Amazon Clone App

1. ***Created separate file for route –***

Routers.dart

Route<dynamic> generateRoute(RouteSettings routeSettings) {

  switch (routeSettings.name) {

    case AuthScreen.routeName:

      return MaterialPageRoute(

        settings: routeSettings,

        builder: (\_) => const AuthScreen(),

      );

    default:

      return MaterialPageRoute(

        builder: (\_) => const Scaffold(

          body: Center(

            child: Text("Page Not Found!"),

          ),

        ),

      );

  }

}

Main.dart

void main() {

  runApp(const MyApp());

}

class MyApp extends StatelessWidget {

  const MyApp({super.key});

  @override

  Widget build(BuildContext context) {

    return MaterialApp(

//code

       onGenerateRoute: (settings) => generateRoute(settings),

      home: //Widget,

    );

  }

}

1. **Downloading Node js –**

**Link to download -** [**https://nodejs.org/en/download/prebuilt-installer/current**](https://nodejs.org/en/download/prebuilt-installer/current)

**Check in command prompt -**

**C:\Users\Asus>node --version**

**v20.12.2**

1. **To use node.js in our project-**

**Create folder “Server” open in in terminal and follow steps-**

…. /Amazon\_Clone/amazon/server (main)

$ npm init

This utility will walk you through creating a package.json file.

It only covers the most common items, and tries to guess sensible defaults.

See `npm help init` for definitive documentation on these fields

and exactly what they do.

Use `npm install <pkg>` afterwards to install a package and

save it as a dependency in the package.json file.

Press ^C at any time to quit.

package name: (server)

version: (1.0.0)

description:

entry point: (index.js)

test command:

git repository:

keywords:

author:

license: (ISC)

About to write to D:\IMPMyWorkplace\GitHub\Amazon\_Clone\amazon\server\package.json:

{

"name": "server",

"version": "1.0.0",

"main": "index.js",

"scripts": {

"test": "echo \"Error: no test specified\" && exit 1"

},

"author": "",

"license": "ISC",

"description": ""

}

Is this OK? (yes)

**After this one file will create in server package.json**

**Create a file index.js and run it:**

Index.js

console.log("hi iam json");

….. /Amazon\_Clone/amazon/server (main)

$ node index.js

hi iam json

1. **Now download dependencies http, express, mangoose –**

….. /Amazon\_Clone/amazon/server (main)

$ npm i http express mongoose

**added 85 packages, and audited 86 packages in 17s**

**after this automatically dependencies are added**

package.json

//code

"dependencies": {

    "express": "^4.19.2",

    "http": "^0.0.1-security",

    "mongoose": "^8.4.1"

  }

1. **Create Api**

Index.js

const express=require("express");

const PORT=3000;

const app=express();//creating instance of express (aboue)

//creating API

// app.listen(PORT,"0.0.0.0",()=>{console.log('connected at port ${PORT}')}); use back tick instead

app.listen(PORT,"0.0.0.0",()=>{console.log(`connected at port ${PORT}`);

});

To run-

…/Amazon\_Clone/amazon/server (main)

$ node index.js

connected at port 3000

1. **Download nodemon package as dev for better run of our api –**

**To add dev packages command is different**

…/Amazon\_Clone/amazon/server (main)

$ npm i nodemon --save-dev

added 29 packages, and audited 115 packages in 7s

**after this one change in package.json-**

"devDependencies": {

    "nodemon": "^3.1.2"

  }

**Now to run index.js fire command npm run dev ->**

**For better run add script first at “dev” and for better deployment add at “start”**

Package.json

 "scripts": {

    "dev": "nodemon ./index.js",

    "start": "node ./index.js"

  },

**To run 🡪**

/Amazon\_Clone/amazon/server (main)

$ npm run dev

npm error Missing script: "dev"

npm error

…/Amazon\_Clone/amazon/server (main)

$ npm run dev

> server@1.0.0 dev

> nodemon ./index.js

[nodemon] 3.1.2

[nodemon] to restart at any time, enter `rs`

[nodemon] watching path(s): \*.\*

[nodemon] watching extensions: js,mjs,cjs,json

[nodemon] starting `node ./index.js`

connected at port 3000

1. **Create a get request:**

**IMP: remove port “0:0:0:0”**

**Package.json**

//get request

app.get('/hello', (req, res) => {

    res.send({name:"Rowdy"},);

});

To run : <http://localhost:3000/hello> in chrome

to send json data:

app.get('/json', (req, res) => {

    res.json({ name: "Rowdy" },);

});

1. **Creating routers in different files and importing it in main js**

**Ex:**

Routers/auth.js

const express=require("express");

const authRouter=express.Router();

authRouter.get('/user',(req,res)=>{

res.json({msg:"Suraj"});

});

module.exports=authRouter;

index.js

//imports from packages

const express=require("express");

const { get } = require("http");

//imports from other files

const authRouter=require("./routers/auth");

//initalization

const PORT=3000;

const app=express();

//middleware

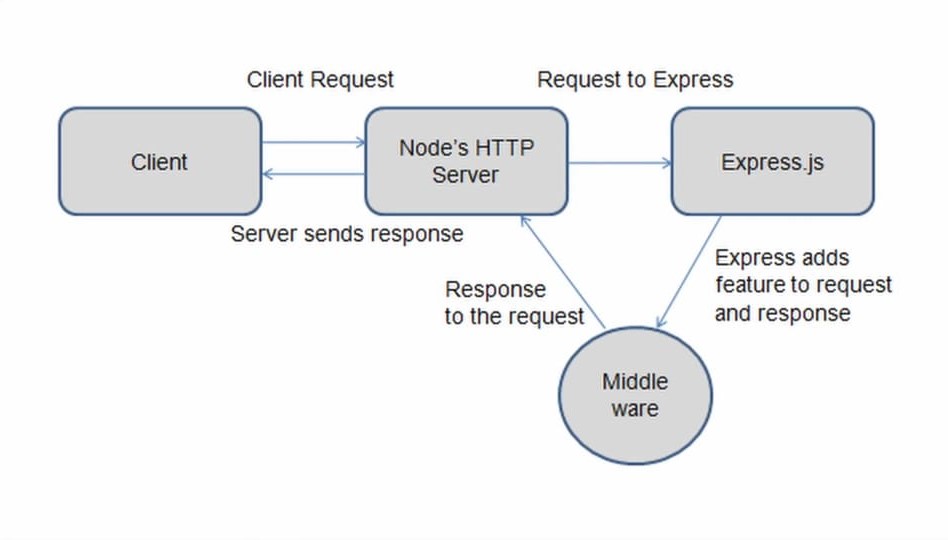
app.use(authRouter);

// app.listen(PORT,"0.0.0.0",()=>{console.log('connected at port ${PORT}')}); use back tick instead

app.listen(PORT,()=>{console.log(`connected at port ${PORT}`);

});

1. **What is middleware**



1. **To create post request-**

auth.js

const express=require("express");

const authRouter=express.Router();

authRouter.post('/api/users/',(req,res)=>{

//get data from user

const {name,email,password} =req.body;

});

module.exports=authRouter;

1. **Create a mangodb account and then create project which is simple steps and After creating go to security and do not forgot to user it for “mongo db native drivers” and port “0.0.0.0” witch means access from anywhere**

**Now go to database then pr name then connect then copy Add your connection string into your application code and copy that-**

“mongodb+srv://suraj:<password>@flutteramazoncloneapp.zspb2e1.mongodb.net/?retryWrites=true&w=majority&appName=FlutterAmazonCloneApp”

In place of <password> add suraj123 that was added while creating project

1. **Creating model and sign up for user**

models/user\_model.js

const mongoose = require('mongoose');

//creating scema

const userScema = mongoose.Schema({

    name: {

        required: true,

        type: String,

        trim: true,

    },

    email: {

        required: true,

        type: String,

        trim: true,

        validate: {

            validator: (value) => {

                const re =

                    /^(([^<>()[\]\.,;:\s@\"]+(\.[^<>()[\]\.,;:\s@\"]+)\*)|(\".+\"))@(([^<>()[\]\.,;:\s@\"]+\.)+[^<>()[\]\.,;:\s@\"]{2,})$/i;

                return value.match(re);

            },

            message: "Please enter valid email",

        },

    },

    password: {

        required: true,

        type: String,

    validate: {

    validator: (value) => {

        const pass =

            /^(?=.\*[a-z])(?=.\*[A-Z])(?=.\*\d)(?=.\*(\W|\_)).{6,}$/;

        return value.match(pass);

    },

        message: "Please enter strong password",

        },

    },

    address: {

        type: String,

        default: '',

    },

    type: {

        type: String,

        default: 'user',

    },

    //cart

});

//creating model

const User = mongoose.model("User", userScema);

module.exports=User;

**then for sign up make changes in auth.js**

auth.js

const express = require("express");

const bcryptjs = require("bcryptjs");

const User = require("../models/user\_model");

const authRouter = express.Router();

const jwt = require("jsonwebtoken");

//sign up

authRouter.post("/api/signup", async (req, res) => {

    //get data from user

    try {

        const { name, email, password } = req.body;

        const existingUser = await User.findOne({ email });

        if (existingUser) {

            return res

                .status(400)

                .json({ msg: "user with same email already exists!" });

        }

        //hash password

        const hashedPassword = await bcryptjs.hash(password, 8);

        //add user feilds in model

        let user = new User({

            email,

            name,

            password: hashedPassword,

        });

        //save user and

        //post data to database

        user = await user.save();

        //return the data to user

        res.json(user);

    } catch (e) {

        res.status(500).json({ error: e.message });

    }

});

module.exports = authRouter;

then to use this service in flutter create new file auth\_service.dart also create a json model of user to save all stuff in dart user.dart(db contain \_id do not forgot to change)

user.dart

import 'dart:convert';

class User {

  final String id;

  final String name;

  final String email;

  final String password;

  final String address;

  final String type;

  final String token;

  User({

    required this.id,

    required this.name,

    required this.email,

    required this.password,

    required this.address,

    required this.type,

    required this.token,

  });

  Map<String, dynamic> toMap() {

    return {

      'id': id,

      'name': name,

      'email': email,

      'password': password,

      'address': address,

      'type': type,

      'token': token,

    };

  }

  factory User.fromMap(Map<String, dynamic> map) {

    return User(

      id: map['\_id'] ?? '', //db contain \_id do not forgot to change

      name: map['name'] ?? '',

      email: map['email'] ?? '',

      password: map['password'] ?? '',

      address: map['address'] ?? '',

      type: map['type'] ?? '',

      token: map['token'] ?? '',

    );

  }

  String toJson() => json.encode(toMap());

  factory User.fromJson(String source) => User.fromMap(json.decode(source));

  User copyWith({

    String? id,

    String? name,

    String? email,

    String? password,

    String? address,

    String? type,

    String? token,

  }) {

    return User(

      id: id ?? this.id,

      name: name ?? this.name,

      email: email ?? this.email,

      password: password ?? this.password,

      address: address ?? this.address,

      type: type ?? this.type,

      token: token ?? this.token,

    );

  }

}

auth\_service.dart

import 'package:amazon/models/user.dart';

import 'package:amazon/utils/error\_hanling.dart';

import 'package:amazon/utils/exports.dart';

import 'package:amazon/utils/show\_snakbar.dart';

import 'package:flutter/material.dart';

import 'package:http/http.dart' as http;

class AuthServices {

  //sign up user

  void signUpUser({

    required BuildContext context,

    required String email,

    required String password,

    required String name,

  }) async {

    try {

      User user = User(

          id: '',

          name: name,

          email: email,

          password: password,

          address: '',

          type: '',

          token: '');

      http.Response res = await http.post(

        Uri.parse('$uri/api/signup'),

        body: user.toJson(),

        headers: <String, String>{

          'Content-Type': 'application/json; charset=UTF-8',

        },

      );

      httpErrorHandling(

        response: res,

        context: context,

        onSuccess: () {

          showSnackBar(

              context, "Account is created! login in  with your creditials.");

        },

      );

    } catch (e) {

      showSnackBar(context, e.toString());

    }

  }

  void signInUser({

    required BuildContext context,

    required String email,

    required String password,

  }) {}

}

**Now to use this in auth\_screen.dart**

Auth\_screen.dart

//code

class \_AuthScreenState extends State<AuthScreen> {

  //auth services instance

  final AuthServices \_authServices = AuthServices();

//code

  //sign up logic

  void userSignUp() {

    \_authServices.signUpUser(

        context: context,

        email: \_emailController.text,

        password: \_passwordController.text,

        name: \_nameController.text);

  }

//code

 @override

  Widget build(BuildContext context) {

//code

 CustomButton(

text: "Create account",

onTap: () {

if (\_signUpFormKey.currentState!.validate()) {

userSignUp();

}

}),

Now to run app on node server by “npm run dev”

Then run fn+f5 and then now you can sign up and do not forgot to use

String uri = 'http://<port number>:3000';

And passing our url for signup

  Uri.parse('$uri/api/signup'),

1. **Error handling and snack bar:**

**Error\_handling.dart**

import 'dart:convert';

import 'package:amazon/utils/exports.dart';

import 'package:amazon/utils/show\_snakbar.dart';

import 'package:flutter/material.dart';

import 'package:http/http.dart' as http;

void httpErrorHandling({

  required http.Response response,

  required VoidCallback onSuccess,

  required BuildContext context,

}) {

  switch (response.statusCode) {

    case 200:

      onSuccess();

      break;

    case 400:

      showSnackBar(context, jsonDecode(response.body)['msg']);

      break;

    case 500:

      showSnackBar(context, jsonDecode(response.body)['error']);

      break;

    default:

      showSnackBar(context, response.body);

  }

}

**Show\_snackbar.dart**

import 'package:amazon/utils/exports.dart';

void showSnackBar(BuildContext context, String text) {

  ScaffoldMessenger.of(context).showSnackBar(

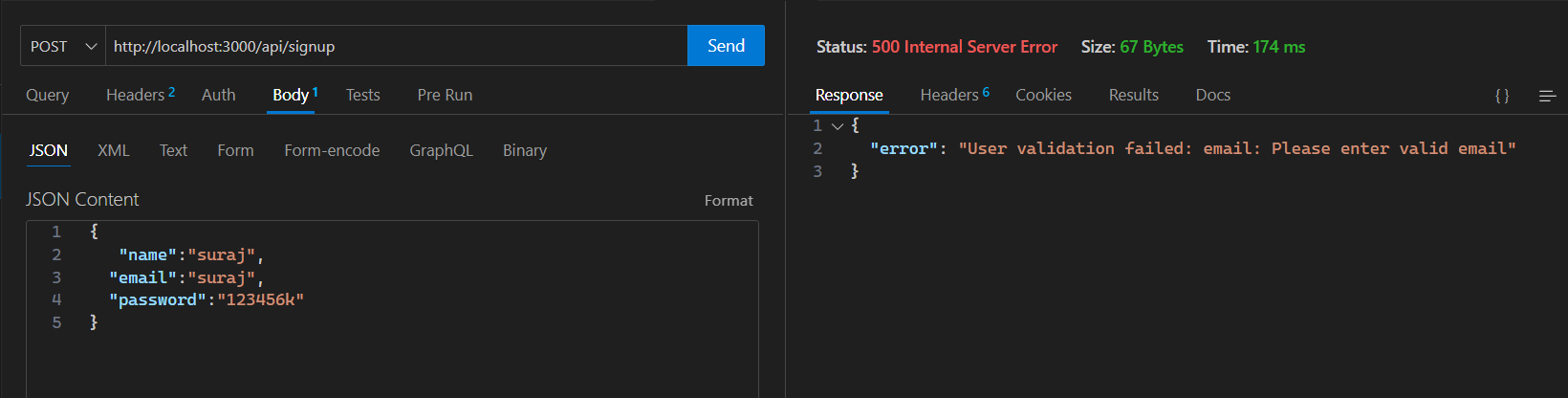
    SnackBar(

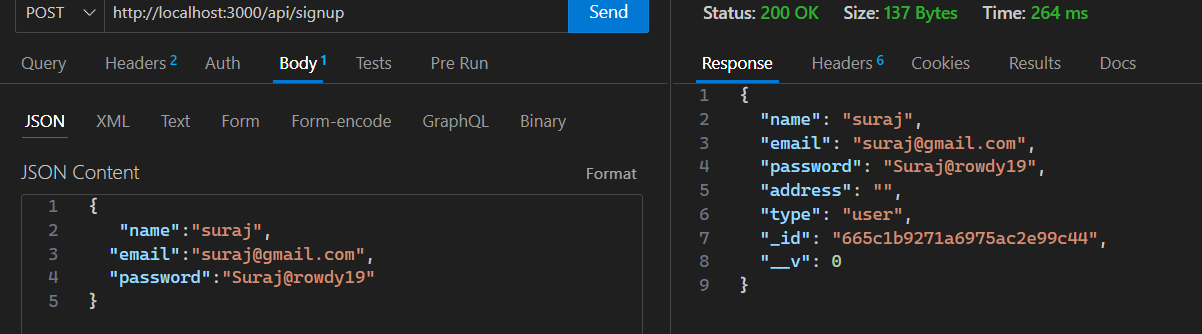
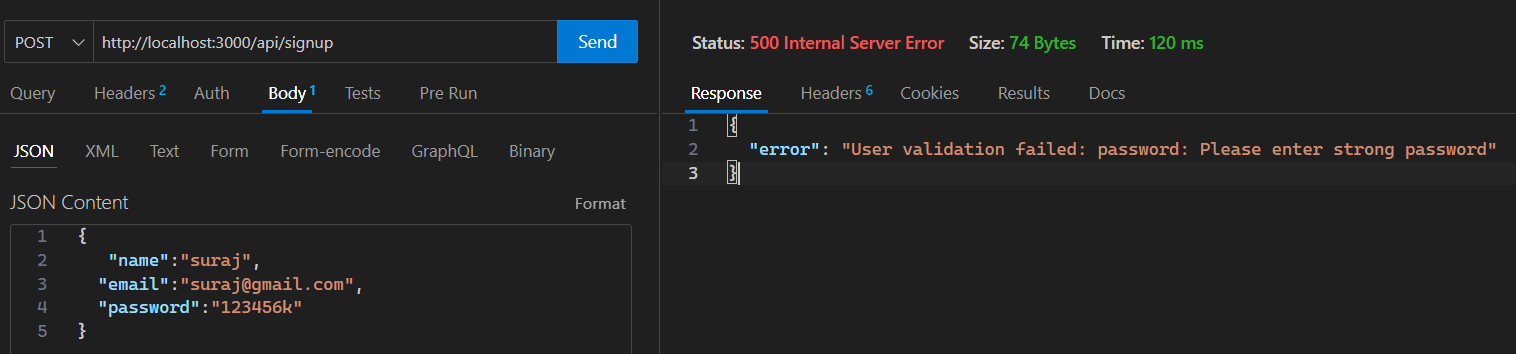
      content: Text(text),

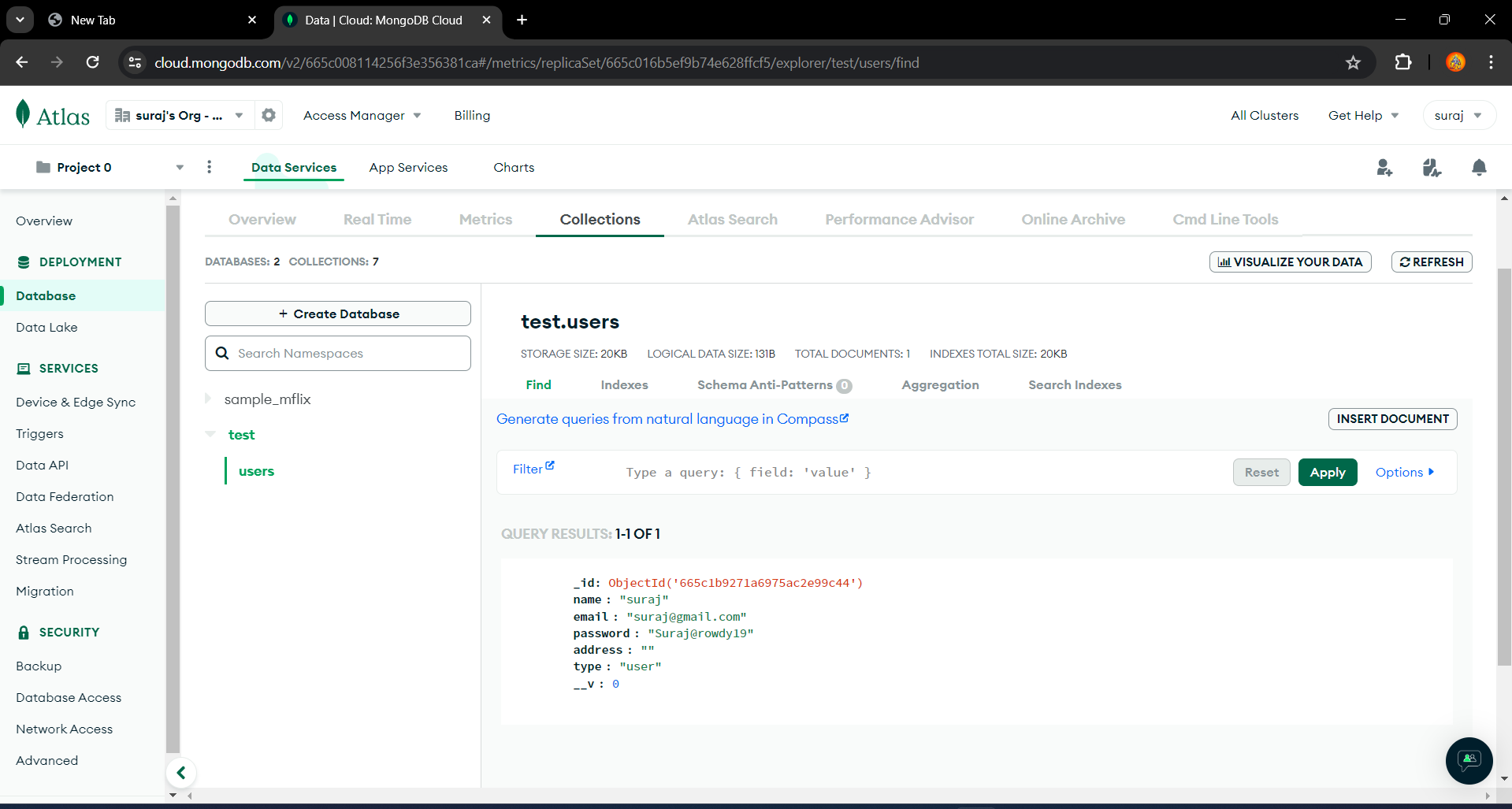
    ),

  );

}

1. **Testing Api “https://localhost:3000/api/signup”-**





1. **To make password secure using bcryptjs –**

/Amazon\_Clone/amazon/server (main)

$ npm i bcryptjs

added 1 package, and audited 116 packages in 3s

auth.js

const bcryptjs = require("bcryptjs");

//code

//add user feilds in model

        //hash password

       const hashedPassword=await bcryptjs.hash(password,8);

        let user = new User({

            email,

            name,

            password:hashedPassword,

        });

//code

1. **For user sign in**

Using jwt(jsonwebtoken) for user sign in on server side

And provider(better state managment),sharedPrefrences (storing token on physical device storage)are using in dart

Auth.js

//code

//sign in user

authRouter.post('/api/signin', async (req, res) => {

    try {

        const { email, password } = req.body;

        const validUser = await User.findOne({ email });

        if (!validUser) {

            return res.status(400).json({ msg: "Email does not exist in database!" });

        }

        //becripting password

        const isMatch = await bcryptjs.compare(password, validUser.password);

        if (!isMatch) {

            return res.status(400).json({ msg: "Incorrect password!" });

        }

        //jwt token

        const token = jwt.sign({ id: validUser.\_id }, "passwordKey");//passwordKey=> secretOrPrivateKey: jwt.Secret

        res.json({ token, ...validUser.\_doc });

    } catch (e) {

        res.status(500).json({ error: e.message });

    }

});

//code

Binding it to dart

Auth\_services.dart

//code

void signInUser({

    required BuildContext context,

    required String email,

    required String password,

  }) async {

    try {

      http.Response res = await http.post(

        Uri.parse('$uri/api/singin'),

        //now just encoding comming data

        body: jsonEncode(

          {

            "email": email,

            'password': password,

          },

        ),

        headers: <String, String>{

          'Content-Type': 'application/json; charset=UTF-8',

        },

      );

      httpErrorHandling(

        response: res,

        context: context,

        onSuccess: () async {

  SharedPreferences prefs = await SharedPreferences.getInstance();

          Provider.of<UserProider>(context, listen: false).setUser(res.body);

          await prefs.setString('auth-token', jsonDecode(res.body)['token']);

          Navigator.pushNamedAndRemoveUntil(

              context, MyHomeScreen.routeName, (route) => false);

},

      );

    } catch (e) {

      return showSnackBar(context, e.toString());

    }

  }

//code

Auth\_screen.dart

class AuthScreen extends StatefulWidget {

  //code

}

class \_AuthScreenState extends State<AuthScreen> {

//code

//sign in logic

  void userSignIn() {

    \_authServices.signInUser(

        context: context,

        email: \_emailController.text,

        password: \_passwordController.text);

  }

//code

 @override

  Widget build(BuildContext context) {

//code

 CustomButton(

text: "Sign In",

onTap: () {

if (\_signInFormKey.currentState!.validate()) {

userSignIn();

}

}),

//code

Added home screen but need to register route

Routers.dart

//code

//MyHomeScreen()

    case MyHomeScreen.routeName:

      return MaterialPageRoute(

        settings: routeSettings,

        builder: (\_) => const MyHomeScreen(),

      );

//code

//home\_screen.dart

class MyHomeScreen extends StatefulWidget {

  static const String routeName = "/home";

  const MyHomeScreen({super.key});

  @override

  State<MyHomeScreen> createState() => \_MyHomeScreenState();

}

class \_MyHomeScreenState extends State<MyHomeScreen> {

  @override

  Widget build(BuildContext context) {

    final user = Provider.of<UserProider>(context).user;

    return Scaffold(

      body: Center(

        child: Text(

          user.toJson(),

        ),

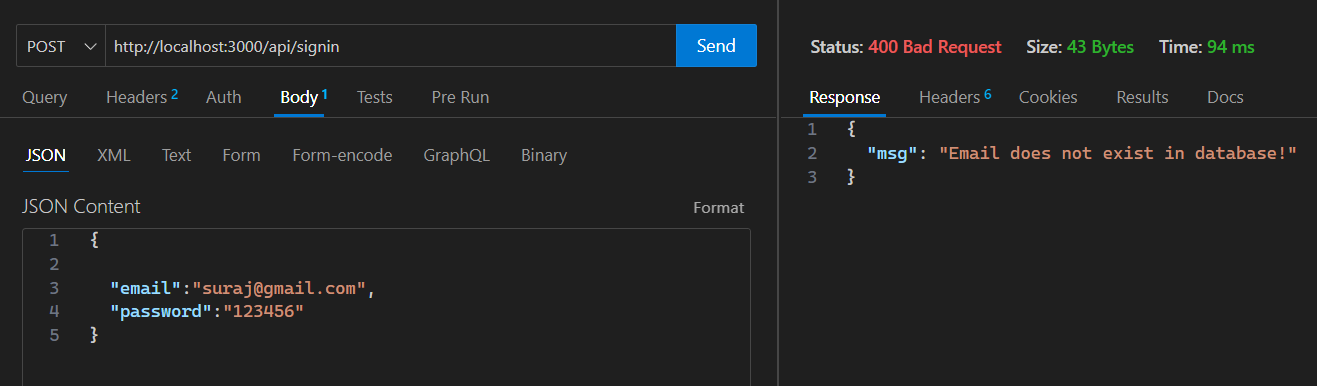
      ),

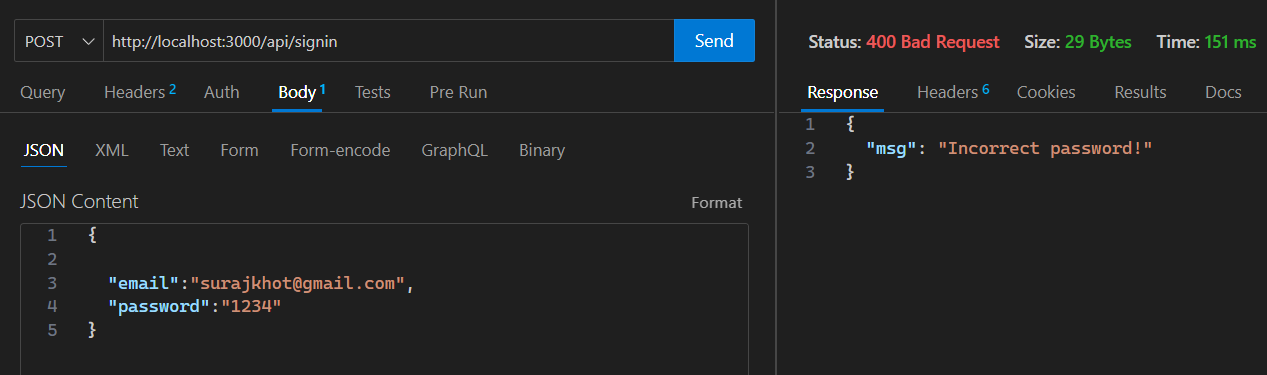
    );

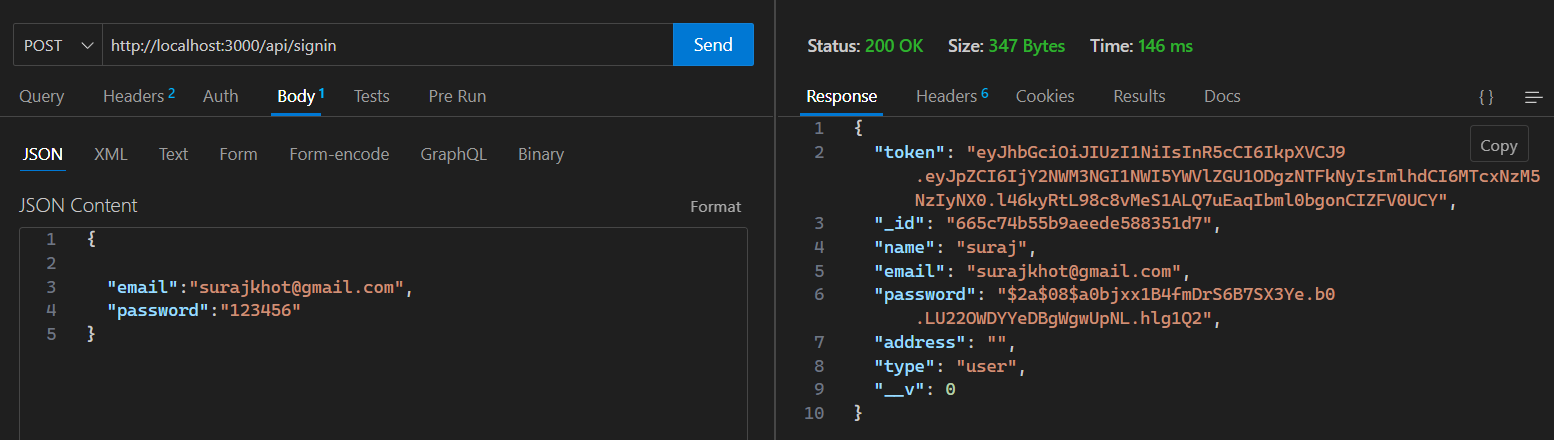
  }

}

1. **Testing api “https://localhost:3000/api/signin”-**







1. Creating user provider for state management

User\_provider.dart

class UserProider with ChangeNotifier {

  User \_user = User(

      id: '',

      name: '',

      email: '',

      password: '',

      address: '',

      type: '',

      token: '');

  User get user => \_user;

  void setUser(String user) {

    \_user = User.fromJson(user);

    notifyListeners();

  }

}

1. **To checking user is already logged or not:**

Using provider and token from api

Auth\_service.dart

//code

//geting user data

  void getUserData({

    required BuildContext context,

  }) async {

    try {

      SharedPreferences prefs = await SharedPreferences.getInstance();

      String? token = prefs.getString("auth-token");

      // creating user with  empty token if first time with our app

      if (token == null) {

        prefs.setString('auth-token', '');

      }

      var tokenIsValidResponse = await http.post(

        Uri.parse(

          '$uri/tokenIsValid',

        ),

        //passing 'auth-token':token from above

        headers: <String, String>{

          'Content-Type': 'application/json; charset=UTF-8',

          'auth-token': token!,

        },

      );

      var tokenResponse = jsonDecode(tokenIsValidResponse.body);

      //geting response in true or flase from our api

      if (tokenResponse == true) {

        //api to get the user data

        http.Response userResponse = await http.get(

          Uri.parse('$uri/'),

          headers: <String, String>{

            'Content-Type': 'application/json; charset=UTF-8',

            'auth-token': token,

          },

        );

        //passing userResponse if he alredy sign in with to provider

        var userProvider = Provider.of<UserProider>(context, listen: false);

        userProvider.setUser(userResponse.body);

      }

    } catch (e) {

      showSnackBar(context, e.toString());

    }

  }

Create middleware on server side do not forgot to export it

authMiddelware.js

const jwt=require('jsonwebtoken');

const authMiddelware =async (req,res,next)=>{

try{

    const token=req.header("auth-token");

    if(!token){

        return res.status(401).json({msg:"no auth token, access denied!"});

    }

    const verifiedToken=jwt.verify(token,"passwordKey");

    if (!verifiedToken){

        return res.status(401).json({ msg: "token verification fails, access denied!" });

    }

    //if user is valid then storing user in req.user

    req.user=verifiedToken.id;

    req.token=token;

    //next => it is just call next callback fun

    next();

}catch(e){

    res.status(500).json({error: e.message});

}

};

module.exports= authMiddelware;

now to verify token and getting user data make changes in auth.js do not forgot to import middleware

auth.js

//code

//verify token api

authRouter.post('/api/signin', async (req, res) => {

    try {

        const { email, password } = req.body;

        const validUser = await User.findOne({ email });

        if (!validUser) {

            return res.status(400).json({ msg: "Email does not exist in database!" });

        }

        //becripting password

        const isMatch = await bcryptjs.compare(password, validUser.password);

        if (!isMatch) {

            return res.status(400).json({ msg: "Incorrect password!" });

        }

        //jwt token

        const token = jwt.sign({ id: validUser.\_id }, "passwordKey");//passwordKey=> secretOrPrivateKey: jwt.Secret

        res.json({ token, ...validUser.\_doc });

    } catch (e) {

        res.status(500).json({ error: e.message });

    }

});

//verify token api

authRouter.post("/tokenIsValid", async (req, res) => {

    try {

        //checking user with null token

        const token = req.header('auth-token');

        if (!token)

            return res.json(false);

        //if there verify with secretOrPublicKey: jwt.Secret

        const isVerified = jwt.verify(token, "passwordKey");

        //if unverified

        if (!isVerified) return res.json(false);

        //cheking user exist with verified id

        const existUser = await User.findById(isVerified.id);

        if (!existUser) return res.json(false);

        //if non of above condition

        res.json(true);

    } catch (e) {

        res.status(500).json({ error: e.message });

    }

});

// geting data of user

// passing middelware authMiddelware

authRouter.get('/', authMiddelware, async (req, res) => {

    const user = await User.findById(req.user);

    res.json({ ...user.\_doc, token: req.token });

});

//code

We need to make change in main.dart on the basis of receving users token and navigate to home\_screen or navigate to auth\_screen and need to register provider there

Main.dart

import 'package:amazon/utils/exports.dart';

void main() {

  runApp(

      //register provider

      MultiProvider(providers: [

    ChangeNotifierProvider(

      create: (\_) => UserProider(),

    ),

  ], child: const MyApp()));

}

class MyApp extends StatefulWidget {

  const MyApp({super.key});

  @override

  State<MyApp> createState() => \_MyAppState();

}

class \_MyAppState extends State<MyApp> {

  AuthServices authServices = AuthServices();

  @override

  void initState() {

    super.initState();

    authServices.getUserData(context: context);

  }

  @override

  Widget build(BuildContext context) {

    return MaterialApp(

      title: 'Amazon',

      debugShowCheckedModeBanner: false,

      theme: ThemeData(

        scaffoldBackgroundColor: GloabalVariables.backgroundColor,

        colorScheme:

            const ColorScheme.light(primary: GloabalVariables.secondaryColor),

        appBarTheme: const AppBarTheme(

          iconTheme: IconThemeData(

            color: Colors.black,

          ),

          elevation: 0,

        ),

        useMaterial3: true,

      ),

      onGenerateRoute: (settings) => generateRoute(settings),

      home: Provider.of<UserProider>(context).user.token.isNotEmpty

          ? const MyHomeScreen()

          : const AuthScreen(),

    );

  }

}

1. Now its time to create home screen and account screen for that create bottomnavigaton bar with all of them icons.
2. Creating admin with home and add-product and to select images-

Admin\_add\_product.dart

class AdminAddProduct extends StatefulWidget {

  static const String routeName = "/addProduct";

  const AdminAddProduct({super.key});

  @override

  State<AdminAddProduct> createState() => \_AdminAddProductState();

}

class \_AdminAddProductState extends State<AdminAddProduct> {

  String selectedCategory = 'Mobiles';

  List<File> productImage = [];

  //initialize controllers

List<String> categoriesList = <String>[//all categories];

//menue button fun

  void updateCategory(String? NewCategory) {

    setState(() {

      selectedCategory = NewCategory!;

    });

  }

//fun to display image in dotted box

  void selectImg() async {

    //util>file\_picker

    var resultImages = await addProductImage().filePicker();

    setState(() {

      productImage = resultImages;

    });

  }

//instance of admin.services

  AdminServices adminServices = AdminServices();

//function to sell product

  void sellProduct() {

    if (sellProductKey.currentState!.validate() && productImage.isNotEmpty) {

      adminServices.sellProduct(

          context: context,

          productName: \_productController.text,

          description: \_descriptionController.text,

          category: selectedCategory,

          quantity: double.parse(\_quantityController.text),

          price: double.parse(\_priceController.text),

          images: productImage);

    }

  }

  @override

  Widget build(BuildContext context) {

    return Scaffold(

      appBar: PreferredSize(

        preferredSize: const Size.fromHeight(50),

       // child: AppBar(//appbar)

      body: SingleChildScrollView(

//also add form and validation

        child: Padding(

          padding: EdgeInsets.symmetric(horizontal: 15.0, vertical: 12),

          child: Column(

            children: [

              //checking is image selected

              productImage.isNotEmpty

                  ? CarouselSlider(

                      items: productImage

                          .map(

                            (images) => Builder(

                              builder: (context) {

                                return Image.file(

                                  images,

                                  fit: BoxFit.fitWidth,

                                  height: 200,

                                  width: double.infinity,

                                );

                              },

                            ),

                          )

                          .toList(),

                      options: CarouselOptions(

                        height: 200,

                        viewportFraction: 1,

                        autoPlay: true,

                      ),

                    )

                  : GestureDetector(

                      onTap: selectImg,

                      child: DottedBorder(

                        strokeWidth: 1,

                        borderType: BorderType.RRect,

                        radius: Radius.circular(10),

                        strokeCap: StrokeCap.round,

                        dashPattern: [10, 4],

                        child: Container(

                          decoration: BoxDecoration(

                            borderRadius: BorderRadius.circular(10),

                          ),

                          height: 150,

                          width: double.maxFinite,

                          child: Column(

                            mainAxisAlignment: MainAxisAlignment.center,

                            children: [

                              Icon(

                                Icons.folder\_copy\_outlined,

                                size: 35,

                              ),

                              CustomSpacer(

                                height: 5,

                              ),

                              Text(

                                "Select Product Images",

                                style: TextStyle(

                                    fontWeight: FontWeight.w400, fontSize: 18),

                              )

                            ],

                          ),

                        ),

                      ),

                    ),

//take all other feilds

              //drop down menue for taking category

              SizedBox(

                width: double.infinity,

                child: DropdownButton(

                  value: selectedCategory,

                  items: categoriesList.map((String category) {

                    return DropdownMenuItem(

                        value: category, child: Text(category));

                  }).toList(),

                  onChanged: updateCategory,

                  icon: Icon(Icons.keyboard\_arrow\_down),

                ),

              ),

//creating api to sell prduct

              CustomButton(text: "Sell", onTap: sellProduct,

            ],

          ),

        ),

      ),

    );

  }

  }

}

Using plugin to store images using clodinary

**cloudinary\_public: ^0.23.1 in yaml**

**now to add product create model and service on frontend side**

admin\_services.dart

import 'package:amazon/models/product.dart';

import '../../../utils/exports.dart';

import 'package:http/http.dart' as http;

class AdminServices {

  //add producct function

  Future<void> sellProduct({

    required BuildContext context,

    required String productName,

    required String description,

    required String category,

    required double quantity,

    required double price,

    required List<File> images,

  }) async {

    final userProvider = Provider.of<UserProider>(context, listen: false);

    try {

      //using cloudinary to store imgaes

      final cloudinary = CloudinaryPublic("dg9rfqe0v", "z1puondu");

      List<String> imageUrl = [];

      for (int i = 0; i < images.length; i++) {

        //adding file with folder name as productName

        CloudinaryResponse response = await cloudinary.uploadFile(

          CloudinaryFile.fromFile(images[i].path, folder: productName),

        );

        //adding only url not files

        imageUrl.add(response.secureUrl);

      }

      //upload urls to mongodb using model Product

      Product product = Product(

          name: productName,

          description: description,

          quantity: quantity,

          images: imageUrl,

          category: category,

          price: price);

      http.Response response = await http.post(

        Uri.parse("$uri/admin/add-product"),

        headers: <String, String>{

          'Content-Type': 'application/json; charset=UTF-8',

          'auth-token': userProvider.user.token,

        },

        body: product.toJson(),

      );

      httpErrorHandling(

          response: response,

          onSuccess: () {

            showSnackBar(context, "Product added successfully!");

            Navigator.pop(context);

          },

          context: context);

    } catch (e) {

      showSnackBar(context, e.toString());

    }

  }

}

Product.dart

import 'package:amazon/utils/exports.dart';

class Product {

  final String name;

  final String description;

  final double quantity;

  final List<String> images; //storing url only

  final String category;

  final double price;

  final String? id;

  Product({

    required this.name,

    required this.description,

    required this.quantity,

    required this.images,

    required this.category,

    required this.price,

    this.id,

  });

  Map<String, dynamic> toMap() {

    return {

      'name': name,

      'description': description,

      'quantity': quantity,

      'images': images,

      'category': category,

      'price': price,

      'id': id,

    };

  }

  factory Product.fromMap(Map<String, dynamic> map) {

    return Product(

      name: map['name'] ?? '',

      description: map['description'] ?? '',

      quantity: map['quantity']?.toDouble() ?? 0.0,

      images: List<String>.from(map['images']),

      category: map['category'] ?? '',

      price: map['price']?.toDouble() ?? 0.0,

      id: map['\_id'], //chnge id to \_id

    );

  }

  String toJson() => json.encode(toMap());

  factory Product.fromJson(String source) =>

      Product.fromMap(json.decode(source));

}

**Now time to create api for add product on server side**

Admin.js

const express = require("express");

const adminRoute = express.Router();

const adminMiddelware = require("../middlewares/admin\_middleware");

const Product = require("../models/product\_model");

//ading product api

adminRoute.post('/admin/add-product', adminMiddelware, async (req, res) => {

    try {

        const { name, description, images, quantity, price, category } = req.body;

        let product = new Product({

            name,

            description,

            images,

            quantity,

            price,

            category,

        });

        //save to database

        product=await product.save();

        //return product to client side

        res.json(product);

    } catch (e) {

        res.status(500).json({ error: e.message });

    }

});

Modules.export=Admin;

**Register admin roter in index.js**

//code

app.use(adminRoute);

//code

//admin\_middleware.js

const jwt = require('jsonwebtoken');

const User = require('../models/user\_model'); //importing user model

const adminMiddelware = async (req, res, next) => {

    try {

        const token = req.header("auth-token");

        if (!token) {

            return res.status(401).json({ msg: "no auth token, access denied!" });

        }

        const verifiedToken = jwt.verify(token, "passwordKey");

        if (!verifiedToken) {

            return res.status(401).json({ msg: "token verification fails, access denied!" });

        }

        //creating user by their id using User model

        const user = await User.findById(verifiedToken.id);

        //cheking he is user or seller

        if (user.type = "user" || user.type == "seller") {

            return res.status(401).json({ msg: "you are not admin, access denied!" });

        }

        //if he is admin

        req.user = verifiedToken.id;

        req.token = token;

        //next => it is just call next callback fun

        next();

    } catch (e) {

        res.status(500).json({ error: e.message });

    }

};

module.exports = adminMiddelware;

product.js

const mongoose = require('mongoose');

//creating scema

const productrSchema = mongoose.Schema({

    name: {

        required: true,

        type: String,

        trim: true,

    },

    description: {

        required: true,

        type: String,

        trim: true,

    },

    //typr:array

    images: [

        {

            type: String,

            required: true,

        }

    ],

    price: {

        required: true,

        type: Number,

    },

    quantity: {

        type: Number,

        required: true

    },

    category: {

        type: String,

        required: true,

    }

});

//creating model

const Product = mongoose.model("Product", productrSchema);

module.exports = Product;

**checking for user type**

main.dart

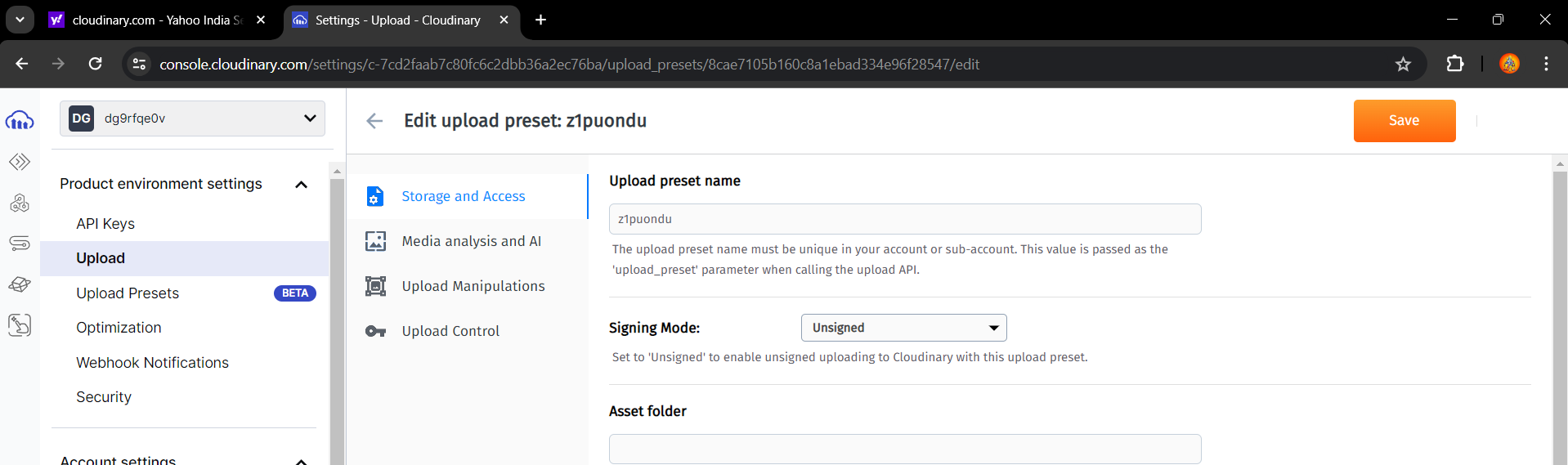
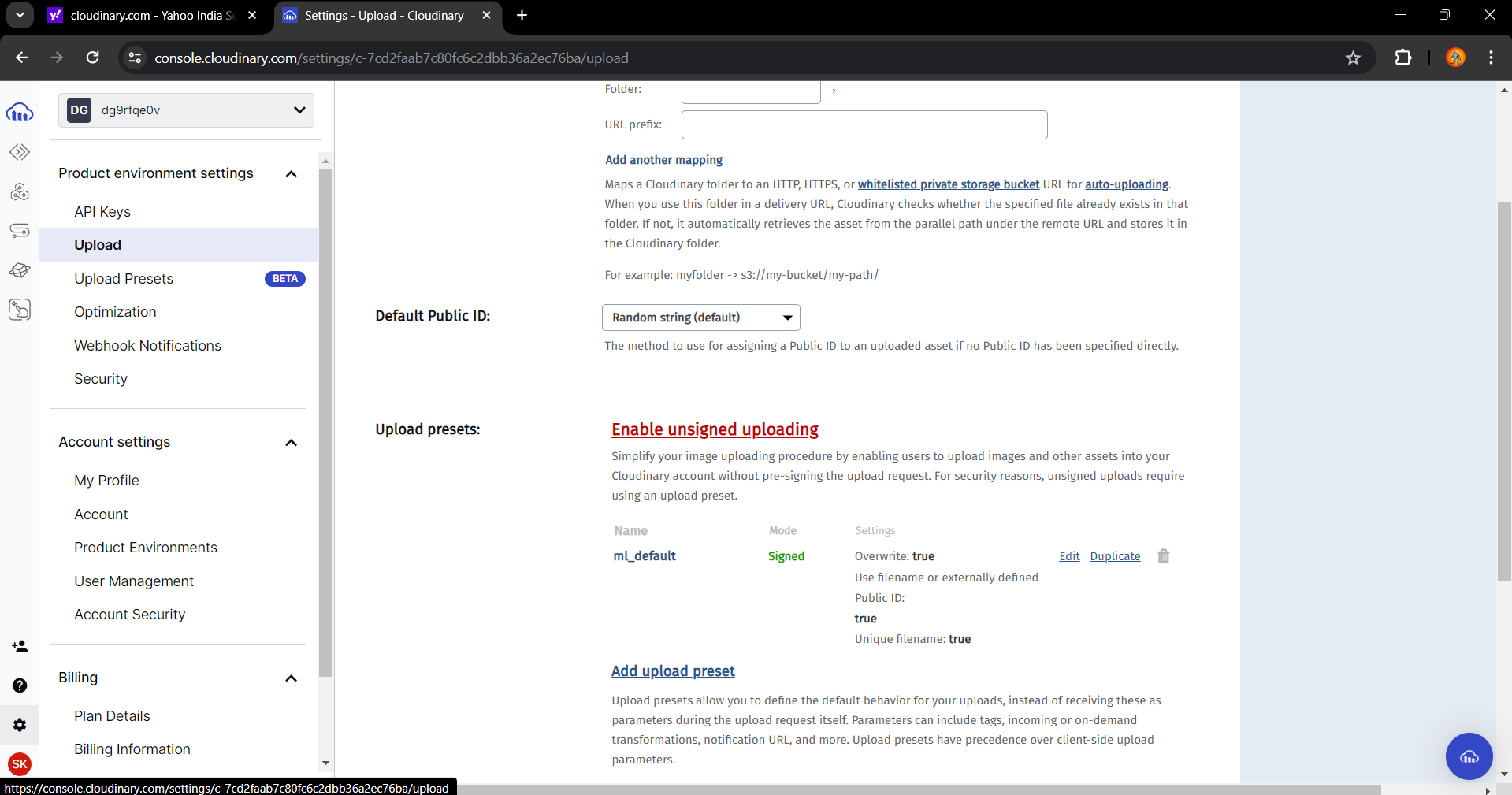
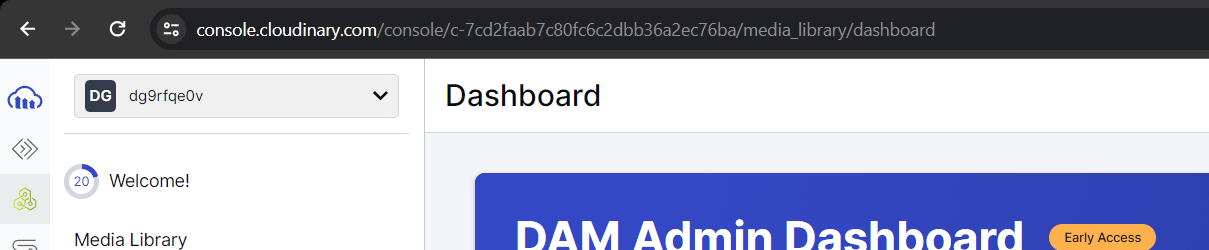
home: Provider.of<UserProider>(context).user.token.isNotEmpty

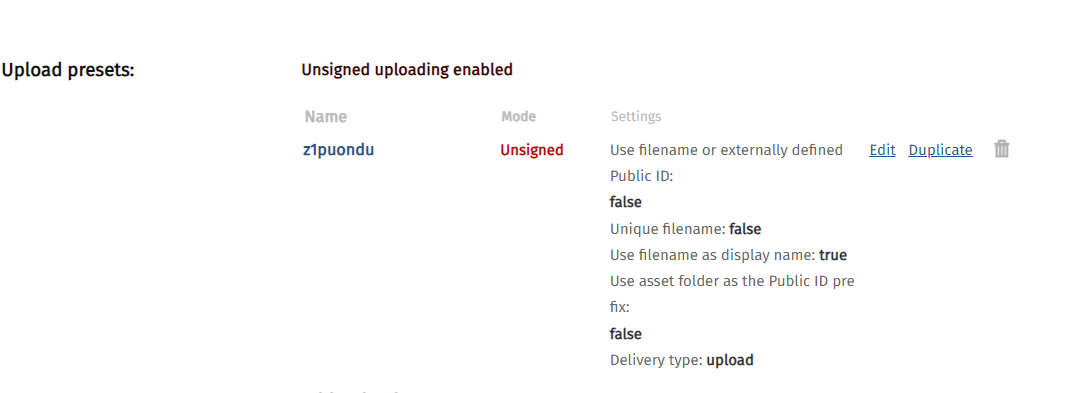
            ? Provider.of<UserProider>(context).user.type == "user"

                ? const BottomNavigation()

                : AdminBottomBar()

            : const AuthScreen());

[**https://console.cloudinary.com/**](https://console.cloudinary.com/)****



Steps: 1. Copy product environment key

2. enable unsigned uploading for that go in settings and make it

3. delete signed uploading

4. copy the upload preset now by clicking on unsigned uploading

Syntax:

    //using cloudinary to store imgaes

      final cloudinary = CloudinaryPublic("dg9rfqe0v", "z1puondu");

      List<String> imageUrl = [];

      for (int i = 0; i < images.length; i++) {

        //adding file with folder name as productName

        CloudinaryResponse response = await cloudinary.uploadFile(

          CloudinaryFile.fromFile(images[i].path, folder: productName),

        );

        //adding only url not files

        imageUrl.add(response.secureUrl);

      }

1. Now Fetch and show all products

Creating api first

Admin.js

//code

// showing product

adminRoute.get('/admin/get-product', adminMiddelware, async (req, res) => {

    try {

        //fetch product

        const fetchProduct = await Product.find({});

        res.json(fetchProduct);

    } catch (e) {

        res.status(500).json({ error: e.message });

    }

});

//code

Create frontend api call

Admin\_services.dart

//code

  //fetch product

  //add producct function

  Future<List<Product>> getProduct(BuildContext context) async {

    final userProvider = Provider.of<UserProider>(context, listen: false);

    List<Product> productList = [];

    try {

      http.Response response = await http

          .get(Uri.parse("$uri/admin/get-product"), headers: <String, String>{

        'Content-Type': 'application/json; charset=UTF-8',

        "auth-token": userProvider.user.token,

      });

      httpErrorHandling(

        response: response,

        context: context,

        onSuccess: () {

          for (int i = 0; i < jsonDecode(response.body).length; i++) {

            productList.add(

              Product.fromJson(

                jsonEncode(

                  jsonDecode(response.body)[i],

                ),

              ),

            );

          }

        },

      );

    } catch (e) {

      showSnackBar(context, e.toString());

    }

    return productList;

  }

//code

Now show it in adminhome.dart

import 'package:amazon/utils/exports.dart';

class AdminHome extends StatefulWidget {

  const AdminHome({super.key});

  @override

  State<AdminHome> createState() => \_AdminHomeState();

}

class \_AdminHomeState extends State<AdminHome> {

  final AdminServices adminServices = AdminServices();

  //creating list

  List<Product>? products;

  @override

  void initState() {

    super.initState();

    fetchProducts();

  }

  fetchProducts() async {

    products = await adminServices.getProduct(context);

    setState(() {});

  }

  @override

  Widget build(BuildContext context) {

//checking product list is null

    return products == null

        ? CustomProgressIndicator()

        : Scaffold(

            body: SingleChildScrollView(

              padding: EdgeInsets.symmetric(horizontal: 10, vertical: 20),

              child: GridView.builder(

                  itemCount: products!.length,

                  gridDelegate: SliverGridDelegateWithFixedCrossAxisCount(

                    crossAxisCount: 2,

                  ),

                  itemBuilder: (context, index) {

                    final productData = products![index];

                    return Column(

                      children: [

                        SizedBox(

                          height: 150,

                          child: SingleOrder(

                            img: productData.images[index],

                          ),

                        ),

                        Row(

                          mainAxisAlignment: MainAxisAlignment.spaceEvenly,

                          children: [

                            Expanded(

                              child: Text(

                                productData.name,

                                overflow: TextOverflow.ellipsis,

                                maxLines: 2,

                              ),

                            ),

                            InkWell(

                                onTap: () {},

                                child: Icon(Icons.delete\_outline)),

                          ],

                        )

                      ],

                    );

                  }),

            ),

            floatingActionButtonLocation:

                FloatingActionButtonLocation.miniEndDocked,

            floatingActionButton: FloatingActionButton(

              backgroundColor: AppStyles.selectedNavBarColor,

              tooltip: "Add Product",

              onPressed: () {

                Navigator.pushNamed(context, AdminAddProduct.routeName);

              },

              child: Icon(

                Icons.add,

                color: Colors.black,

                size: 40,

              ),

            ),

          );

  }

}

1. Deleting product at admin side

Admin.js

//code

//delete product

adminRoute.post('/admin/delete-product', adminMiddelware, async (req, res) => {

    try {

        //fetch id of product

        const { id } = req.body;

//passing that id here

        let deleteProduct = await Product.findByIdAndDelete(id);

        res.json(deleteProduct);

    } catch (e) {

        res.status(500).json({ error: e.message });

    }

//code

//admin\_services.dart

//code

//delete product

  void deleteProduct({

    required BuildContext context,

    required Product product,

    required VoidCallback runToDelete,

  }) async {

    final userProvider = Provider.of<UserProider>(context, listen: false);

    try {

      http.Response response = await http.post(

        Uri.parse(

          '$uri/admin/delete-product',

        ),

        headers: <String, String>{

          'Content-Type': 'application/json; charset=UTF-8',

          "auth-token": userProvider.user.token,

        },

        body: jsonEncode(

            //passing is to delete it

            {'id': product.id}),

      );

      httpErrorHandling(

          response: response, onSuccess: runToDelete, context: context);

    } catch (e) {

      return showSnackBar(context, e.toString());

    }

  }

//code

Admin\_home.dart

//code

//delete product

  void deleteProduct(Product product, int index) {

    adminServices.deleteProduct(

        context: context,

        product: product,

        runToDelete: () {

          //passing index with removeAt func and to replicate using setState

          products!.removeAt(index);

          setState(() {});

        });

  }

//code

InkWell(

onTap: () => deleteProduct(productData, index),

child: Icon(Icons.delete\_outline),

),

1. Now Showing a product of specific product
2. Creating api to get product with category–

Note: How to access value from url-

If >>>/api/product?category=Mobiles

Then >>> req.query.category

If>>> api/amazon?theme=dark

Then>>> req.query.theme

If>>> api/products:category =Mobile

Then>>> req.query.params.category

Category\_product.js

const express = require("express");

const auth = require("../middlewares/auth\_middleware");

const Product = require("../models/product\_model");

const categoryProductRoute = express.Router();

// showing product with specific category

categoryProductRoute.get("/api/category-product", auth, async (req, res) => {

    try {

        //fetch product with specific product

        const fetchProduct = await Product.find({ category: req.query.category });

        res.json(fetchProduct);

        //error handling

    } catch (e) {

        res.status(500).json({ error: e.message });

    }

});

//exports

module.exports = categoryProductRoute;

bind this route in index.js

index.js

//code

const categoryProductRoute=require("./routers/categort\_product");

//code

app.use(categoryProductRoute);

//code

1. Using it in frontend-

Product\_category.dart

import 'package:amazon/utils/exports.dart';

import 'package:http/http.dart' as http;

class ProductCategorySevice {

  Future<List<Product>> getProductWithCategory({

    required BuildContext context,

    required String category,

  }) async {

    final userProvider = Provider.of<UserProider>(context,listen:false);

    List<Product> productList = [];

    try {

      //geting product with category

      http.Response response = await http.get(

        Uri.parse("$uri/api/category-product?category=$category"),

        headers: <String, String>{

          'Content-Type': 'application/json; charset=UTF-8',

          "auth-token": userProvider.user.token,

        },

      );

      httpErrorHandling(

          response: response,

          onSuccess: () {

            for (int i = 0; i < jsonDecode(response.body).length; i++) {

              productList.add(

                Product.fromJson(

                  jsonEncode(

                    jsonDecode(response.body)[i],

                  ),

                ),

              );

            }

          },

          context: context);

    } catch (e) {

      showSnackBar(context, e.toString());

    }

    return productList;

  }

}

1. Using it in app-

specific\_category\_screen.dart

import 'package:amazon/utils/exports.dart';

class SpecificCategory extends StatefulWidget {

  final String Category;

  static const String routeName = "/orders-screen";

  const SpecificCategory({super.key, required this.Category});

  @override

  State<SpecificCategory> createState() => \_SpecificCategoryState();

}

class \_SpecificCategoryState extends State<SpecificCategory> {

  ProductCategorySevice productCategorySevice = ProductCategorySevice();

  List<Product>? productList;

  @override

  void initState() {

    getProductWithSpecificCategory();

    super.initState();

  }

  void getProductWithSpecificCategory() async {

    productList = await productCategorySevice.getProductWithCategory(

        context: context, category: widget.Category);

    setState(() {});

  }

  @override

  Widget build(BuildContext context) {

    return Scaffold(

      appBar: PreferredSize(

        preferredSize: const Size.fromHeight(45),

        child: AppBar(

          centerTitle: true,

          flexibleSpace: Container(

            decoration: const BoxDecoration(

              gradient: AppStyles.appBarGradient,

            ),

            width: double.infinity,

          ),

          backgroundColor: AppStyles.selectedNavBarColor,

          title: Text(

            widget.Category,

            style: TextStyle(fontWeight: FontWeight.bold, color: Colors.black),

          ),

        ),

      ),

      body: productList == null

          ? CustomProgressIndicator()

          : Padding(

              padding: const EdgeInsets.symmetric(horizontal: 10, vertical: 16),

              child: Column(

                children: [

                  Row(

                    children: [

                      Text(

                        "Keep shoping for, ",

                        style: TextStyle(color: AppStyles.selectedNavBarColor),

                      ),

                      Text(

                        widget.Category + " ...",

                        style: TextStyle(

                          fontWeight: FontWeight.w700,

                          color: AppStyles.selectedNavBarColor,

                        ),

                      ),

                    ],

                  ),

                  CustomSpacer(

                    height: 20,

                  ),

                  GridView.builder(

                    scrollDirection: Axis.horizontal,

                    itemCount: productList!.length,

                    gridDelegate:

                        const SliverGridDelegateWithFixedCrossAxisCount(

                            crossAxisCount: 1,

                            mainAxisSpacing: 10,

                            childAspectRatio: 1.4),

                    itemBuilder: (context, index) {

                      //initalizing product

                      final product = productList![index];

                      return Column(

                        children: [

                          SizedBox(

                            height: 180,

                            child: DecoratedBox(

                              decoration: BoxDecoration(

                                border: Border.all(

                                    color: Colors.black12, width: 0.5),

                              ),

                              child: Padding(

                                padding: EdgeInsets.all(10),

                                child: Image.network(

                                  product.images[0],

                                ),

                              ),

                            ),

                          ),

                        ],

                      );

                    },

                  ),

                ],

              ),

            ),

    );

  }

}

1. Creating search feature
2. Creating api

Search.js

const express = require("express");

const auth = require("../middlewares/auth\_middleware");

const Product = require("../models/product\_model");

//search screen

const searchScreenRouter = express.Router();

//if : in url params

//if ? in url query

searchScreenRouter.get('/api/search/:name', auth, async (req, res) => {

    try {

        //fetching product with search query

        const fetchProductWithSearchQuery = await Product.find({

            //passing reqular expression

            name: { $regex: req.params.name, $options: "i" },

        });

        res.json(fetchProductWithSearchQuery);

    } catch (e) {

        res.status(500).json({ error: e.message });

    }

});

//export

module.exports = searchScreenRouter;

bind it to index.js

//index.js

const searchScreenRouter = require("./routers/search");

//code

app.use(searchScreenRouter);

//code

1. Create search service

Search\_services.dart

import 'package:amazon/utils/exports.dart';

import 'package:http/http.dart' as http;

class SearchServices {

  Future<List<Product>> fetchProductWithSearch({

    required BuildContext context,

    required String searchQuery,

  }) async {

    final userProvider = Provider.of<UserProider>(context, listen: false);

    List<Product> productListWithSearchMatch = [];

    try {

      http.Response response = await http.get(

        Uri.parse("$uri/api/search/$searchQuery"),

        headers: <String, String>{

          'Content-Type': 'application/json; charset=UTF-8',

          "auth-token": userProvider.user.token,

        },

      );

      httpErrorHandling(

          response: response,

          onSuccess: () {

            for (int i = 0; i < jsonDecode(response.body).length; i++) {

              productListWithSearchMatch.add(

                Product.fromJson(

                  jsonEncode(

                    jsonDecode(response.body)[i],

                  ),

                ),

              );

            }

          },

          context: context);

    } catch (e) {

      showSnackBar(context, e.toString());

    }

    return productListWithSearchMatch;

  }

}

1. Use it to fronted

Home\_screen.dart>appbarsearch>

import 'package:amazon/utils/exports.dart';

class AppBarSearch extends StatefulWidget {

  const AppBarSearch({super.key});

  @override

  State<AppBarSearch> createState() => \_AppBarSearchState();

}

class \_AppBarSearchState extends State<AppBarSearch> {

  void NavigateToSearchScreen(String query) {

    Navigator.pushNamed(context, SearchScreen.routeName, arguments: query);

  }

  @override

  Widget build(BuildContext context) {

    return Row(

      mainAxisAlignment: MainAxisAlignment.spaceBetween,

      children: [

        //search bar

        Expanded(

          child: Container(

            margin: const EdgeInsets.only(

              left: 15,

            ),

            height: 42,

            child: Material(

              //for white color border radius

              borderRadius: BorderRadius.circular(7),

              elevation: 1,

              child: TextFormField(

                //passing value to search screen

                onFieldSubmitted: NavigateToSearchScreen,

                decoration: InputDecoration(

                  filled: true,

                  fillColor: Colors.white,

                  hintText: "Search Amazon.in",

                  contentPadding: const EdgeInsets.only(top: 10, left: 8),

                  hintStyle: const TextStyle(

                      fontWeight: FontWeight.w300,

                      fontSize: 17,

                      color: Colors.black),

                  //search icon

                  suffixIcon: Container(

                    decoration: BoxDecoration(

                      borderRadius: BorderRadius.circular(8),

                      color: Colors.amber[300],

                    ),

                    padding: EdgeInsets.only(left: 6),

                    child: Icon(

                      Icons.search,

                      color: Colors.black,

                      size: 28,

                    ),

                  ),

                  border: OutlineInputBorder(

                    borderSide: BorderSide.none,

                    borderRadius: BorderRadius.all(Radius.circular(7)),

                  ),

                  enabledBorder: OutlineInputBorder(

                    borderSide:

                        const BorderSide(width: 1, color: Colors.black45),

                    borderRadius: BorderRadius.circular(7),

                  ),

                ),

              ),

            ),

          ),

        ),

        //mic btn

        Container(

          height: 42,

          color: Colors.transparent,

          margin: const EdgeInsets.only(

            left: 15,

          ),

          child: const Icon(

            Icons.mic,

            color: Colors.black,

            size: 28,

          ),

        ),

      ],

    );

  }

}

1. Show diff screen for it

import 'package:amazon/screens/2\_User/search/widget/list\_product.dart';

import 'package:amazon/utils/exports.dart';

class SearchScreen extends StatefulWidget {

  static const String routeName = "/search";

  final String search;

  const SearchScreen({super.key, required this.search});

  @override

  State<SearchScreen> createState() => \_SearchScreenState();

}

class \_SearchScreenState extends State<SearchScreen> {

  final SearchServices searchQuery = SearchServices();

  bool isLoading = true;

  List<Product>? productList;

  @override

  void initState() {

    getSearchQuery();

    super.initState();

  }

  void getSearchQuery() async {

    productList = await searchQuery.fetchProductWithSearch(

        context: context, searchQuery: widget.search);

    setState(() {

      isLoading = false;

    });

  }

  @override

  Widget build(BuildContext context) {

    return Scaffold(

      appBar: PreferredSize(

        preferredSize: const Size.fromHeight(50),

        child: AppBar(

          flexibleSpace: Container(

            decoration: const BoxDecoration(

              gradient: AppStyles.appBarGradient,

            ),

            width: double.infinity,

          ),

          title: const AppBarSearch(),

        ),

      ),

      body: productList == null

          ? CustomProgressIndicator()

          : Column(

              children: [

                BelowAppBar(),

                CustomSpacer(

                  height: 10,

                ),

                Expanded(

                  child: ListView.builder(

                    itemCount: productList!.length,

                    itemBuilder: (context, index) {

                      return SearchListProduct(product: productList![index]);

                    },

                  ),

                )

              ],

            ),

    );

  }

}

1. Now Its Time to work on Ratings :
2. Create model for ratings separate and then add it in Product Model
3. On fronted side

Ratings.dart

import 'dart:convert';

class Rating {

  final String userId;

  final double rating;

  Rating({

    required this.userId,

    required this.rating,

  });

  Map<String, dynamic> toMap() {

    return {

      'userId': userId,

      'rating': rating,

    };

  }

  factory Rating.fromMap(Map<String, dynamic> map) {

    return Rating(

      userId: map['userId'] ?? '',

      rating: map['rating']?.toDouble() ?? 0.0,

    );

  }

  String toJson() => json.encode(toMap());

  factory Rating.fromJson(String source) => Rating.fromMap(json.decode(source));

}

Use it in Product Model

Product.dart

import 'package:amazon/utils/exports.dart';

class Product {

  final String name;

  final String description;

  final double quantity;

  final List<String> images; //storing url only

  final String category;

  final double price;

  final String? id;

  final List<Rating>? ratings;

  Product({

    required this.name,

    required this.description,

    required this.quantity,

    required this.images,

    required this.category,

    required this.price,

    this.id,

    this.ratings,

  });

  Map<String, dynamic> toMap() {

    return {

      'name': name,

      'description': description,

      'quantity': quantity,

      'images': images,

      'category': category,

      'price': price,

      'id': id,

      'rating': ratings,

    };

  }

  factory Product.fromMap(Map<String, dynamic> map) {

    return Product(

      name: map['name'] ?? '',

      description: map['description'] ?? '',

      quantity: map['quantity']?.toDouble() ?? 0.0,

      images: List<String>.from(map['images']),

      category: map['category'] ?? '',

      price: map['price']?.toDouble() ?? 0.0,

      id: map['\_id'], //change id to \_id

      ratings: map['ratings'] != null

          ? List<Rating>.from(

              map['ratings']?.map(

                (x) => Rating.fromMap(x),

              ),

            )

          : null,

    );

  }

  String toJson() => json.encode(toMap());

  factory Product.fromJson(String source) =>

      Product.fromMap(json.decode(source));

}

1. On server side

const mongoose = require('mongoose');

const ratingSchema = require('./rating');

//creating scema

const productrSchema = mongoose.Schema({

    name: {

        required: true,

        type: String,

        trim: true,

    },

    description: {

        required: true,

        type: String,

        trim: true,

    },

    //typr:array

    images: [

        {

            type: String,

            required: true,

        }

    ],

    price: {

        required: true,

        type: Number,

    },

    quantity: {

        type: Number,

        required: true

    },

    category: {

        type: String,

        required: true,

    },

    //add ratings

    ratings: [ratingSchema],

});

//creating model

const Product = mongoose.model("Product", productrSchema);

module.exports = Product;

1. Create rating schema/model at sever side:

Model>Rating.js

const mongoose = require("mongoose");

const ratingSchema = mongoose.Schema({

    userId: {

        type: String,

        required: true,

    },

    rating: {

        type: Number,

        required: true,

    },

});

module.exports = ratingSchema;

1. Creating route

>route>rating.js

const express = require("express");

const auth = require("../middlewares/auth\_middleware");

const Product = require("../models/product\_model");

const ratingRouter = express.Router();

//ratings router

ratingRouter.post("/api/rate-product", auth, async (req, res) => {

    try {

        //taking id of product

        const { id, ratings } = req.body;

        //find that product

        var product = await Product.findById(id);

        for (let i = 0; i < product.ratings.length; i++) {

            //for each user

            if (product.ratings[i].userId == req.user) {

                //just updating ratings

                product.ratings.splice(i, 1);

                break;

            }

        }

        //geting all feilds

        const ratingSchema = {

            userId: req.user,

            ratings: ratings,

        }

        product.ratings.push(ratingSchema);

        product = await product.save();

        res.json(product);

        //error handling

    } catch (e) {

        res.status(500).json({ error: e.message });

    }

});

//exports

module.exports = ratingRouter;

bind it with index.js

//code

const ratingRouter = require("./routers/rating");

//code

app.use(ratingRouter)

1. Now creating services for that at fronted

Product\_services.dart

import 'package:amazon/utils/exports.dart';

import 'package:http/http.dart' as http;

class ProductServices {

  //rating fun

  void rateProduct({

    required BuildContext context,

    required double ratings,

    required Product product,

  }) async {

    final userProvider = Provider.of<UserProider>(context, listen: false);

    try {

      http.Response response = await http.post(

        Uri.parse("$uri/api/rate-product"),

        headers: <String, String>{

          'Content-Type': 'application/json; charset=UTF-8',

          "auth-token": userProvider.user.token,

        },

        body: jsonEncode({

          "id": product.id!,

          "ratings": ratings,

        }),

      );

      httpErrorHandling(response: response, onSuccess: () {}, context: context);

    } catch (e) {

      showSnackBar(context, e.toString());

    }

  }

}

1. Now we can user this service
2. Product description

product\_description.dart

import 'package:amazon/utils/exports.dart';

class ProductDescription extends StatefulWidget {

  static const String routeName = "/description";

  final Product product;

  const ProductDescription({super.key, required this.product});

  @override

  State<ProductDescription> createState() => \_ProductDescriptionState();

}

class \_ProductDescriptionState extends State<ProductDescription> {

  //puting initial values

  double avgRatings = 0;

  double myRatings = 0;

  //instance of product services

  ProductServices productServices = ProductServices();

//update ratings

  @override

  void initState() {

    double totalRatings = 0;

    for (int i = 0; i < widget.product.ratings!.length; i++) {

      totalRatings = totalRatings + widget.product.ratings![i].rating;

      //checking user

      if (widget.product.ratings![i].userId ==

          Provider.of<UserProider>(context, listen: false).user.id) {

        myRatings = widget.product.ratings![i].rating;

      }

    }

    //adding avg rating

    if (totalRatings != 0) {

      avgRatings = totalRatings / widget.product.ratings!.length;

    }

    super.initState();

  }

  @override

  Widget build(BuildContext context) {

    return Scaffold(

      appBar: PreferredSize(

        preferredSize: const Size.fromHeight(50),

        child: AppBar(

          leadingWidth: 15,

          flexibleSpace: Container(

            decoration: const BoxDecoration(

              gradient: AppStyles.appBarGradient,

            ),

            width: double.infinity,

          ),

          title: const AppBarSearch(),

        ),

      ),

      body: SingleChildScrollView(

        child: Column(

          crossAxisAlignment: CrossAxisAlignment.start,

          mainAxisAlignment: MainAxisAlignment.start,

          children: [

            Padding(

              padding: const EdgeInsets.symmetric(horizontal: 8, vertical: 2),

              child: Row(

                mainAxisAlignment: MainAxisAlignment.spaceBetween,

                children: [

                  Text(widget.product.id!),

                  //shhowing avg ratings

                  Ratings(rating: avgRatings),

                ],

              ),

            ),

            CustomSpacer(

              height: 20,

            ),

            Padding(

              padding: const EdgeInsets.only(left: 8, right: 8, bottom: 5),

              child: Text(

                widget.product.name,

                style: TextStyle(fontWeight: FontWeight.bold),

              ),

            ),

            CarouselSlider(

              items: widget.product.images

                  .map(

                    (images) => Builder(

                      builder: (context) {

                        return Image.network(

                          images,

                          fit: BoxFit.contain,

                          height: 350,

                          width: double.infinity,

                        );

                      },

                    ),

                  )

                  .toList(),

              options: CarouselOptions(

                height: 350,

                viewportFraction: 1,

                autoPlay: true,

              ),

            ),

            Container(

              height: 10,

              color: Colors.black12,

            ),

            CustomSpacer(

              height: 10,

            ),

            Padding(

              padding: const EdgeInsets.symmetric(horizontal: 8.0),

              child: Row(

                children: [

                  Text(

                    "Deal Price: ",

                    style: TextStyle(

                      fontWeight: FontWeight.bold,

                    ),

                  ),

                  Text(

                    "${widget.product.price} Rs",

                    style: TextStyle(

                        fontWeight: FontWeight.w500,

                        color: Colors.red,

                        fontSize: 18),

                  )

                ],

              ),

            ),

            Padding(

              padding: EdgeInsets.symmetric(horizontal: 8.0, vertical: 16),

              child: Text(widget.product.description),

            ),

            Container(

              height: 10,

              color: Colors.black12,

            ),

            CustomSpacer(

              height: 10,

            ),

            Padding(

              padding: const EdgeInsets.symmetric(horizontal: 8.0),

              child: CustomButton(

                text: "Buy Now",

                onTap: () {},

              ),

            ),

            CustomSpacer(

              height: 10,

            ),

            Padding(

              padding: const EdgeInsets.symmetric(horizontal: 8.0),

              child: CustomButton(

                text: "Add To Cart",

                color: true,

                onTap: () {},

              ),

            ),

            CustomSpacer(

              height: 10,

            ),

            Padding(

              padding: const EdgeInsets.symmetric(horizontal: 8.0),

              child: Text(

                "Rate The Product",

                style: TextStyle(fontWeight: FontWeight.bold, fontSize: 20),

              ),

            ),

            //adding ratings

            RatingBar.builder(

              initialRating: myRatings,

              maxRating: 5,

              minRating: 1,

              allowHalfRating: true,

              direction: Axis.horizontal,

              itemCount: 5,

              itemPadding: EdgeInsets.symmetric(

                horizontal: 10,

                vertical: 5,

              ),

              itemBuilder: (context, \_) {

                return Icon(

                  Icons.star,

                  color: AppStyles.secondaryColor,

                );

              },

              //updating ratings

              onRatingUpdate: (ratings) {

                productServices.rateProduct(

                    context: context,

                    ratings: ratings,

                    product: widget.product);

                setState(() {});

              },

            ),

            CustomSpacer(

              height: 30,

            )

          ],

        ),

      ),

    );

  }

}

1. For searched product:

List\_product.dart

import 'package:amazon/utils/exports.dart';

class SearchListProduct extends StatelessWidget {

  final Product product;

  const SearchListProduct({super.key, required this.product});

  @override

  Widget build(BuildContext context) {

    //updating ratings

    double totalRating = 0;

    for (int i = 0; i < product.ratings!.length; i++) {

      totalRating += product.ratings![i].rating;

    }

    double avgRating = 0;

    if (totalRating != 0) {

      avgRating = totalRating / product.ratings!.length;

    }

    return Column(

      children: [

        //navigate to product descriptin screen for each product

        GestureDetector(

          onTap: () => Navigator.pushNamed(

              context, ProductDescription.routeName,

              arguments: product),

          child: Row(

            children: [

              Container(

                padding: EdgeInsets.only(left: 10),

                child: Image.network(

                  product.images[0],

                  height: 130,

                  width: 160,

                  fit: BoxFit.fitHeight,

                ),

              ),

              Expanded(

                child: Padding(

                  padding: const EdgeInsets.only(

                      left: 8.0, top: 12.0, bottom: 12.0, right: 8.0),

                  child: Column(

                    crossAxisAlignment: CrossAxisAlignment.start,

                    children: [

                      Container(

                        child: Text(

                          product.name,

                          style: TextStyle(

                            fontWeight: FontWeight.bold,

                            overflow: TextOverflow.ellipsis,

                          ),

                          maxLines: 2,

                        ),

                      ),

                      //adding avg ratings

                      Ratings(rating: avgRating),

                      Row(

                        mainAxisAlignment: MainAxisAlignment.start,

                        crossAxisAlignment: CrossAxisAlignment.start,

                        children: [

                          Text(

                            "\₹ ${product.price}",

                            maxLines: 1,

                            style: TextStyle(

                                fontWeight: FontWeight.bold, fontSize: 18),

                          ),

                          Icon(

                            Icons.check,

                            color: AppStyles.secondaryColor,

                            size: 20,

                          ),

                          Text(

                            "prime",

                            style: TextStyle(

                                fontWeight: FontWeight.bold,

                                fontSize: 18,

                                color: AppStyles.secondaryColor),

                          ),

                        ],

                      ),

                      Container(

                        color: Colors.red,

                        width: 135,

                        height: 20,

                        child: Center(

                          child: Text(

                            "Limited Time Deal",

                            style: TextStyle(

                                fontWeight: FontWeight.bold,

                                color: Colors.white),

                          ),

                        ),

                      ),

                      Text(

                        "In Stock",

                        style: TextStyle(

                            fontWeight: FontWeight.bold,

                            color: AppStyles.selectedNavBarColor),

                      ),

                      Text("Get it on Friday Aug 19"),

                    ],

                  ),

                ),

              )

            ],

          ),

        ),

      ],

    );

  }

}

1. Its time to work on deal of the day:
2. Create api for that

Deal-of-the-day.js

const express = require("express");

const auth = require("../middlewares/auth\_middleware");

const Product = require("../models/product\_model");

//deal of the day

const dealOfTheDayRoute = express.Router();

dealOfTheDayRoute.get('/api/deal-of-day', auth, async (req, res) => {

    try {

        //get product

        let product = await Product.find({});

        //sort it accourding to ratings

        product.sort((a, b) => {

            let product1 = 0;

            let product2 = 0;

            for (let i = 0; i < a.ratings.length; i++) {

                product1 += a.ratings[i].rating;

            }

            for (let i = 0; i < b.ratings.length; i++) {

                product2 += b.ratings[i].rating;

            }

            return product1 < product2 ? 1 : -1;

        });

        res.json(product[0]);

    } catch (e) {

        res.status(500).json({ error: e.message });

    }

});

//export

module.exports = dealOfTheDayRoute;

bind it with index.js also

index.js

//code

const dealOfTheDayRoute = require("./routers/deal-of-day");

//code

app.use(dealOfTheDayRoute);

//code

1. Creating services at fronted:

Deal\_of\_day\_services.dart

import 'package:amazon/utils/exports.dart';

import 'package:http/http.dart' as http;

class DealOfDay {

  Future<Product> dealOfTheDay({

    required BuildContext context,

  }) async {

    final userProvider = Provider.of<UserProider>(context, listen: false);

    Product productList = Product(

        name: '',

        description: '',

        quantity: 0,

        images: [],

        category: '',

        price: 0);

    try {

      //geting product with deal of day>>ratings

      http.Response response = await http.get(

        Uri.parse("$uri/api/deal-of-day"),

        headers: <String, String>{

          'Content-Type': 'application/json; charset=UTF-8',

          "auth-token": userProvider.user.token,

        },

      );

      httpErrorHandling(

          response: response,

          onSuccess: () {

            productList = Product.fromJson(response.body);

          },

          context: context);

    } catch (e) {

      showSnackBar(context, e.toString());

    }

    return productList;

  }

}

1. Bind at fronted

Deal\_of\_day.dart

import 'package:amazon/utils/exports.dart';

class DealOfDay extends StatefulWidget {

  const DealOfDay({super.key});

  @override

  State<DealOfDay> createState() => \_DealOfDayState();

}

class \_DealOfDayState extends State<DealOfDay> {

  //product

  Product? product;

  //instance of service

  DealOfDayServices dealOfDayServices = DealOfDayServices();

  @override

  void initState() {

    dealOfTheDay();

    super.initState();

  }

  //fun to fetch deal of day

  void dealOfTheDay() async {

    product = await dealOfDayServices.dealOfTheDay(context: context);

  }

  @override

  Widget build(BuildContext context) {

    return Padding(

      padding: const EdgeInsets.symmetric(horizontal: 10.0),

      child: product == null

          ? CustomProgressIndicator()

          : product!.name.isEmpty

              ? const SizedBox()

              : GestureDetector(

                  //navigate to product description

                  onTap: () => Navigator.pushNamed(

                    context,

                    ProductDescription.routeName,

                    arguments: product,

                  ),

                  child: Column(

                    children: [

                      Align(

                        alignment: Alignment.topLeft,

                        child: Text(

                          "Deal of the day",

                          style: TextStyle(

                              fontWeight: FontWeight.w500, fontSize: 22),

                        ),

                      ),

                      CustomSpacer(

                        height: 5,

                      ),

                      Image.network(

                        product!.images[0],

                        height: 235,

                        fit: BoxFit.fitHeight,

                      ),

                      CustomSpacer(

                        height: 5,

                      ),

                      Align(

                        alignment: Alignment.topLeft,

                        child: Text(

                          "\$20",

                          style: TextStyle(

                              fontWeight: FontWeight.w500, fontSize: 18),

                        ),

                      ),

                      CustomSpacer(

                        height: 5,

                      ),

                      Align(

                        alignment: Alignment.topLeft,

                        child: Text(

                          "Product name",

                          style: TextStyle(overflow: TextOverflow.ellipsis),

                        ),

                      ),

                      CustomSpacer(

                        height: 5,

                      ),

                      Container(

                        height: 50,

                        width: double.infinity,

                        child: SingleChildScrollView(

                          scrollDirection: Axis.horizontal,

                          child: Row(

                            children: product!.images

                                .map(

                                  (e) => Image.network(

                                    e,

                                    fit: BoxFit.contain,

                                  ),

                                )

                                .toList(),

                          ),

                        ),

                      ),

                      CustomSpacer(

                        height: 5,

                      ),

                      Align(

                        alignment: Alignment.topLeft,

                        child: Text(

                          "See all deals",

                          style: TextStyle(

                              color: AppStyles.selectedNavBarColor,

                              fontSize: 16),

                        ),

                      ),

                      CustomSpacer(

                        height: 20,

                      )

                    ],

                  ),

                ),

    );

  }

}

1. Its Time to work on cart system
2. Add cart in user.js

user.js

const mongoose = require('mongoose');

const { productSchema } = require('./product\_model');

//creating scema

const userScema = mongoose.Schema({

//code

//added cart

    cart: [

        {

            product:productSchema,

            quantity:{

                type:Number,

                required:true,

            }

        }

    ]

});

//creating model

const User = mongoose.model("User", userScema);

module.exports = User;

need to make change in product.js

product.js

const mongoose = require('mongoose');

const ratingSchema = require('./rating');

//creating scema

const productSchema = mongoose.Schema({

//code

//creating model

const Product = mongoose.model("Product", productSchema);

module.exports = {Product ,productSchema};

now in every router change Product to {Product}

like this

const {Product} = require("../models/product\_model");

1. Add cart in user.dart model

User.dart

import 'dart:convert';

class User {

  final String id;

  final String name;

  final String email;

  final String password;

  final String address;

  final String type;

  final String token;

  final List<dynamic> cart;

  User({

    required this.id,

    required this.name,

    required this.email,

    required this.password,

    required this.address,

    required this.type,

    required this.token,

    required this.cart,

  });

  Map<String, dynamic> toMap() {

    return {

      'id': id,

      'name': name,

      'email': email,

      'password': password,

      'address': address,

      'type': type,

      'token': token,

      'cart': cart,

    };

  }

  factory User.fromMap(Map<String, dynamic> map) {

    return User(

      id: map['\_id'] ?? '',

      name: map['name'] ?? '',

      email: map['email'] ?? '',

      password: map['password'] ?? '',

      address: map['address'] ?? '',

      type: map['type'] ?? '',

      token: map['token'] ?? '',

      cart: List<Map<String, dynamic>>.from(

        map['cart']?.map(

          (x) => Map<String, dynamic>.from(x),

        ),

      ),

    );

  }

  String toJson() => json.encode(toMap());

  factory User.fromJson(String source) => User.fromMap(json.decode(source));

  User copyWith({

    String? id,

    String? name,

    String? email,

    String? password,

    String? address,

    String? type,

    String? token,

    List<dynamic>? cart,

  }) {

    return User(

      id: id ?? this.id,

      name: name ?? this.name,

      email: email ?? this.email,

      password: password ?? this.password,

      address: address ?? this.address,

      type: type ?? this.type,

      token: token ?? this.token,

      cart: cart ?? this.cart,

    );

  }

}

1. Create user router:

User\_route.js

const express = require("express");

const auth = require("../middlewares/auth\_middleware");

const { Product } = require("../models/product\_model");

const User = require("../models/user\_model");

//deal of the day

const userRoute = express.Router();

userRoute.post('/api/add-to-cart', auth, async (req, res) => {

    try {

        const { id } = req.body;

        const product = await Product.findById(id);

        //find user

        let user = await User.findById(req.user);

        if (user.cart.length == 0) {

            user.cart.push({ product, quantity: 1 });

        } else {

            let isProductFound = false;

            for (let i = 0; i < user.cart.length; i++) {

                //to increase quantity

                if (user.cart[i].product.\_id.equals(product.\_id)) {

                    isProductFound = true;

                }

            }

            if (isProductFound) {

                let foundedProduct = user.cart.find((matchedProduct) => matchedProduct.product.\_id.equals(product.\_id));

                //if already in cart then increase by 1

                foundedProduct.quantity += 1;

            } else {

                user.cart.push({ product, quantity: 1 });

            }

        }

        user = await user.save();

        res.json(user);

    } catch (e) {

        res.status(500).json({ error: e.message });

    }

});

//export

module.exports = userRoute;

bind it with

index.js

//code

const userRoute = require("./routers/user\_route");

//code

app.use(userRoute);

//code

1. Update the user provider

User\_provider.dart

import 'package:amazon/utils/exports.dart';

class UserProider with ChangeNotifier {

  User \_user = User(

    id: '',

    name: '',

    email: '',

    password: '',

    address: '',

    type: '',

    token: '',

    cart: [],

  );

  User get user => \_user;

  void setUser(String user) {

    \_user = User.fromJson(user);

    notifyListeners();

  }

  //function for set user

  void setUserFromMode(User user) {

    \_user = user;

    notifyListeners();

  }

}

1. Update auth-services

import 'package:amazon/utils/exports.dart';

import 'package:http/http.dart' as http;

class AuthServices {

  //sign up user

  void signUpUser({

    required BuildContext context,

    required String email,

    required String password,

    required String name,

  }) async {

    try {

      User user = User(

          id: '',

          name: name,

          email: email,

          password: password,

          address: '',

          type: '',

          token: '',

          cart: [],

          );

//code

//code

//code

//code

}

1. Now its time to create service for add to cart

import 'package:amazon/utils/exports.dart';

import 'package:http/http.dart' as http;

class ProductServices {

  //code

//code

  //add to cart

  void addToCart({

    required BuildContext context,

    required Product product,

  }) async {

    final userProvider = Provider.of<UserProider>(context, listen: false);

    try {

      http.Response response = await http.post(

        Uri.parse("$uri/api/add-to-cart"),

        headers: <String, String>{

          'Content-Type': 'application/json; charset=UTF-8',

          "auth-token": userProvider.user.token,

        },

        body: jsonEncode({

          "id": product.id!,

        }),

      );

      httpErrorHandling(

          response: response,

          onSuccess: () {

            User user = userProvider.user.copyWith(

              cart: jsonDecode(response.body)['cart'],

            );

            userProvider.setUserFromMode(user);

          },

          context: context);

    } catch (e) {

      showSnackBar(context, e.toString());

    }

  }

}

1. User it at fronted-

Bottom\_navigation\_bar.dart

import 'package:amazon/utils/exports.dart';

class BottomNavigation extends StatefulWidget {

  const BottomNavigation({super.key});

  static const String routeName = '/bottomNav';

  @override

  State<BottomNavigation> createState() => \_BottomNavigationState();

}

class \_BottomNavigationState extends State<BottomNavigation> {

  int isSelected = 0;

  final List \_items = const <Widget>[

    MyHomeScreen(),

    ProfileScreen(),

    CartScreen(),

  ];

  void changeIndex(int index) {

    setState(() {

      isSelected = index;

    });

  }

  @override

  Widget build(BuildContext context) {

    final userCartLength = context.watch<UserProider>().user.cart.length;

    return Scaffold(

      body:

//code

//code

//code

          //cart

          BottomNavigationBarItem(

            //code

              child: Badge(

                  label: Text(userCartLength.toString()),

                  child: Icon(Icons.shopping\_cart\_rounded)),

            ),

            label: 'shoping\_cart',

          ),

        ],

      ),

    );

  }

}

import 'package:amazon/utils/exports.dart';

class ProductDescription extends StatefulWidget {

  static const String routeName = "/description";

  final Product product;

  const ProductDescription({super.key, required this.product});

  @override

  State<ProductDescription> createState() => \_ProductDescriptionState();

}

class \_ProductDescriptionState extends State<ProductDescription> {

 //code

//code

  void addToCart() {

    ProductServices().addToCart(context: context, product: widget.product);

  }

  @override

  Widget build(BuildContext context) {

    return Scaffold(

      appBar: //code

//code

      ),

      body: SingleChildScrollView(

        child: Column(

          crossAxisAlignment: CrossAxisAlignment.start,

          mainAxisAlignment: MainAxisAlignment.start,

          children: [

//code

//code

//code

            Padding(

              padding: const EdgeInsets.symmetric(horizontal: 8.0),

              child: CustomButton(

                text: "Add To Cart",

                color: true,

                //adding it to cart

                onTap: addToCart,

              ),

            ),

//code

//code

//code

          ],

        ),

      ),

    );

  }

}

1. Creating service for remove product from cart
2. Create service at fronted

//cart\_service.dart

import 'package:amazon/utils/exports.dart';

import 'package:http/http.dart' as http;

class CartService {

  //remove from cart

  void removeProductFromCart({

    required BuildContext context,

    required Product product,

  }) async {

    final userProvider = Provider.of<UserProider>(context, listen: false);

    try {

      http.Response response = await http.delete(

        Uri.parse("$uri/api/delete-from-cart/${product.id}"),

        headers: <String, String>{

          'Content-Type': 'application/json; charset=UTF-8',

          "auth-token": userProvider.user.token,

        },

      );

      httpErrorHandling(

          response: response,

          onSuccess: () {

            User user = userProvider.user.copyWith(

              cart: jsonDecode(response.body)['cart'],

            );

            userProvider.setUserFromMode(user);

          },

          context: context);

    } catch (e) {

      showSnackBar(context, e.toString());

    }

  }

}

1. Update user\_route.js

const express = require("express");

const auth = require("../middlewares/auth\_middleware");

const { Product } = require("../models/product\_model");

const User = require("../models/user\_model");

//add to cart

//code

//remove from cart

userRoute.delete('/api/delete-from-cart/:productId', auth, async (req, res) => {

    try {

        const { productId } = req.params;

        const product = await Product.findById(productId);

        //find user

        let user = await User.findById(req.user);

        for (let i = 0; i < user.cart.length; i++) {

            //to increase quantity

            if (user.cart[i].product.\_id.equals(product.\_id)) {

                /\*

            splice:   The zero-based location in the array from which to start removing elements.

Removes elements from an array and, if necessary, inserts new elements in their place, returning the deleted elements.

                \*/

                //if one quantity => delete

                if (user.cart[i].quantity == 1) {

                    user.cart.splice(i, 1)

                }

                //if more than one quantity => decrease by 1

                else {

                    user.cart[i].quantity -= 1

                }

            }

        }

        user = await user.save();

        res.json(user);

    } catch (e) {

        res.status(500).json({ error: e.message });

    }

});

//export

module.exports = userRoute;

1. Its Time to create a procced to buy screens
2. First design a page for taking address
3. pay: ^2.0.0

using this package for payment purpose also using json files.

# To add assets to your application, add an assets section, like this:

  assets:

    - assets/googlepay.json

    - assets/applepay.json

1. creating address services at frontend

address\_services.dart

import 'package:amazon/utils/exports.dart';

import 'package:http/http.dart ' as http;

class AddressService {

  //saving user address

  void saveUserAddress({

    required BuildContext context,

    required String address,

  }) async {

    final userProider = Provider.of<UserProider>(context, listen: false);

    try {

      http.Response response = await http.post(

        Uri.parse("$uri/api/pay"),

        headers: <String, String>{

          'Content-Type': 'application/json; charset=UTF-8',

          'auth-token': userProider.user.token,

        },

        body: jsonEncode(

          {

            'address': address,

          },

        ),

      );

      httpErrorHandling(

          response: response,

          onSuccess: () {

            User user = userProider.user.copyWith(

              address: jsonDecode(response.body)['address'],

            );

            userProider.setUserFromMode(user);

          },

          context: context);

    } catch (r) {

      showSnackBar(context, r.toString());

    }

  }

  //order

  void placeOrder({

    required BuildContext context,

    required String address,

    required double totalSum,

  }) async {

    final userProider = Provider.of<UserProider>(context, listen: false);

    try {

      http.Response response = await http.post(

        Uri.parse("$uri/api/order"),

        headers: <String, String>{

          'Content-Type': 'application/json; charset=UTF-8',

          'auth-token': userProider.user.token,

        },

        body: jsonEncode(

          {

            'cart': userProider.user.cart,

            'address': address,

            ' totalPrice': totalSum,

          },

        ),

      );

      httpErrorHandling(

          response: response,

          onSuccess: () {

            showSnackBar(context, "Your order has been palce");

            User user = userProider.user.copyWith(

              cart: [],

            );

            userProider.setUserFromMode(user);

          },

          context: context);

    } catch (r) {

      showSnackBar(context, r.toString());

    }

  }

}

1. creating it at backend order model

order.js

const mongoose = require('mongoose');

const { productSchema } = require('./product\_model');

//creating scema

const orderSchema = mongoose.Schema({

    products: [

        {

            product: productSchema,

            quantity: {

                type: Number,

                required: true,

            },

        },

    ],

    totalPrice: {

        type: Number,

        required: true,

    },

    address: {

        type: String,

        required: true,

    },

    userId: {

        type: String,

        required: true,

    },

    orderedAt: {

        type: Number,

        required: true,

    },

    status: {

        type: Number,

        default:0,

    }

});

//creating model

const Order = mongoose.model("Order", orderSchema);

module.exports = Order;

1. create api at user\_route.js

const express = require("express");

const auth = require("../middlewares/auth\_middleware");

const { Product } = require("../models/product\_model");

const User = require("../models/user\_model");

const Order = require("../models/order");

//code

/code

//to save address

userRoute.post('/api/pay', auth, async (req, res) => {

    try {

        const { address } = req.body;

        //find user

        let user = await User.findById(req.user);

        user.address = address;

        user = await user.save();

        res.json(user);

    } catch (e) {

        res.status(500).json({ error: e.message });

    }

});

//to order product

userRoute.post('/api/order', auth, async (req, res) => {

    try {

        const { cart, totalprice, address } = req.body;

        let products = [];

        for (let i = 0; i < cart.length; i++) {

            let product = await Product.findById(cart[i].product.\_id);

            if (product.quantity >= cart[i].quantity) {

                product.quantity -= cart[i].quantity;

                products.push({ product, quantity: cart[i].quantity });

                await product.save();

            } else {

                return res.status(400).json({ msg: `${product.name} is out of stock!` })

            }

        }

        //find user

        let user = await User.findById(req.user);

        user.cart = [];

        user = await user.save();

        let order = new Order({

            products,

            totalPrice,

            address,

            userId: req.user,

            orderedAt: new Date().getTime(),

        });

        order = await order.save();

        res.json(order);

    } catch (e) {

        res.status(500).json({ error: e.message });

    }

});

//export

module.exports = userRoute;

1. using at fronted

address\_screen.dart

import 'package:amazon/screens/2\_User/address/services/address\_services.dart';

import 'package:amazon/utils/exports.dart';

class AddressScreen extends StatefulWidget {

  static const String routeName = "/address";

  final String totalAmt;

  const AddressScreen({super.key, required this.totalAmt});

  @override

  State<AddressScreen> createState() => \_AddressScreenState();

}

class \_AddressScreenState extends State<AddressScreen> {

  TextEditingController flatController = TextEditingController();

  TextEditingController areaController = TextEditingController();

  TextEditingController pinController = TextEditingController();

  TextEditingController cityController = TextEditingController();

  final \_addressFormKey = GlobalKey<FormState>();

  String addressUsingUser = "";

//using address services

  final AddressService addressService = AddressService();

  List<PaymentItem> paymentItems = [];

  @override

  void initState() {

    paymentItems.add(PaymentItem(

        amount: widget.totalAmt,

        label: 'Total Amount',

        status: PaymentItemStatus.final\_price));

    super.initState();

  }

//onPaymentResult

  void onGooglePayResult(res) {

    if (Provider.of<UserProider>(context, listen: false).user.address.isEmpty) {

      //updating user address using services

      addressService.saveUserAddress(

          context: context, address: addressUsingUser);

    }

    addressService.placeOrder(

        context: context,

        address: addressUsingUser,

        totalSum: double.parse(widget.totalAmt));

  }

  //to check whic address is using user

  void runOnPayPress(String addressFromProvider) {

    addressUsingUser = "";

    bool isUsingForm = flatController.text.isNotEmpty ||

        cityController.text.isNotEmpty ||

        areaController.text.isNotEmpty ||

        pinController.text.isNotEmpty;

    if (isUsingForm) {

      if (\_addressFormKey.currentState!.validate()) {

        addressUsingUser =

            "${flatController.text}, ${areaController.text}, ${cityController.text}, ${pinController.text}";

      } else {

        throw Exception("please enter all the values");

      }

    } else if (addressFromProvider.isNotEmpty) {

      addressUsingUser = addressFromProvider;

    } else {

      showSnackBar(context, "Error");

    }

  }

  @override

  void dispose() {

    flatController.dispose();

    areaController.dispose();

    pinController.dispose();

    cityController.dispose();

    super.dispose();

  }

  @override

  Widget build(BuildContext context) {

    final address = Provider.of<UserProider>(context).user.address;

    return Scaffold(

      appBar: PreferredSize(

        preferredSize: const Size.fromHeight(65),

        child: AppBar(

          flexibleSpace: Container(

            decoration: const BoxDecoration(

              gradient: AppStyles.appBarGradient,

            ),

            width: double.infinity,

          ),

        ),

      ),

      //checking address

      body: SingleChildScrollView(

        child: Padding(

          padding: EdgeInsets.all(8.0),

          child: Column(

            children: [

              address.isNotEmpty

                  ? Column(

                      children: [

                        Container(

                          decoration: BoxDecoration(

                            color: Colors.white,

                            border: Border.all(

                              width: 1,

                              color: const Color.fromARGB(31, 176, 64, 64),

                            ),

                            borderRadius: BorderRadius.circular(8),

                          ),

                          height: 30,

                          child: Text(

                            address,

                            style: TextStyle(

                              color: Colors.black,

                              overflow: TextOverflow.ellipsis,

                              fontWeight: FontWeight.w500,

                              fontSize: 18,

                            ),

                          ),

                        ),

                        CustomSpacer(

                          height: 12,

                        ),

                        Center(

                          child: Text(

                            "OR",

                            style: TextStyle(fontWeight: FontWeight.bold),

                          ),

                        ),

                      ],

                    )

                  : Form(

                      key: \_addressFormKey,

                      child: Padding(

                        padding: const EdgeInsets.all(8.0),

                        child: Column(

                          mainAxisAlignment: MainAxisAlignment.start,

                          crossAxisAlignment: CrossAxisAlignment.start,

                          children: [

                            CustomSpacer(

                              height: 12,

                            ),

                            CustomTextFeild(

                              controller: flatController,

                              text: "Flat, House no. Building",

                            ),

                            CustomSpacer(

                              height: 8,

                            ),

                            CustomTextFeild(

                              controller: areaController,

                              text: "Area, Street",

                            ),

                            CustomSpacer(

                              height: 8,

                            ),

                            CustomTextFeild(

                              controller: pinController,

                              text: "Pincode",

                              type: TextInputType.number,

                            ),

                            CustomSpacer(

                              height: 8,

                            ),

                            CustomTextFeild(

                              controller: cityController,

                              text: "Town/City",

                            ),

                            CustomSpacer(

                              height: 20,

                            ),

                          ],

                        ),

                      ),

                    ),

              //pay button

              GooglePayButton(

                paymentConfigurationAsset: "googlepay.json",

                onPaymentResult: onGooglePayResult,

                paymentItems: paymentItems,

                height: 50,

                width: double.infinity,

                margin: EdgeInsets.all(8.0),

                loadingIndicator: const Center(

                  child: CircularProgressIndicator(),

                ),

                onPressed: () => runOnPayPress(address),

              ),

            ],

          ),

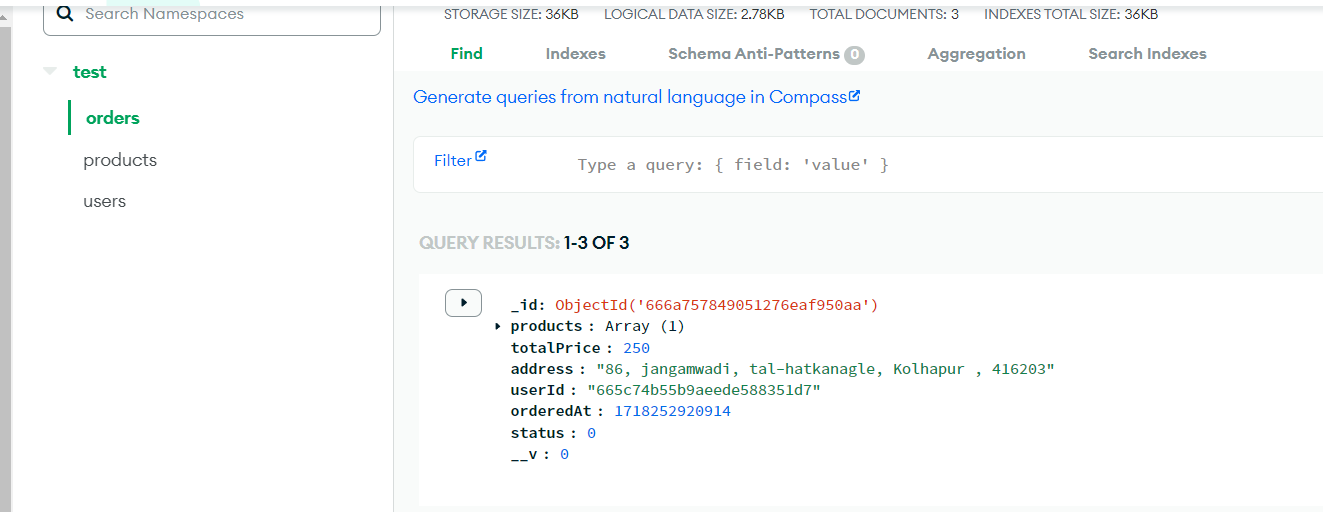
        ),

      ),

    );

  }

}



1. Time to display product details.
2. Create a model for order

Order.dart

import 'package:amazon/utils/exports.dart';

class Order {

  final String id;

  final List<Product> products;

  final List<int> quantity;

  final String address;

  final String userId;

  final int orderedAt;

  final int status;

  final double totalPrice;

  Order({

    required this.id,

    required this.products,

    required this.quantity,

    required this.address,

    required this.userId,

    required this.orderedAt,

    required this.status,

    required this.totalPrice,

  });

  Map<String, dynamic> toMap() {

    return {

      'id': id,

      'products': products.map((x) => x.toMap()).toList(),

      'quantity': quantity,

      'address': address,

      'userId': userId,

      'orderedAt': orderedAt,

      'status': status,

      'totalPrice': totalPrice,

    };

  }

  factory Order.fromMap(Map<String, dynamic> map) {

    return Order(

      id: map['\_id'] ?? '',

      products: List<Product>.from(

          map['products']?.map((x) => Product.fromMap(x['product']))),

      quantity: List<int>.from(

        map['products']?.map(

          (x) => x['quantity'],

        ),

      ),

      address: map['address'] ?? '',

      userId: map['userId'] ?? '',

      orderedAt: map['orderedAt']?.toInt() ?? 0,

      status: map['status']?.toInt() ?? 0,

      totalPrice: map['totalPrice']?.toDouble() ?? 0.0,

    );

  }

  String toJson() => json.encode(toMap());

  factory Order.fromJson(String source) => Order.fromMap(json.decode(source));

}

1. Create api at server side

User\_route.dart

//code

//code

//fetching order details:

userRoute.get("/api/order-detail", auth, async (req, res) => {

    try {

        const orders = await Order.find({ userId: req.user });

        res.json(orders);

    } catch (e) {

        res.status(500).json({ error: e.message });

    }

});

//code

1. Create service at frontend

import 'package:amazon/utils/exports.dart';

import 'package:http/http.dart' as http;

class ProfileServices {

  Future<List<Order>> getOrderDetails({

    required BuildContext context,

  }) async {

    final userProider = Provider.of<UserProider>(context, listen: false);

    List<Order> orderList = [];

    try {

      http.Response response = await http.get(

        Uri.parse("$uri/api/order-detail"),

        headers: <String, String>{

          'Content-Type': 'application/json; charset=UTF-8',

          'auth-token': userProider.user.token,

        },

      );

      httpErrorHandling(

          response: response,

          onSuccess: () {

            for (int i = 0; i < jsonDecode(response.body).length; i++) {

              orderList.add(

                Order.fromJson(

                  jsonEncode(

                    jsonDecode(response.body)[i],

                  ),

                ),

              );

            }

          },

          context: context);

    } catch (e) {

      showSnackBar(context, e.toString());

    }

    return orderList;

  }

}

1. Using it at fronted

Profile>order\_list\_view.dart

import 'package:amazon/screens/2\_User/profile/services/profile\_services.dart';

import 'package:amazon/utils/exports.dart';

class OrderList extends StatefulWidget {

  const OrderList({super.key});

  @override

  State<OrderList> createState() => \_OrderListState();

}

class \_OrderListState extends State<OrderList> {

  final ProfileServices profileServices = ProfileServices();

  List<Order>? orders;

  @override

  void initState() {

    super.initState();

    getOrder();

  }

  void getOrder() async {

    orders = await profileServices.getOrderDetails(context: context);

    setState(() {});

  }

  @override

  Widget build(BuildContext context) {

    return orders == null

        ? CustomProgressIndicator()

        : SizedBox(

            height: 180,

            child: ListView.builder(

              padding: const EdgeInsets.symmetric(horizontal: 10),

              scrollDirection: Axis.horizontal,

              itemCount: orders!.length,

              itemBuilder: (context, index) {

                return SingleOrder(img: orders![index].products[0].images[0]);

              },

            ),

          );

  }

}

1. Now its Time to create admin side order details:
2. Create admin service at frontend

Admin\_services.dart

class AdminServices {

//code

//code

  //to see order details

  Future<List<Order>> getOrderDetails({

    required BuildContext context,

  }) async {

    List<Order> orderList = [];

    final userProvider = Provider.of<UserProider>(context, listen: false);

    try {

      http.Response response = await http.get(

        Uri.parse("$uri/admin/order-detail"),

        headers: <String, String>{

          'Content-Type': 'application/json; charset=UTF-8',

          "auth-token": userProvider.user.token,

        },

      );

      httpErrorHandling(

          response: response,

          onSuccess: () {

            for (int i = 0; i < jsonDecode(response.body).length; i++) {

              orderList.add(

                Order.fromJson(

                  jsonEncode(

                    jsonDecode(response.body)[i],

                  ),

                ),

              );

            }

          },

          context: context);

    } catch (e) {

      showSnackBar(context, e.toString());

    }

    return orderList;

  }

}

1. Create route for that

Admin.js

//code

//code

//get order details

adminRoute.get("/admin/order-detail", adminMiddelware, async (req, res) => {

    try {

        let order = await Order.find({});

        res.json(order);

    } catch (e) {

        res.status(500).json({ error: e.message });

    }

});

1. Use it at frontend

Admin\_order\_details.dart

import 'package:amazon/utils/exports.dart';

class AdminOrderDetails extends StatefulWidget {

  const AdminOrderDetails({super.key});

  @override

  State<AdminOrderDetails> createState() => \_AdminOrderDetailsState();

}

class \_AdminOrderDetailsState extends State<AdminOrderDetails> {

  final AdminServices adminServices = AdminServices();

  List<Order>? order;

  @override

  void initState() {

    super.initState();

    getOrders();

  }

  void getOrders() async {

    order = await adminServices.getOrderDetails(context: context);

    setState(() {});

  }

  @override

  Widget build(BuildContext context) {

    return order == null

        ? CustomProgressIndicator()

        : GridView.builder(

            padding: EdgeInsets.all(8.0),

            itemCount: order!.length,

            gridDelegate: SliverGridDelegateWithFixedCrossAxisCount(

              childAspectRatio: 1.2,

              mainAxisSpacing: 5,

              crossAxisCount: 2,

            ),

            itemBuilder: (context, index) {

              return InkWell(

                onTap: () => Navigator.pushNamed(

                    context, OrderDetailsScreen.routeName,

                    arguments: order![index]),

                child: SizedBox(

                  height: 150,

                  child: SingleOrder(

                    img: order![index].products[0].images[0],

                  ),

                ),

              );

            },

          );

  }

}

1. Its time to make admin like he can change the status of order
2. Create services:

import 'package:amazon/utils/exports.dart';import 'package:intl/intl.dart';

class OrderDetailsScreen extends StatefulWidget {

  static const String routeName = "/order-details";

  final Order order;

  const OrderDetailsScreen({super.key, required this.order});

  @override

  State<OrderDetailsScreen> createState() => \_OrderDetailsScreenState();

}

class \_OrderDetailsScreenState extends State<OrderDetailsScreen> {

  int currentStep = 0;

  @override

  void initState() {

    super.initState();

    currentStep = widget.order.status;

  }

  //changing order status \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*only for admin\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

  final AdminServices adminServices = AdminServices();

  void changeOrderStatus(int status) {

    adminServices.changeStatus(

        context: context,

        status: status + 1,

        order: widget.order,

        onSuccess: () {

          setState(() {

            //when done button clicked current state will+1

            currentStep += 1;

          });

        });

  }

  @override

  Widget build(BuildContext context) {

    final user = Provider.of<UserProider>(context).user;

    return Scaffold(

      appBar: PreferredSize(

        preferredSize: const Size.fromHeight(65),

        child: AppBar(

          leadingWidth: 20,

          flexibleSpace: Container(

            decoration: const BoxDecoration(

              gradient: AppStyles.appBarGradient,

            ),

            width: double.infinity,

          ),

          title: const AppBarSearch(),

        ),

      ),

      body: SingleChildScrollView(

        padding: EdgeInsets.all(8),

        child: Column(

          crossAxisAlignment: CrossAxisAlignment.start,

          children: [

            Text(

              "View Oder Details",

              style: TextStyle(fontWeight: FontWeight.bold, fontSize: 18),

            ),

            Container(

              padding: EdgeInsets.all(5),

              width: double.infinity,

              decoration: BoxDecoration(

                border: Border.all(

                  width: 1.2,

                  color: Colors.black12,

                ),

              ),

              child: Column(

                crossAxisAlignment: CrossAxisAlignment.start,

                children: [

                  //formating date using intl

                  Text(

                      "Order Date:      ${DateFormat().format(DateTime.fromMillisecondsSinceEpoch(widget.order.orderedAt))}"),

                  Text("Order ID:          ${widget.order.id}"),

                  Text("Order Total:     ${widget.order.totalPrice}"),

                ],

              ),

            ),

            CustomSpacer(

              height: 10,

            ),

            Text(

              "Purchase Details",

              style: TextStyle(fontWeight: FontWeight.bold, fontSize: 18),

            ),

            Container(

              padding: EdgeInsets.all(8),

              width: double.infinity,

              decoration: BoxDecoration(

                border: Border.all(

                  width: 1.2,

                  color: Colors.black12,

                ),

              ),

              child: Column(

                children: [

                  for (int i = 0; i < widget.order.products.length; i++)

                    Row(

                      children: [

                        Image.network(

                          widget.order.products[i].images[0],

                          height: 120,

                          width: 120,

                          fit: BoxFit.contain,

                        ),

                        CustomSpacer(

                          width: 5,

                        ),

                        Expanded(

                          child: Column(

                            crossAxisAlignment: CrossAxisAlignment.start,

                            children: [

                              Text(

                                widget.order.products[i].name,

                                style: TextStyle(

                                    fontWeight: FontWeight.bold, fontSize: 17),

                                maxLines: 2,

                                overflow: TextOverflow.ellipsis,

                              ),

                              Text(

                                "Quantity: ${widget.order.quantity[i]}",

                              ),

                            ],

                          ),

                        ),

                      ],

                    ),

                  CustomSpacer(

                    height: 10,

                  )

                ],

              ),

            ),

            CustomSpacer(

              height: 10,

            ),

            Text(

              "Tracking",

              style: TextStyle(fontWeight: FontWeight.bold, fontSize: 18),

            ),

            Container(

              padding: EdgeInsets.all(5),

              height: 500,

              decoration: BoxDecoration(

                border: Border.all(

                  width: 1.2,

                  color: Colors.black12,

                ),

              ),

              child: Stepper(

                currentStep: currentStep,

                controlsBuilder: (context, details) {

                  return

                      //cheking a type as admin

                      user.type == "admin"

                          ? CustomButton(

                              text: "Done",

                              onTap: () =>

                                  changeOrderStatus(details.currentStep),

                            )

                          : SizedBox();

                },

                steps: [

                  Step(

                    title: Text("Pending"),

                    content: Text(

                      "Your order is yet to be delivered",

                    ),

                    isActive: currentStep > 0,

                    state: currentStep > 0

                        ? StepState.complete

                        : StepState.indexed,

                  ),

                  Step(

                    title: Text("Completed"),

                    content: Text(

                      "Your order has been delivered, you are yet to sign.",

                    ),

                    isActive: currentStep > 1,

                    state: currentStep > 1

                        ? StepState.complete

                        : StepState.indexed,

                  ),

                  Step(

                    title: Text("Received"),

                    content: Text(

                      "Your order has been delivered, and signed by you.",

                    ),

                    isActive: currentStep > 2,

                    state: currentStep > 2

                        ? StepState.complete

                        : StepState.indexed,

                  ),

                  Step(

                    title: Text("Delivered"),

                    content: Text(

                      "Your order has been delivered, and signed by you.",

                    ),

                    isActive: currentStep >= 3,

                    state: currentStep >= 3

                        ? StepState.complete

                        : StepState.indexed,

                  ),

                ],

              ),

            ),

          ],

        ),

      ),

    );

  }

}

1. Time to create analytics to admin screen
2. Create api:

Admin.js

//code

//code

//admin anylitics

adminRoute.get("/admin/analytics", adminMiddelware, async (req, res) => {

    try {

        const order = Order.find({});

        let totalEarnings = 0;

        for (let i = 0; i < order.length; i++) {

            for (let j = 0; j < order[i].products.length; j++) {

                totalEarnings += order[i].products[j].quantity \* order[i].products[j].product.price;

            }

        }

        //category wise earnings

        let mobileEarnigs = await categoryWiseProduct("Mobile");

        let fashionEarnigs = await categoryWiseProduct("Fashion");

        let freshEarnigs = await categoryWiseProduct("Fresh");

        let electronicsEarnigs = await categoryWiseProduct("Electronics");

        let homeEarnigs = await categoryWiseProduct("Home");

        let dealsEarnigs = await categoryWiseProduct("Deals");

        let beautyEarnigs = await categoryWiseProduct("Beauty");

        let appliancesEarnigs = await categoryWiseProduct("Appliances");

        let booksEarnigs = await categoryWiseProduct("Books");

        let everydayEarnigs = await categoryWiseProduct("Everyday");

        let earnigs = {

            totalEarnings,

            mobileEarnigs,

            fashionEarnigs,

            freshEarnigs,

            electronicsEarnigs,

            homeEarnigs,

            dealsEarnigs,

            beautyEarnigs,

            appliancesEarnigs,

            booksEarnigs,

            everydayEarnigs,

        }

        res.json(earnigs);

    } catch (e) {

        res.status(500).json({ error: e.message });

    }

});

//categoryWiseProduct

async function categoryWiseProduct(category) {

    let earnigs = 0;

    let categoryOrders = await Order.find({

        "products.product.category": category,

    });

    for (let i = 0; i < categoryOrders.length; i++) {

        for (let j = 0; j < categoryOrders[i].products.length; j++) {

            earnigs += categoryOrders[i].products[j].quantity \* categoryOrders[i].products[j].product.price;

        }

    }

    return earnigs;

}

//code

//code

1. Creating service frontend

Admin\_service.dart

//code

//code

//analytics

  Future<Map<String, dynamic>> viewAnalytics({

    required BuildContext context,

  }) async {

    final userProvider = Provider.of<UserProider>(context, listen: false);

    List<Sales> sales = [];

    int totalEarnings = 0;

    try {

      http.Response response = await http.get(

        Uri.parse("$uri/admin/analytics"),

        headers: <String, String>{

          'Content-Type': 'application/json; charset=UTF-8',

          "auth-token": userProvider.user.token,

        },

      );

      httpErrorHandling(

          response: response,

          onSuccess: () {

            var res = jsonDecode(response.body);

            totalEarnings = res['totalEarnings'];

            sales = [

              Sales("Mobile", res['mobileEarnigs']),

              Sales("Fresh", res['freshEarnigs']),

              Sales("Fashion", res['fashionEarnigs']),

              Sales("Electronics", res['electronicsEarnigs']),

              Sales("Home", res['homeEarnigs']),

              Sales("Deals", res['dealsEarnigs']),

              Sales("Beauty", res['beautyEarnigs']),

              Sales("Appliances", res['appliancesEarnigs']),

              Sales("Book", res['booksEarnigs']),

              Sales("Everyday", res['everydayEarnigs']),

            ];

          },

          context: context);

    } catch (e) {

      showSnackBar(context, e.toString());

    }

    return {

      'sales': sales,

      'totalErnings': totalEarnings,

    };

  }

1. Do not forgot to create a sales model

class Sales {

  final String label;

  final int earning;

  Sales(this.label, this.earning);

}

1. Using it in frontend