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Introduction

STL-Ecom is basically a Ecommerce application which ful

Tech Used

1.FrontEnd

1.Html,

2.Css

3.TypeScript

4.Angular

2.Backend

1.Java

2.Spring boot

3.Jwt Authentication

4.Microservices

5.MySql

6.JWT

Backend

The whole backend is built on microservices architecture.In this application there are

8 microservices.We are using Mysql database and we have one Database with 7 tables .

DB Schema

There is one Database and 7 tables

1.user

This table contains all the Details of user who are Doing Signup which contains the Fields userid(PK), name,email,contactNumber, password.Now when user is signup we are storing there data in table user.

2.catalog

This table contains all the product categories, It contains the fields cat\_id(PK),image,

title.Basically we are displaying all these category in the frontend so when user click on those we can data acc to category.

3.Product

This table contains all the products, it contains fields prod\_id(PK),prod\_name,prod\_price,prod\_desc,cat\_id(FK).Here cat\_id we are using as a foreingn key.

4.Cart-Items

This table contains all the item user has in his cart. It contains the fields like cartItemsId(PK),Prod\_id,Pro\_desc,prod\_price,prod\_quantity,prod\_image,userId(FK)

here we using userID as foreingn key.

5.Order

This table contains all the item user user ordered . It contains orderItem(PK),prod\_id,

prod\_quantiy,userId(FK),orderId(Fk). Here for every item a orderItem row will be genrated and Order ID is unique for every order which is foreign key refrence to token table.

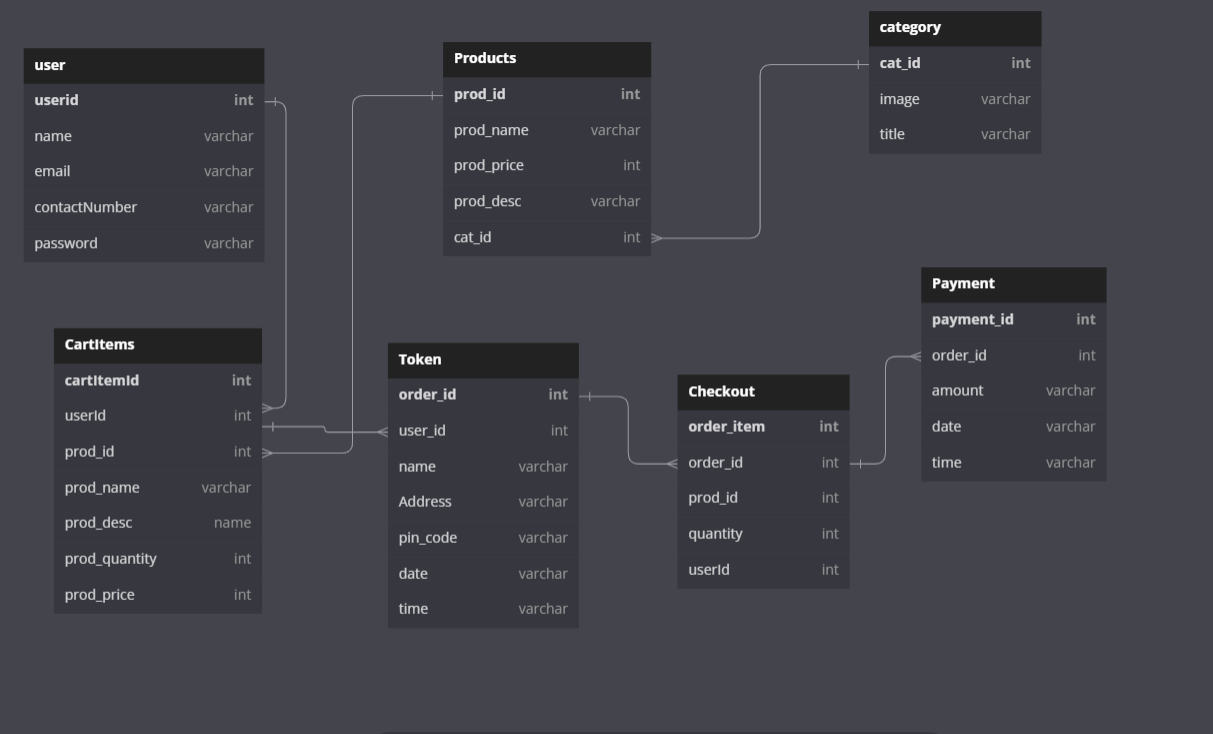
6.OrderToken

This table will contains orders id for every order user does and adress for delivery and date,time of order made.It contains fields order\_id(pk),userId(Fk),name,Adress,

pincode,date,time.

7.Payment

This table will contain The payment that user will do for his order.Fields in this table are payment\_id(PK), order\_id(Fk),amount,date,time.

 Figure 1.1 DB Schema

Microservices

SignUp Microservices

This Service will interact with every new user. Because to buy items from he has to register first. Here we are reciving the data from the client and service then interacts with JPA for storing the data in the table.

Dependencies used

1.web,JPA,Devtools,MySqlConnector.

Login Services

This Service is interact with every existing user. When user enter his creadentials the we check in our user table there his data is present or not after that spring security checks that user credential are vailed or not.after sucessfull authentication we give the user a token so that he can use that token and can go anywhere in the app. Here we are using Spring security to authenticate the user. We are also using JWT token for session based logout. And we are setting the expairy time 30 minutes after every token genration and user will be automatically logged out after the token expired.

Dependencies Used.  
1.Web,Jpa,Jwt,SpringSecurity,mySqlConnector,Devtools.

Spring boot version – 2.7.9

2 Catalog Service

This Service is responsible for providing the categories of the project.It uses category table for that.This service also communicate with product Service for getting the products based on category.

So when user click on any category the request comes to catalog service it then calls product service and ask for the data based on the category id, and when product service give data back, then it gives back to client.

DependenciesUSed

1.web,JPA,Devtools,MySqlConnector.

ProductService

This Service is responsible for client request for the products. It has table

name product. So when catalog service request it for the data with specific category id, then it interact table product using jpa and gets the data. It also fetches all data for showing all the products.

DependenciesUSed: web,JPA,Devtools,MySqlConnector.

CartServices

This services interact with client when uses adds item to cart , then post request from client comes to services. Then servics calls jpa to save the data in the cartItem table with respect to user\_id.so now when user do login everytime we load there cart items using get request that already added previously by calling this cartServices. This services comes into picture only when user is logged.It also has on api named deleteByCartId

so that when click on delete icon we call this api to delete the item with id of that cart item.

DependenciesUSed:web,JPA,Devtools,MySqlConnector.

Checkout And Order Service

When items are added in the cart and user want to checkout, this services needs is there. It has two tables named order\_item, token\_orderId.

It gets name,adress, userId from the client and calls Cart Microservice to get the Cart items of the user. After that it calls jpa of token\_orderId to save adress and gets the order id. And using order id it saves the data to order\_item table which stores products that are ordered and amount that are to be paid.

DependenciesUSed:web,JPA,Devtools,MySqlConnector.

Payment Services

This service is called by order service when user click on payment ,client request to order the item. Then order service makes post request to payment to save the amount paid by user. Where it saves the paymentAmount,orderid,date and time of payment.

DependenciesUSed:web,JPA,Devtools,MySqlConnector.

FrontEnd

We are using Angular for devloping the frontend in which we divided the whole view in the form of components and we are devloping them.

The Components are

1. Home Components
2. Category Components
3. Product Components
4. Cart Components
5. Footer Component
6. Checkout Component
7. Payment Component