

Nodejs Course

Lab 1

1- Create Express.js Web Api Project

2- Create this file containing Sample Data (data.js)

```
const products = [  
  { id: 1, name: "iPhone 14", price: 999, categoryId: 1 },  
  { id: 2, name: "Samsung Galaxy S22", price: 899, categoryId: 1 },  
  { id: 3, name: "MacBook Pro", price: 1999, categoryId: 2 }  
];  
  
const categories = [  
  { id: 1, name: "Phones" },  
  { id: 2, name: "Laptops" }  
];  
  
const users = [  
  { id: 1, name: "Alice", email: "alice@example.com" },  
  { id: 2, name: "Bob", email: "bob@example.com" }  
];  
  
const cart = [  
  { userId: 1, items: [{ productId: 1, quantity: 2 }] },  
  { userId: 2, items: [] }  
];  
  
module.exports = { products, categories, users, cart };
```

3- Implement the following Endpoints

PRODUCTS

GET /api/products - Get all products

GET /api/products/:id - Get product by ID

GET /api/products/search?keyword=mac&minPrice=1000 - Search products by query

POST /api/products - Add a new product (JSON body)

PUT /api/products/:id - Replace product by ID

PATCH /api/products/:id - Update part of product (e.g., price)

DELETE /api/products/:id - Remove product

CATEGORIES

GET /api/categories - Get all categories

GET /api/categories/:id/products - Get all products in a category

POST /api/categories - Add new category

USERS

GET /api/users - List all users

GET /api/users/:id - Get user by ID

POST /api/users - Add a new user

PUT /api/users/:id - Replace a user

DELETE /api/users/:id - Delete a user

CART

GET /api/cart/:userId - Get cart items for a user

POST /api/cart/:userId/items - Add product to user's cart (JSON body)

PATCH /api/cart/:userId/items/:productId - Update quantity

DELETE /api/cart/:userId/items/:productId - Remove item from cart

DELETE /api/cart/:userId - Clear all cart items for user

4- Organize your code using Controllers