

FoodBoxWeb Application

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PROJECT OVERVIEW

- ▮ This document aims to elaborate the features, database model, application architecture and flow, automation testing, DevOps, technology used for the development and the sprint planning of the project named Foodbox.
- ▮ FoodBox is an online food delivery web application which lets the user order their favourite dishes from the comfort of their own homes.

ABOUT DEVELOPER



This application is created from scratch by Arshiya Saxena through the training received from Simplilearn.

Sprints planned

- ▮ The project is delivered within four sprints (around one-week per sprint), with every sprint delivering a minimal viable product. It is estimated to have about 20 hours per sprint.

Sprint 1
(5 Days)

Day 1 – Day 5 (user stories)

- ▮ As a developer, I want to setup MySQL connection and Spring Boot enabled Eclipse Maven project in my local machine so that I can start to develop REST APIs application.
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- ▮ As a developer, I want to create a 'develop' branch so that the incremental feature development can be tested in 'develop' branch whilst the master branch will be used for end-of-sprint release and staging.
- ▮ As an administrator, I want to log-in to admin portal so that my browser session storage is saved and I am allowed to manipulate master data and view reports.
- ▮ As an administrator, I want to have a navigation bar in admin portal so that I can navigate to categories, foods, offers, and reports pages, and logout.

- ▮ As an administrator, I want to log-out from admin portal so that my browser session storage will be removed.
- ▮ As an administrator, I want to view a list of food categories in a table so that I can proceed to update, delete or enable/disable the available categories.
- ▮ As an administrator, I want to add a food category so that the food category will be displayed in user portal.
- ▮ As an administrator, I want to update food category so that the food category data change will be reflected in user portal.
- ▮ As an administrator, I want to delete a food category so that the removed food category will not be displayed in user portal.
- ▮ As an administrator, I want to enable/disable a food category so that the enabled/disabled food category will/will not be displayed in user portal.

- ▮ As an administrator, I want to add or update category image so that the category image can be downloaded and displayed in user portal.
- ▮ As a guest/user, I want to have a navigation bar in user portal so that I can navigate to food search result page and cart pages, and logout.
- ▮ As a guest/user, I want to view the list of food cuisines/categories with image and name when landed user portal so that I can navigate to foods catalog page.
- ▮ As a guest, I want to sign up as user so that I can log-in to user portal
- ▮ As a user, I want to log-in to user portal so that my username will be displayed at top-right corner of the navigation bar.
- ▮ As a user, I want to log-out from user portal so that my username will not be displayed at top-right corner of the navigation bar.
- ▮ As a tester, I want to write unit/integration tests so that I can validate the REST controllers, services and data persistence layer for the authentication and food categories.

Sprint 2
(5 Days)

Day 6 – Day 10 (user stories)

As an administrator, I want to view a list of offers in a table so that I can proceed to update or delete the available offers.

As an administrator, I want to add an offer so that the offer will be displayed in user portal.

As an administrator, I want to update an offer so that the offer data change will be reflected in user portal.

As an administrator, I want to delete an offer so that the removed offer will not be displayed in user portal.

As an administrator, I want to view a list of my food items in a table so that I can proceed to update, delete or enable/disable the available food items.

As an administrator, I want to view a list of food items in a table by pagination, so that to reduce data loading time when food item number getting bigger.

- As an administrator, I want to sort the list of food items in a table, so that the food items can be sorted by food name, category, price, offer, created date, enabled/disabled status in ascending order.
- As an administrator, I want to add a food item so that the food item details will be displayed in user portal.
- As an administrator, I want to update a food item so that the food item data change will be reflected in user portal.
- As an administrator, I want to delete a food item so that the removed food item will not be displayed in user portal.
- As an administrator, I want to enable/disable a food item so that the enabled/disabled food item will/will not be displayed in user portal.
- As an administrator, I want to add or update food image so that the food image can be downloaded and displayed in user portal.
- As a guest/user, I want to view the list of food items with image, name price after selecting food cuisine/category so that I can navigate to food details page.

- ▮ As a guest/user, I want to view the list of food items in card layout by pagination, so that to reduce data loading time when food item number getting bigger.
- ▮ As a guest/user, I want to sort the list of food items so that the food items can be sorted by name, lowest price and highest price.
- ▮ As a guest/user, I want to filter the list of food items so that the food items can be filtered by food categories or offers.
- ▮ As a guest/user, I want to search food with keyword so that the search result of food items will be displayed in cards layout and allow navigation to food details page.

Sprint 3
(5 Days)

Day 11 – Day 15 (user stories)

As a guest/user, I want to navigate to the food details page so that I can view the food image, name, category, description, price and offer, and add food item to cart. The cart item number will also be refreshed and displayed at navigation bar after adding food item to cart.

As a guest/user, I want to navigate to the food cart page so that I can view a list of cart items and the summary of price to paid.

As a guest/user, I want to remove the cart item from the cart page so that the cart item will not be displayed in cart page, the summary of price to paid and the cart item number at the navigation bar will be changed accordingly.

As a guest/user, I want to increase or reduce the number of cart items in cart page so that the summary of price to paid and the cart item number at the navigation bar will be changed accordingly.

As a guest, I want to be forced to sign-in as user so that I can continue to checkout and make payment after confirming the cart items.

As a developer, I want to investigate about Stripe payment gateway so that I can integrate the service to both backend and frontend application.

- ▮ As a user, I want to checkout and make payment so that I can confirm my order.
- ▮ As a user, I want to view my order details after performing checkout and payment so that I can confirm my order, and my food will be delivered.
- ▮ As a user, I want to view my order history so that I can review my previous orders
- ▮ As an administrator, I want to view and filter the list of order reports between two dates so that I can review the orders processed by the system between two dates.
- ▮ As an administrator, I want to view and filter the list of user reports between two dates so that I can review the users signed-up to the system between two dates.
- ▮ As a DevOps engineer, I want to create docker repository for both backend and frontend applications so that I can publish docker images of backend and frontend applications, and pulled and deployed the docker images at AWS EC2 instance.

Sprint 4 (5 Days)

Day 16 – Day 20 (user stories)

- ▮ As a tester, I want to add more unit/integration tests so that I can validate the available REST controllers, services and data persistence layer.
- ▮ As a tester, I want to add more selenium tests so that I can validate the user interfaces of the available web pages for both user and admin portal.
- ▮ As a developer, I want to fix bugs found by tester so that to ensure minimum application defects before ending the project.
- ▮ As a developer, I want to create a new git tag from master branch so that I can release applications for this sprint.
- ▮ As a developer, I want to write specification document so that to demonstrate the application features and capabilities to Foodbox management team.

Application Algorithm

- ▮ The Foodbox system demonstrates a dynamic and responsive online food delivery web application for ordering food items of different cuisines from a restaurant. It has two main functionalities
- ▮ Allow administrator to manage master data such as food categories, food items and offers, and view order and user reports.
- ▮ Allow guest or user to view food categories and food items details, search, filter and sort food items, and add food items to cart. Guest must sign up and login as user to perform checkout and payment.

Admin Portal

- A login page for administrator to sign-in to manage master data and view reports.
- Page to view a table list of categories created by the logged-in administrator. Administrator can delete category by selecting the trash button displayed on each table row. The category can be enabled or disabled by toggling the switch button.
- Page to create category by filling up the category form. Administrator can also upload category image file in this page.
- Page to update category details and change category image.
- Page to view a table list of foods created by the logged-in administrator. Administrator can delete food by selecting the trash button displayed on each table row. The food can be enabled or disabled by toggling the switch button. The page is displayed by pagination. Number of entries to display can be changed by selecting the entries dropdown.

- Page to create food by filling up the food form. Administrator can also upload food image file in this page.
- Page to update food details and change food image.
- Page to view a table list of offers created by the logged-in administrator. Administrator can delete offer by selecting the trash button displayed on each table row.
- Page to create offer by filling up the offer form.
- Page to update offer details.
- Page to view a table list of orders created by the logged-in user. Order list can be filtered by selecting the start or end date input. The order details can be viewed by selecting the eye icon displayed on each table.

User Portal

The web pages of guest or user consist of:

- A sign-up page for guest to register as user.
- A food categories page which downloads category images uploaded from Admin Portal, and displays the images in cards layout. It allows user to navigate to foods page under the category by clicking on the selected card.
- A foods page which downloads food images uploaded from Admin Portal, and displays food name, price and image in cards layout. It allows user to navigate to individual food page by clicking on the selected card.
 - The food cards in this page are displayed by pagination.
 - Number of items to display can be changed by selecting the item dropdown.
 - The foods can also be sorted by name, lowest price and highest price.
 - The foods can be filtered by category and offer types in this page.

- The food search result items can be displayed in this page after user inputs search keyword and hits ENTER at navigation bar.
- A food details page with food name, category, price, description, offer and image. It allows user to add food item to cart by selecting the “Add to Cart” button. Number of cart items would be displayed accordingly at navigation bar next to the cart icon.
- A cart page which displays selected food item details and allows user to change order quantity or remove cart item. Number of cart items would be displayed accordingly at navigation bar next to the cart icon.
- A login page for signed-up user to sign-in to perform checkout and payment.
- A checkout page for signed-in user to view price to paid and delivery information, enter credit or debit card details, make payment and place order.
- An order confirmation page which displays order summary details.

Core Concepts

- ▮ Core Java : To write the code for basic functionalities.
- ▮ Sprint-Boot : To create a standalone application.
- ▮ Git : Used to push the code to an online repository.
- ▮ Frontend development: JSP, Angular, Bootstrap, HTML/CSS, and Javascript
- ▮ Automation and testing technologies: Selenium, Jasmine, and TestNG
- ▮ DevOps and production technologies: Git, GitHub, Jenkins, Docker, Kubernetes, and AWS

GitHub Repository Link

🔗 <https://github.com/arshiyasaxena/Simplilearn-phase-career-readiness>

Conclusion on Enhancing the Application

▮The REST APIs application can be further enhanced:

- To support web security for authentication, authorization and access of frontend API requests.
- To support HTTPs connection
- To add logging for backend system tracing
- The web application can be further enhanced:
 - To add authorization details to HTTP header in API service methods.
 - To add support of descending sort of food list in admin portal by food name, category, price, offer, created date and enabled/disabled status.
 - To make currency of food price and payment price configurable

Unique Selling Points

▮ According to me, the USP of this website/application is that it provides a one-stop solution for all kind of Food ordering requirements.

Thank You