

Amazon Clone

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E-commerce Website

Background

This is a e-commerce website

- Peoples nowadays prefer convenience in choosing the products wherever and whenever.
- Creating a one-stop place for all products
- Amazon clone is a feature-rich platform



Solutions overview

Whether logged in or not, users can browse the products through different categories.

user also can go to product detail page to find more info

Amazon Clone Register User Profile Our products For Admin*

Sign Out

Categories

Furniture

- Bedroom Furniture
- Dining Room Furniture
- Home Office Furniture

Arts Crafts & Sewing

- Craft Supplies
- Scrapbooking
- Painting & Drawing

Bedding

- Pillows
- Quilt Covers & Sets
- Comforters & Sets

Bath

- Bath Towels
- Bath Rugs

Vacuums & Floor Care

- Vacuums
- Vacuum Accessories
- Hard Floor Cleaners/Mops
- Floor Cleaners

Kitchen & Dining

- Barware
- Cookware
- Coffee Tea & Espresso

Heating Cooling & Air Quality

- Air Conditioners
- Fans
- Space Heaters
- Humidifiers

Search here...

Top seller!

Price and other details may vary based on product size and colour.

Moltibly Queen Bed Frame
Premium Upholstered Platform Beds with Strong Wood Slat Support and No Box Spring Needed, Easy Assembly/Queen Size Bed Blue(60"×80")
289.99
Stock: 100
View details

FDW Dining Table Set
Dining Table Dining Room Table Set for Small Spaces Kitchen Table and Chairs for 4 Table with Chairs Home Furniture Rectangular Modern, Black
289.99
Stock: 100
View details

Ergonomic Office Chair - KERDOM
Comfortable Computer Chair with Adjustable Headrest and Armrests, High Back Mesh Gaming Chair Executive Swivel Chair(Black S)
254.99
Stock: 100
View details

Amazon Clone Register User Profile Our products For Admin*

Sign Out

Categories

Search here...

father's day

Shop now

FURNITURE

ARTS, CRAFTS & SEWING

BEDDING

VACUUMS & FLOOR CARE

KITCHEN & DINING

HEATING, COOLING & AIR QUALITY

Amazon Clone Register User Profile Our products For Admin*

Sign Out

Chezmoi Collection Upland 7-Piece Quilted Patchwork Comforter Set, Burgundy/Black/Brown, Queen

category:3

Free Shipping

Easy Returns

Brand: Chezmoi

Price: 132.17

Description: Upland 7-Piece Comforter Set includes: 1 Comforter, 2 Shams, 1 Bedskirt, 1 Cushion, 1 Neck Roll, 1 Breakfast Pillow/Queen Size Measurements: Comforter 90" x 92", Shams 20" x 26", Bedskirt 60" x 80" + 14" drop, Square Cushion 18" x 18", Neck Roll 7" x 18", Breakfast Pillow 12" x 18" in A luxurious pin-sonic pressed medallion design quilted in a patchwork pattern with each fabric pieced together. The perfect union of three tone colors to draw out the exhilarating bedroom experience. InSoft, lightweight, and comfy fabric versatile for any bedroom decor. Suitable for year round use. InEasy Care - Machine wash gentle cycle with cold water. (Sun dry or low tumble dry)

ADD TO WISHLIST

ADD TO CART

BUY NOW

Solutions overview

Login

You are about to get your fav.

Username:

Password:

Login

Not a user yet, [register here](#)

Registration and Login

- Users can register through the unique username and email.
- Flash message pop if errors during login or registration.
- Once logged in, user is available to reach their order history.
- An admin has extra CRUD permissions.

Register User Profile Our products

For Admin ▾

Product Management

Client Management

add Subcategory

add Product

Sign Up

Welcome to become our lovely customer.

Username

Username...

Email

Email...

Password

Password...

Confirm Password

Confirm Password...

Submit

Solutions overview

- For the interested product, user can pay online by use credit/debit card.
- After payment ,user receive success message ,can choose continue shopping or view the order history.

Order History

Order ID	Amount	Paid At
62b7f2eed7fe25cc09e2da3	\$350	2022-06-26T05:47:26.552Z
62b7f3d9ed7fe25cc09e2daa	\$400	2022-06-26T05:51:21.709Z

Your amount is \$289.99

Card number

1234 1234 1234 1234



Expiration

MM / YY

CVC

CVC



Country

Canada



Postal code

M5T 1T4

Pay now

YL

Solutions overview

Admin has the permission to manage product list.

Product List

[Add New Item](#)

Item Name	Item Description	Price	Actions
100 Colors Alcohol Markers Dual Tips Permanent Art Markers Pen for Kids & Adult, Alcohol-	Art set 100 Vibrant Colors Alcohol Markers Plus 1 Blender Permanent Marker with 2 bases: Professional superior artist quality double-ended permanent art markers. Includes Fine tip 1mm and Broad tip 6mm all the primary and secondary color shade tones artists need for adult coloring, drawing, writing, sketching, illustrating, shading, designing, rendering, anime, adult	33.71	Edit Delete
Pillows Queen Size 2 Pack for Sleeping, Soft and Supportive Bed Pillow for Side and Back Sleeper,	QUEEN PILLOWS 2 PACK -- Each order will include two Hotel Quality Bed Pillows that are finished with well stitching and reinforced seams. An ideal choice for side, stomach and back sleepers as these pillows have a high loft and offer maximum comfort for any sleeping position./nSOFT & SUPPORTIVE PILLOWS -- Since our down alternative pillows are made with a great balance of softness and plump firmness, so whether you	40.99	Edit Delete
Bedsure White Duvet Cover Queen Size Set - Ultra Soft Microfiber Bed Set, 3 Piece Breathable	Quality Material: Utilizing 110GSM polyester microfiber fabric, Bedsure's duvet cover set offers longer durability and comfort all year round. The comforter cover set applies a pre-washed process that creates exceptional softness with an artful cotton touch to give you beauty sleep all night long./nPerfect Home Decoration: Bedsure's duvet cover set presents a vintage feeling and beautiful wrinkled texture for homeowners with	42.99	Edit Delete
Chezmoi Collection Upland 7-Piece Quilted Patchwork Comforter Set,	Upland 7-Piece Comforter Set Includes: 1 Comforter, 2 Shams, 1 Bedskirt, 1 Cushion, 1 Neck Roll, 1 Breakfast Pillow/nQueen Size Measurements: Comforter 90' x 92', Shams 20' x 26', Bedskirt 60' x 80' +14' drop, Square Cushion 18' x 18', Neck Roll 7' x 18', Breakfast Pillow 12' x 18'/nA luxurious pin-sonic pressed medallion design quilted in a patchwork pattern with each fabric pieced together. The perfect unison of three tone	132.17	Edit Delete
Amazon Basics 6-Piece Fade Resistant Bath, Hand and Washcloth Towel Set - Teal	6-piece towel set includes (2) 54 x 30 inch bath towels, (2) 26 x 16 inch hand towels, and (2) 12 x 12 inch washcloths/nMade of 100% cotton for softness and tear-resistant strength/nLightweight towels quickly absorbs moisture/nDesigned with a classic and simple pique border/nFade-resistant teal color/nMade in OEKO-TEX Standard 100 factory, an independent certification system that ensures textiles meet high safety and	31.41	Edit Delete

Rows per page: 5 1-5 of 96

Solutions overview

add/edit/delete/retrieve
product and
subcategory.

	Price	Actions
m. New lor and : Made The ick to	11.99	<div>Edit</div> <div>Delete</div>
ses: tip 1mm at -coloring lass and	33.71	<div>Edit</div> <div>Delete</div>
line Ve	17.99	<div>Edit</div> <div>Delete</div>
nakes ely in	40.99	<div>Edit</div> <div>Delete</div>
are back	42.99	<div>Edit</div> <div>Delete</div>
ade with vs.		
t offers ed sleep all ling and		

Upload Image

Choose File amazon-seo-product-images.jpg.webp



Subcategory Name

Enter subcategory name

Category

Vacuums & Floor Care

☐ Check if the product is active

AddSubcategory

Amazon Basics 6-Piece Nonstick Oven Bakeware Baking Set

category 6

Free Shipping

Easy Returns

Brand: Amazon Basics

Price: 32.86

Description: 6-piece bakeware set includes a 9x5-inch loaf pan, 2 round 9-inch cake pans, a 12-cup muffin pan, a 13x9-inch roast pan, and a 13x9-inch baking sheet. Made of heavy-weight steel for thorough, even heating. Nonstick coating for effortless food release and easy cleaning. Oven-safe to 500 degrees. Dish-hand-wash only recommended.



ADD TO WISHLIST

ADD TO CART

BUY NOW

Modify Product

Product Name:

Sodagreen Galaxy Purple Washi Tape - Gol

Description:

♥ PURPLE GALAXY WASHI TAPE : 12 rolls +

Image:

https://m.media-amazon.com/images/I/71

Brand:

Sodagreen

Category:

Furniture

SubCategory:

(Ex. Sub Category...)

Stock:

100

Price:

11.99

Edit product

Back to List

Our products For Admin

Product Name

Enter Product name

You must input a name!

Brand Name

Enter Brand

brand is a required field

Description

Enter description

description is a required field

Image url

Enter image address

Sub Category

Select a sub Category

Category

Select a Category

Stock

0

Price

0

☐ Check if the product is active

Add Product

wd

Solutions overview

- Once login ,user can view personal info on profile page.
- add,edit,display in the same page

Profile

Welcome , admin

First Name

admin

Last Name

Li

Address

324 Av west

City

Montreal

Province

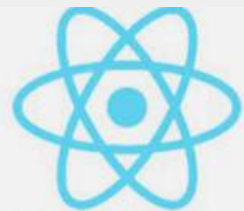
Quebec

Postal Code

H4R 6V3

Save

Technologies



React



XIN + WD + YL

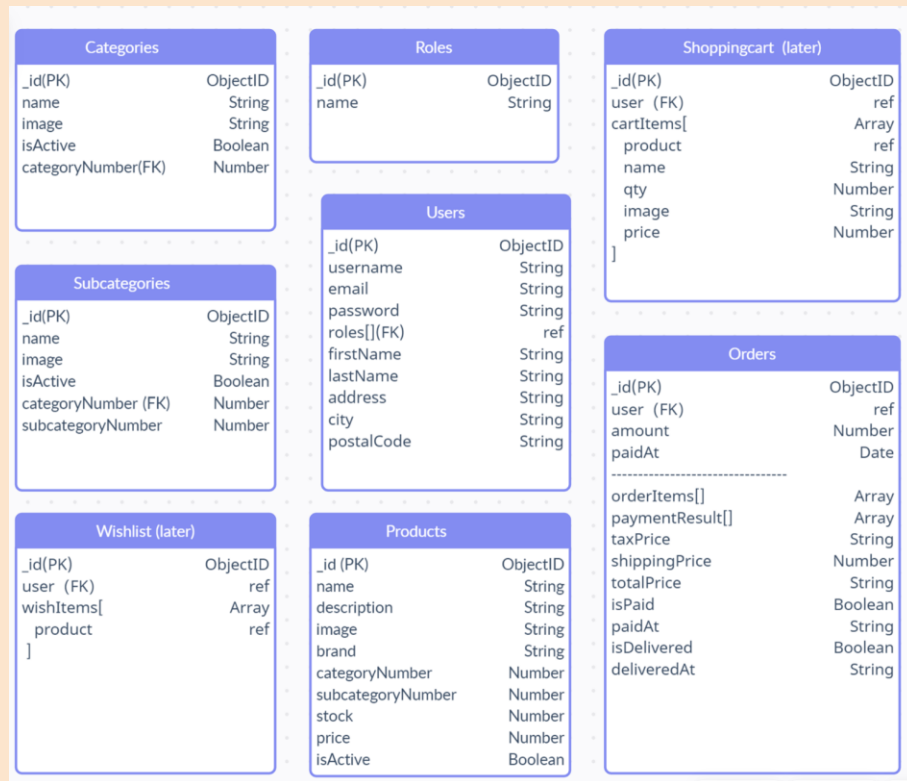
Challenges and solutions -Database

MongoDB

- support array in model
- populate

Obstacle

- joint query is more complicate than expected



Challenges and solutions-Registration/Login

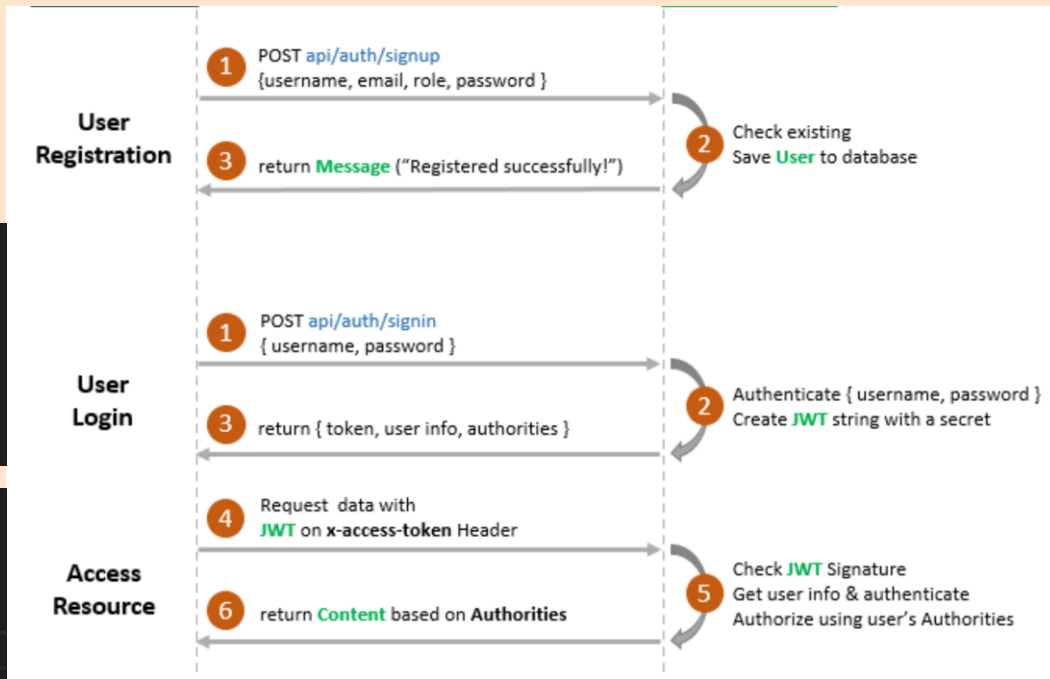
User Registration/Login

-JWT

-CORS --Cross-origin resource sharing

```
Axios.get('http://localhost:4000/api/admin/product',{  
  headers: {  
    "x-access-token": localStorage.getItem("accessToken"),  
  },  
  withCredentials: true,  
});
```

```
var corsOptions = {  
  origin: "http://localhost:3000",  
  credentials:true ,  
};
```

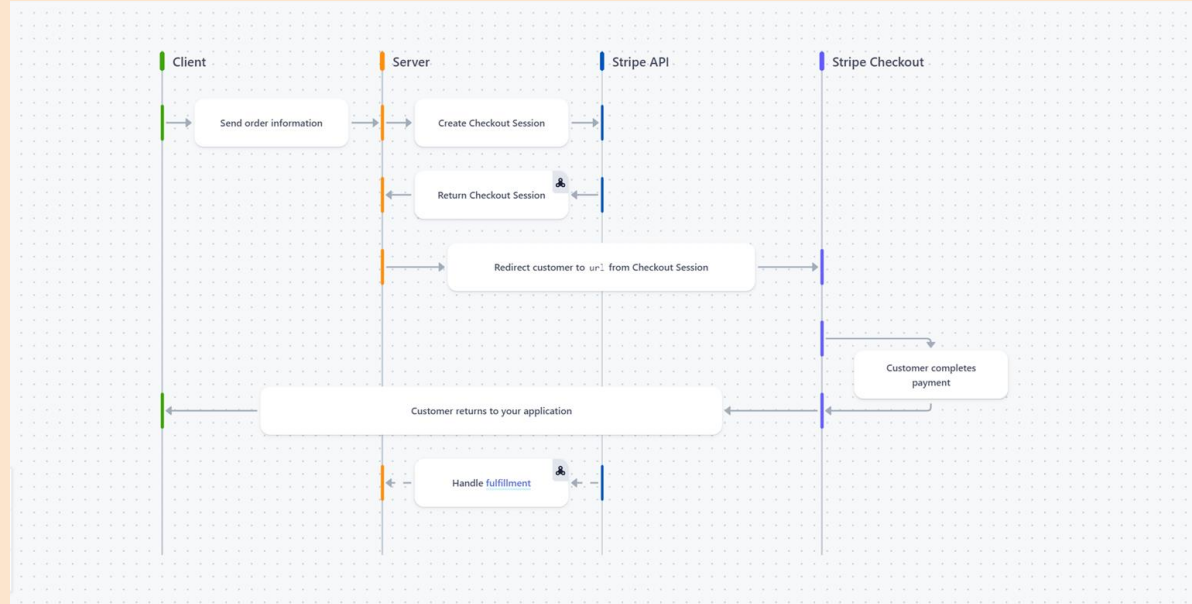


Challenges and solutions -Payment

Stripe Checkout

obstacle

- many payment types
stripe/papal....
>20 types in stripe checkout
- wasting time on other options



Challenges and solutions-S3(2 options)

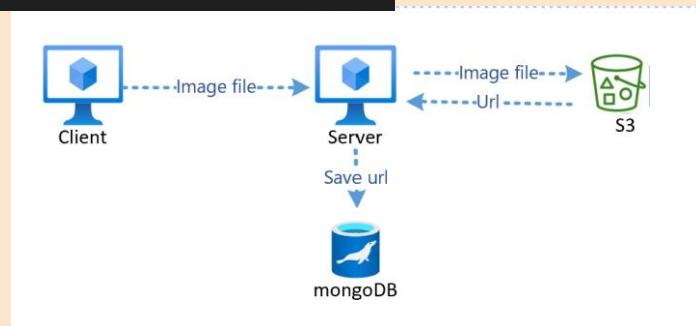
Option 1

Create Bucket in S3 , set Bucket Access Permissions

- Front-end choose a file , send file name , file content to back-end
- Back-end upload file to S3
- After uploading, s3 return a url to back-end, back-end save it to database

```
const s3 = new A  
  accessKeyId:  
  secretAccess  
});
```

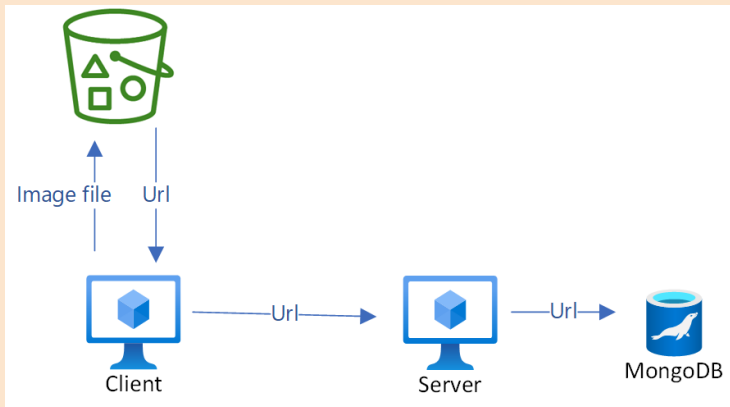
```
const uploadFile = (file) =>  
{  
  const params = {  
    Bucket: "amazonclonefsd03",  
    Key: file.name,  
    Body: file  
  };  
};
```



Option 2

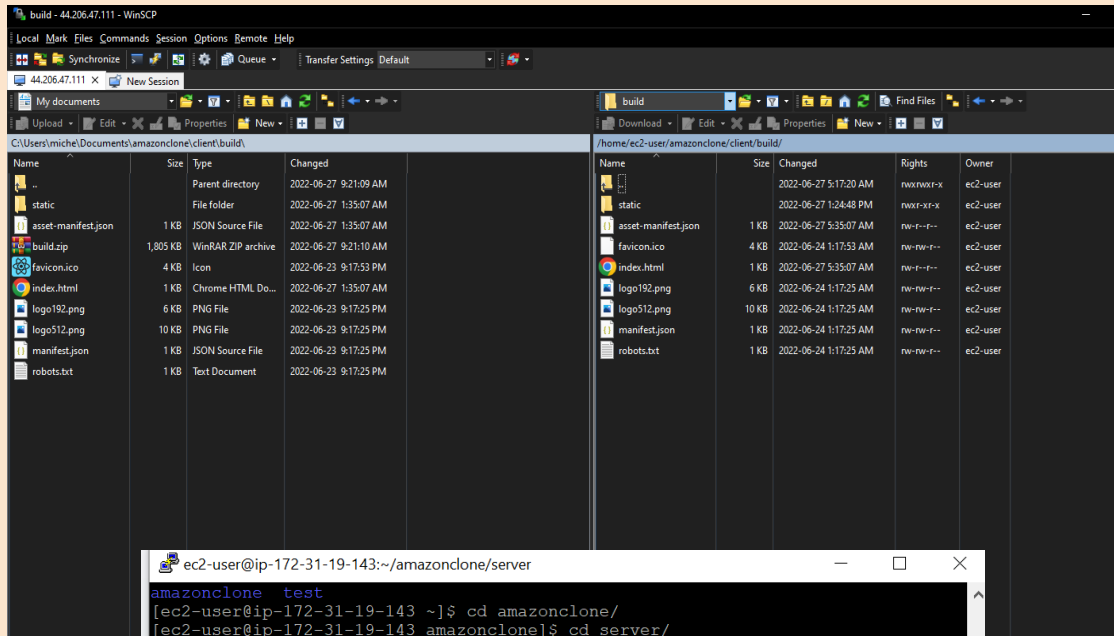
Create Bucket in S3 , set Bucket Access Permissions

- Front-end choose a file , upload file to S3
- After uploading, s3 return a url to front-end,
- front-end use this url when send add/edit product request back-end save to database



Challenges -Hosting

<http://projectclone.mywire.org/>



```
Using username "ec2-user".
Authenticating with public key "linux2AMI"
Last login: Mon Jun 27 05:08:38 2022 from modcmcable217.116-21-96.mc.video
a

  _ _  _ _  _
 _ _  _ _  _  Amazon Linux 2 AMI

https://aws.amazon.com/amazon-linux-2/
[ec2-user@ip-172-31-19-143 ~]$ ls
amazonclone test
[ec2-user@ip-172-31-19-143 ~]$ cd amazonclone/
[ec2-user@ip-172-31-19-143 amazonclone]$ cd client
[ec2-user@ip-172-31-19-143 client]$ npm update

up to date, audited 1562 packages in 28s

208 packages are looking for funding
  run `npm fund` for details

6 high severity vulnerabilities

To address all issues (including breaking changes), run:
  npm audit fix --force

Run `npm audit` for details.
[ec2-user@ip-172-31-19-143 client]$ npm install

up to date, audited 1562 packages in 4s

208 packages are looking for funding
  run `npm fund` for details

6 high severity vulnerabilities

To address all issues (including breaking changes), run:
  npm audit fix --force

Run `npm audit` for details.
[ec2-user@ip-172-31-19-143 client]$ npm run build

> client@0.1.0 build
> react-scripts --max_old_space_size=1024 build

Creating an optimized production build...
```

```
ec2-user@ip-172-31-19-143:~/amazonclone/server

amazonclone test
[ec2-user@ip-172-31-19-143 ~]$ cd amazonclone/
[ec2-user@ip-172-31-19-143 amazonclone]$ cd server/
[ec2-user@ip-172-31-19-143 server]$ ls
app node_modules README.md
jwt-refresh-token-node-js-example-flow.png package.json server.js
jwt-token-authentication-node-js-example-flow.png package-lock.json
[ec2-user@ip-172-31-19-143 server]$ npm start

> amazonclone@1.0.0 start
> node server.js

(node:8096) Warning: Accessing non-existent property 'product' of module exports
inside circular dependency
(Use `node --trace-warnings ...` to show where the warning was created)
(node:8096) Warning: Accessing non-existent property 'category' of module exports
inside circular dependency
(node:8096) Warning: Accessing non-existent property 'subcategory' of module exports
inside circular dependency
(node:8096) Warning: Accessing non-existent property 'order' of module exports
inside circular dependency
Server is running on port 4000.
Successfully connect to MongoDB.
```

what we learned—hooks

useLocation

```
auth?.user
  ? <Navigate to="/unauthorized" state={{ from: location }} replace />
  : <Navigate to="/login" state={{ from: location }} replace />
```

useNavigate - go forward

```
const from = location.state?.from?.pathname || "/";
```

```
navigate(from, { replace: true });
```

useEffect

```
const { categoryNumber, subcategoryNumber } = useParams();
useEffect(() => {
  axios
    .get(
      `http://localhost:4000/api/productlist/${categoryNumber}/${subcategoryNumber}`,
    )
    .then(response => {
      // ...
    })
    .catch(error => {
      // ...
    })
});
```

what we learned- Protected Route and Role Based

us

```
<IsAuthContext.Provider value={{isAuth, setIsAuth}}>  
  <UserContext.Provider value={{user, setUser}}>  
    <RoleContext.Provider value={{roles, setRoles}}>  
  
      <Routes>  
    
```

```
    if(!localStorage.getItem("roles")){  
      setRoles(null);  
    } else {  
      setRoles(localStorage.getItem("roles"))  
    }  
  
```

```
<Route path = "admin" element={ (isAuth && roles === '["ROLE_ADMIN"]')? <Admin /> : <Unauthorized/> } />
```


what we learned

two ways of joint-query in MongoDB

– populate

```
exports.signin = (req, res) => {  
  User.findOne({  
    username: req.body.username  
  })  
    .populate("roles", "-__v")  
    .exec((err, user) => {
```

```
{  
  "roles": [  
    "62b73884e44e085058310cb7"  
  ],  
  "firstName": "susanupdate2",  
  "lastName": "san",  
  "address": "address",  
  "city": "montreal",  
  "postalCode": "H34 567",  
  "_id": "62b74005b8603015e802cfd6",  
  "username": "admin",  
  "email": "admin@email.com",  
  "password": "$2a$08$X9M9wQ0mk8Kg4iBwQbNf5eFcEOIkcFD9srB6LZByGlfmHx0cthnC",  
  "__v": 1  
},
```

```
const User = mongoose.model(  
  "User",  
  new mongoose.Schema({  
    username: String,  
    email: String,  
    password: String,  
    roles: [  
      {  
        type: mongoose.Schema.Types.ObjectId,  
        ref: "Role"  
      }  
    ],  
    firstName: { type: String },  
    lastName: { type: String },  
    address: { type: String },  
    city: { type: String },  
    postalCode: { type: String },  
  })  
);  
  
module.exports = User;
```

what we learned

joint query – aggregate

```
{
  $lookup:
  {
    from: <collection to join>,
    localField: <field from the input documents>,
    foreignField: <field from the documents of the "from" collection>,
    as: <output array field>
  }
}
```

```
{
  "id": "62b73885e44e085058310d0e",
  "stock": 100,
  "price": 289.99,
  "isActive": true,
  "name": "FDM Dining Table Set Dining Table Dining Room Table Set for Small Spaces",
  "description": "The improved of the thickness of the glass of the dining table to make the Dining Table Set more resistant to daily use scratches.Easy to clean of the dining room table set.Dining Table Set dining room table dining room table set Table Set dining table /n【Easy to Assemble】Exquisite hardware and detailed manual are included of the dining table. All parts of the dining room table set are listed and numbered and specific assembly steps are also shown in the instruction of the Dining Table Set.dining table Dining Table Set dining room table dining room table set Table Set/n【Comfortable and Elegant】This dining chairs are Personality, mid-century modern sensibility dining chairs,Such a dining chairs with ergonomically designed.Kitchen Chairs Chair for Kitchen side chairs dining dining chairs Dining Room Chairs/n【Easy to clean】The improved of the thickness of the glass of the dining table to make the Dining Table Set more resistant to daily use scratches.Easy to clean of the dining room table set.Dining Table Set dining room table dining room table set Table Set dining table/n【Easy To Storage and Keep Tidy】Dining chairs of dining table set can be moved under the dining table when you finish your meal, which our kitchen table set largely helps you save room space. Featuring smooth surface, our table and chairs set is easy to be kept clean.table and chairs set kitchen table and chairs for 4 dining table set",
  "image": "https://m.media-amazon.com/images/I/61rn0lu4KDL._AC_SX679_.jpg",
  "brand": "FDM",
  "categoryNumber": 1,
  "subcategoryNumber": 2,
  "createdAt": "2022-06-25T16:32:05.106Z",
  "updatedAt": "2022-06-25T16:32:05.106Z",
  "v": 0,
  "category": [
```

```
{
  "id": "62b73885e44e085058310cbf",
  "isActive": true,
  "name": "Furniture",
  "image": "https://images-na.ssl-images-amazon.com/images/G/15/img16/home/content-grid/1001488_ca_home_cg_homepage_750x375_furniture.jpg",
  "categoryNumber": 1,
  "createdAt": "2022-06-25T16:32:05.018Z",
  "updatedAt": "2022-06-25T16:32:05.018Z",
  "v": 0
}
```

```
Product.aggregate([
  // { $match:{categoryNumber:1}},
  {
    $match: {
      $and: [
        {categoryNumber:cNumber},
        {subcategoryNumber:subCNumber}
      ]
    },
  },
  {
    $lookup: {
      from: Category.collection.name, //imp
      localField: "categoryNumber",
      foreignField: "categoryNumber",
      as: "category"
    }
  }
], function (err, products) {
  res.status(200).json(products);
})
```

```
const Product = mongoose.model(
  "Product",
  new mongoose.Schema({
    name: {
      type: String,
      trim: true,
      required: true
    },
    description: {
      type: String,
      trim: true
    },
    image: {
      type: String,
    },
    brand: {
      type: String,
      required: false,
      maxlength: 100
    },
    categoryNumber: {
      type: Number,
    },
    subcategoryNumber: {
      type: Number,
    },
  })
```

what we learned

tips :

-the data type of ID is objectId

```
Product.findOne({_id :ObjectId(productId)}, (err, product) => {
```

-MongoDb add “s/es/ies” to table name

```
$lookup: {  
  from: Category.collection.name,
```

YL

```
//important, or use "categories". use category or categorys can't get results
```

Future work

- Shopping cart
 - Wishlist
- Dashboard for admin
 - Product comments
- order function enhance
 - Email Verify
- code refactoring

YL

Summary

-what was done and with what result.

- A user can browse categories, subcategories and products
- An admin have CRUD functionality for products
- user can view orderhistory
- user can pay for select product.
- user can save his info on website