:

My retail application uses No SQL Mongo database for storing the price records. The OFFER table will be used to save the price data at a product id level.

🚩 Offer			
	_id Int32	price Double	currencycode String
1	123	10	"USD"
2	11111	13.49	"USD"
3	13860428	13.49	"USD"
4	53184864	10	"USD"
5	53494594	120.49	"USD"
6	53648312	220.49	"USD"
7	54439661	1210.49	"USD"
8	54549976	20.49	"USD"
9	54549991	131.49	"USD"
10	78842191	120.49	"USD"

API Specifications:

1. View Products REST API

This API provides the price and description of a product based on the input product id.

Http Method	GET
URL	http://<hostname>/v1/products/<product-id>
Request Body	NA
Success Http code	200 Ok
Sample URL	http://localhost:8102/v1/products/54439661
Sample Success Response	<pre>{ "product": { "id": 54439661, "name": "Kids's Astronaut Union Suit Pajamas - Cat & Jack's Orange M", "current_price": { "value": 1210.49, "currency_code": "USD" } }, "responseTime": "25ms", }</pre>

	<pre> { "status": "SUCCESS" } </pre>
Sample Error Response	<pre> { "exceptionCode": "404", "exceptionMessage": "Product Not Found", "status": "FAILURE" } </pre>

2. Update Price REST API

This API can be used to update the price records for a given product id. The data will be saved in no SQL data source.

Http Method	PUT
URL	http://<hostname>/v1/products/<product-id>
Request Body	<pre> { "value": 1210.49, "currency_code": "USD" } </pre>
Success Http code	200 Ok
Sample URL	http://localhost:8102/v1/products/54439661
Sample Success Response	<pre> { "product": { "id": 54439661, "name": "Kids Astronaut Union Suit Pajamas - Cat & Jack Orange M", "current_price": { "value": 1210.49, "currency_code": "USD" } }, "responseTime": "25ms", "status": "SUCCESS" } </pre>

Sample Error Response

```
{  
  "exceptionCode": "404",  
  "exceptionMessage": "Product Not Found",  
  "status": "FAILURE"  
}
```