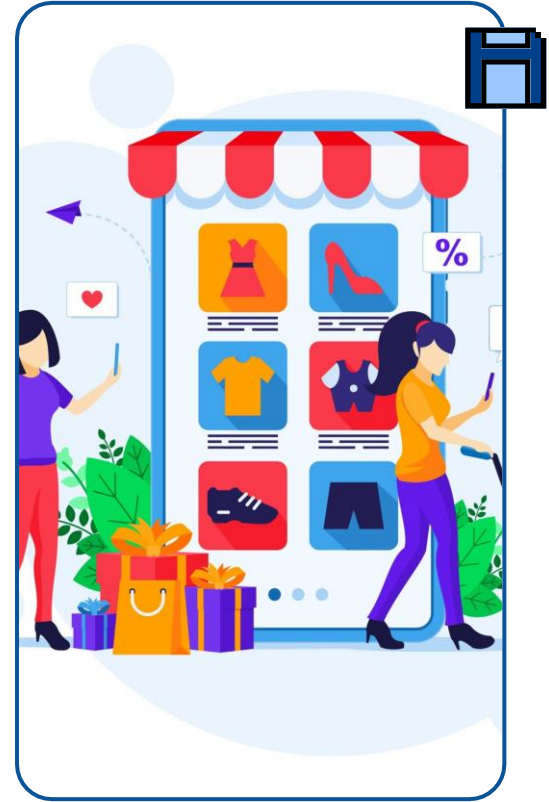




# Online Shopping Cart System



*Advisor: Professor: Obinna KALU, M.Sc., MSCS*

Presenter: Md Sahid Hossain





# Table of Contents

1. Project Overview
2. Use case and ER Diagram
3. Output
4. Project future plan
5. Project Demo





# Project Overview

- An online shopping system must be able to store information about the customers who register on the site and place orders.
- It must also store information about the products available for purchase, indicating price and stock data for each product.
- Customers must be able to have a shopping cart, where the products they choose from the catalog are stored before the customer is ready to place their order.
- When the customer confirms an order, the data model must be able to record the order data as well as payment and shipping information.





# Functional Requirement



## **Add Product**

1. The system shows a product
2. The customer adds the product to shoppingcart
3. The system shows the current shoppingcart

## **Remove Product**

1. The system shows the shoppingcart
2. The customer removes a product from the shoppingcart
3. The system shows the updated shoppingcart





# Functional Requirement



## **Change quantity**

1. The system shows the shoppingcart
2. The customer changes the quantity of a certain product
3. The system shows the updated shoppingcart

## **Place an order**

The customer checks-out the shoppingcart

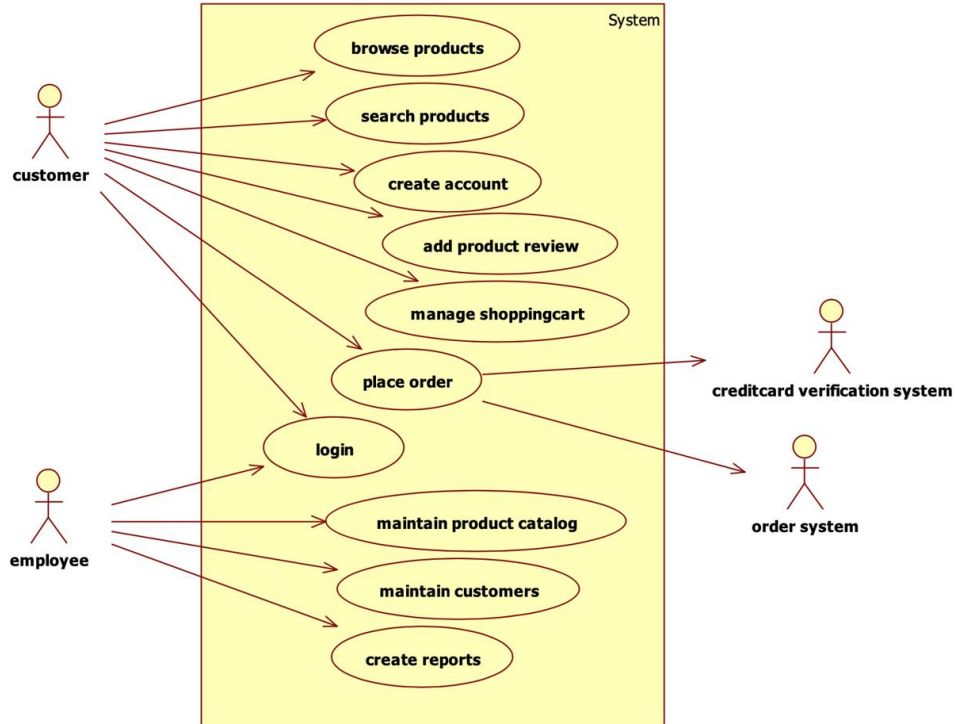
3. The system shows the order
4. The customer confirms the order
5. The system shows the address details





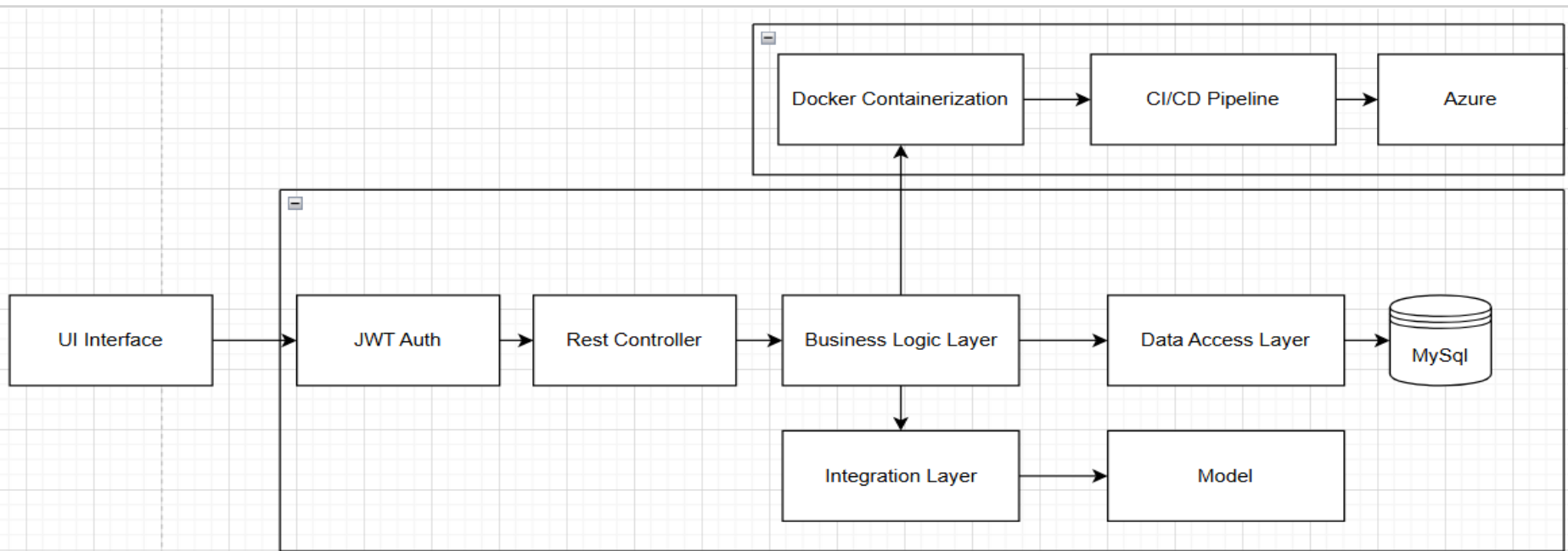
# Use case Diagram

Use case diagram:



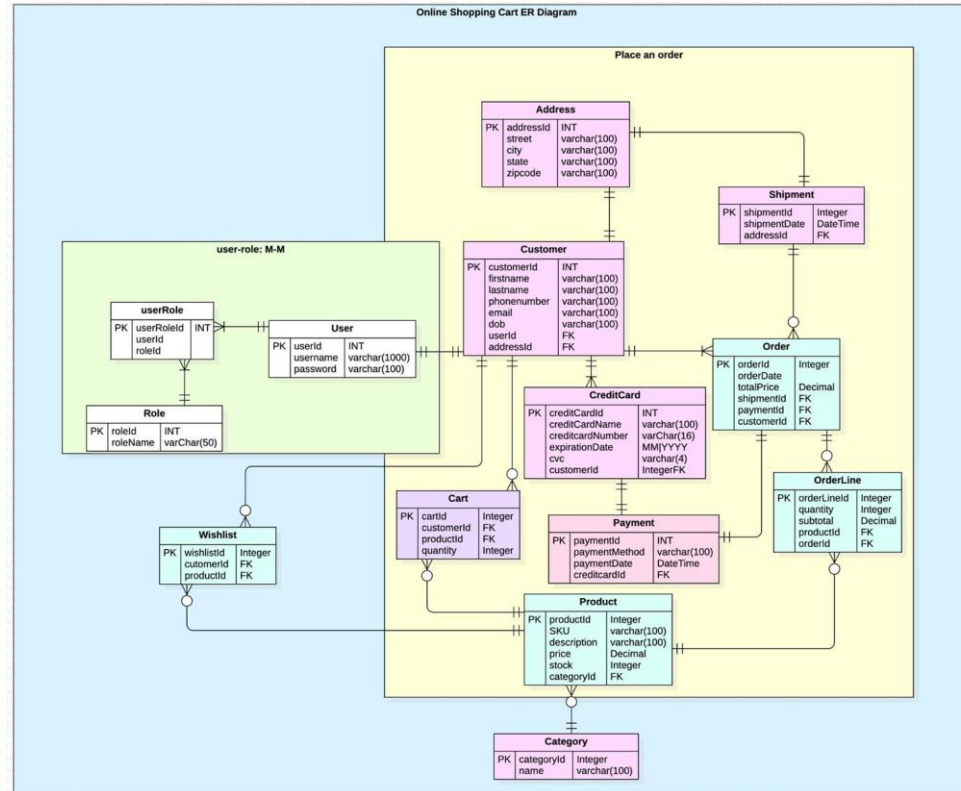


# Architectural Diagram





# ER Diagram



[Please Click here to view the detail](#)







# Real Data Sample

Online Shopping Cart Data Input

File Edit View Insert Format Data Tools Extensions Help

100% 123 Default...

Q27

	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB
1																									
2																									
3																									
4																									
5																									
6																									
7																									
8																									
9																									
10																									
11																									
12																									
13																									
14																									
15																									
16																									
17																									
18																									
19																									
20																									
21																									
22																									
23																									
24																									
25																									
26																									
27																									
28																									
29																									
30																									
31																									
32																									

>>> [Please Click here to view the detail](#)





# Security and user management

## 1. Authentication and Authorization

- Using JWT for security module
- System able to authenticate user with username and password
- Generate JWT tokens logged in uses for authentication and authorization.
- System can verify Token , expiration in 24 hours





# Security and user management

## 2. Customer - Credit card

- Customer can add their address, update, or delete
- CRUD customer
- Get customer by ID, Get all customers
- Customer can add one or many credit cards
- CRUD Credit card





# Product Management

- User can create many categories
- User can create product with a category
- User can search product with quick search like product name, category name, ..
- System provided product CRUD operation to user





# Shopping Cart Management

- User can add product to their cart or Wishlist
- User view product in cart
- System will show an message, when product out of stock
- System will decrease quantity when you add product to cart
- System provided shopping cart CRUD to the user





# Exception handling and beanValidation

- The system will show error message when user trying to search product not found, or any searching item
- Handle bean validation like:
  - credit card name is required, cannot be blank, empty or null, ..
  - product price is require



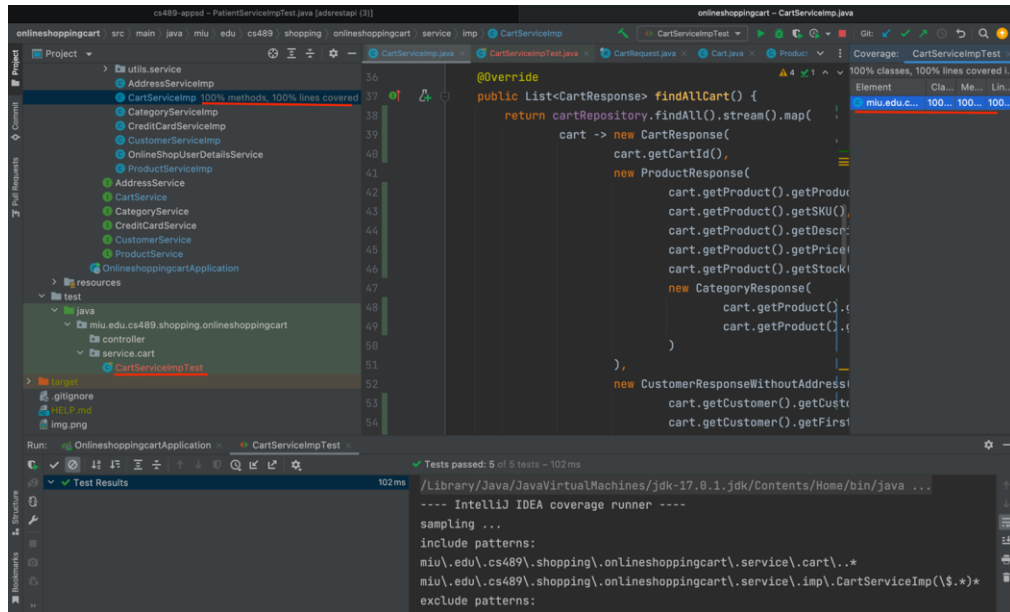


# Coding Quality

## Unit Testing

- CartServiceImp

*100% test coverage*





# Deployment

Our API is running on Microsoft Azure Cloud

The screenshot displays the Microsoft Azure portal interface. At the top, the navigation bar shows 'Microsoft Azure' and a search bar. The main header indicates the user is logged in as 'srin@miu.edu' from 'MAHARISHI INTERNATIONAL U...'. The left sidebar contains a navigation menu with options like 'Overview', 'Activity log', 'Access control (IAM)', 'Tags', 'Diagnose and solve problems', 'Microsoft Defender for Cloud', 'Events (preview)', 'Deployment', 'Settings', 'Configuration', 'Authentication', 'Application Insights', 'Identity', 'Backups', 'Custom domains', 'Certificates', 'Networking', and 'Entra ID (formerly Azure AD)'. The main content area shows the 'Overview' page for the 'Online-Shopping-Cart-System2' Web App. It includes a search bar, action buttons (Browse, Stop, Swap, Restart, Delete, Refresh, Download publish profile, Reset publish profile, Share to mobile, Send your feedback), and a 'JSON View' link. The 'Essentials' section lists key details: Resource group (miu.edu.cs489.project), Status (Running), Location (Central US), Subscription (Azure for Students), Subscription ID (9B18665-2722-437e-a1b4-661cd1ee7011), Default domain (online-shopping-cart-system2.azurewebsites.net), App Service Plan (ASP-mysqlab7advantis-b4b8 (B1: 1)), Operating System (Linux), Health Check (Not Configured), and GitHub Project (https://github.com/sohearyrn-dev/Online-Shopping-Cart-System). Below this, the 'Properties' tab is active, showing a table with details for the 'Web app', 'Domains', and 'Hosting' sections.

Section	Property	Value
Web app	Name	Online-Shopping-Cart-System2
	Publishing model	Code
	Runtime Stack	Java 17 SE
Domains	Default domain	online-shopping-cart-system2.azurewebsites.net
	Custom domain	Add custom domain
Hosting	Plan Type	App Service plan
	Name	ASP-mysqlab7advantis-b4b8







# Technologies + Tools

- Maven Project
- Spring boot for budding restful API
- Database: MySQL
- Database UI: MySQL workbench
- Security | Authentication | Authorization: JWT web token
- Testing: Junit | Mockito
- Deployment: Docker , Azure cloud
- API doc: Swagger
- Testing tool: Postman
- Github: Coding Management





# Required Dependencies

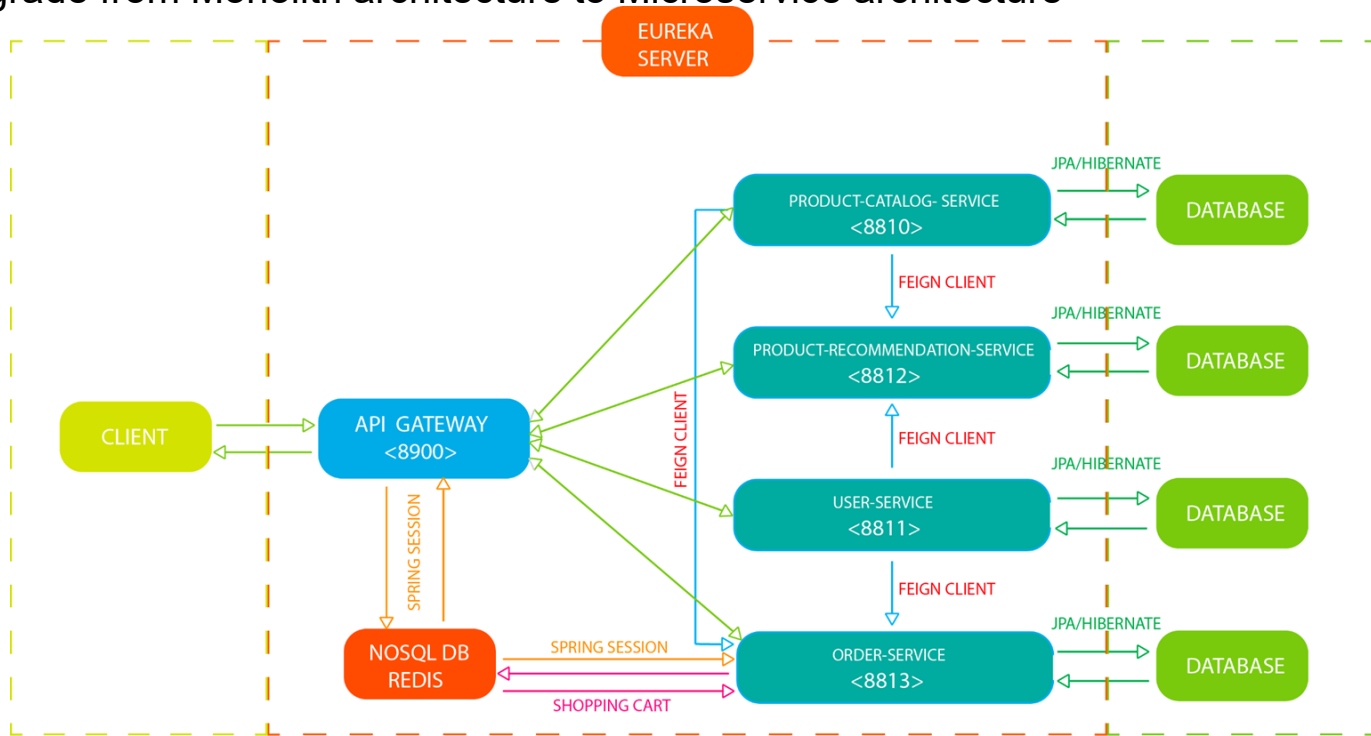
- Spring web
- Spring Data JPA
- lombok
- data validation I/O
- spring security jwt
- mySQL driver
- junit test 3
- Swagger 3.0





# In Progress and Future Plan

- Completing Customer Place an order
- Upgrade from Monolith architecture to Microservice architecture





# Project Demo

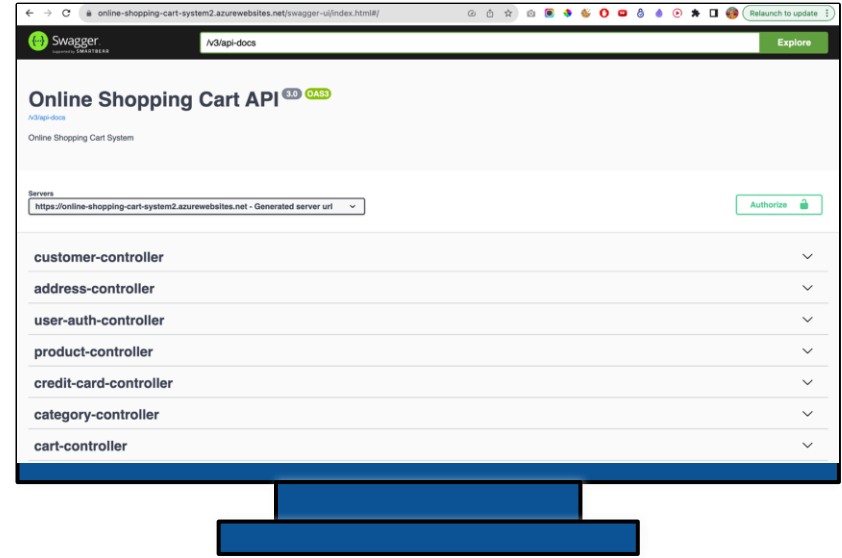
Online Shopping Cart System

Backend Development - source code need?



**GitHub**

<https://github.com/mdsahid07/Online-Shopping-Cart>





# Thank You!

Q&A ?

