**Questions**

1. What would be the main API endpoints you would create when building this solution?

| **Http Method** | **URL** | **Sample Json** | **Description** |
| --- | --- | --- | --- |
| Post | /login | {  "username":"owner",  "password":"123"  } | Login to system  Provide username and password  Then api return JWT token when successful login |
| Get | /customer/list/:offset/:limit | [  {  "id": 2,  "firstName": "firstName1",  "lastName": "lastName",  "contactNumber": "",  "active": true,  "addedBy": 2  },  ] | Get List of customer records  We need to pass limit and offset to get paginated customer list  When you request we need to pass valid bearer token |
| Post | /customer/create | {  "firstName":"testsss",  "lastName": "ddddd",  "contactNumber": “07752”  } | Insert customer record to system  This end point helps to insert new customers to the system .  We check customer first name and last name if both exist on same user we give error message  When you request we need to pass valid bearer token |
| Put | /customer/inactive/:id |  | Soft delete customer record  This end point provide soft delete for customer records  When you request we need to pass valid bearer token |
| Delete | /customer/delete/:id |  | Delete customer records  Permanently delete customer record from the system  When you request we need to pass valid bearer token |
| Put | /customer/update/:id | {  "firstName":"bandara ",  "lastName":"ddd",  "contactNumber":"888888"  } | Update customer records  This endpoint update existing customer records  When you request we need to pass valid bearer token |
| Get | /user/list/:offset/:limit |  | Get list of system users  We need to pass limit and offset to get paginated users list  When you request we need to pass valid bearer token |
| Get | /medication/list/:offset/:limit |  | Get List of medication records  We need to pass limit and offset to get paginated medical records  In this we return all active and inactive records  When you request we need to pass valid bearer token |
| Post | /medication/create | {  "name":"testsss",  "description": "ddddd",  "quantity": 0  } | Create new medication record  When we add record automatically we save as active record  When insert new record we check name already exist if exist we will give error message  When you request we need to pass valid bearer token |
| Put | /medication/inactive/:id |  | Soft delete medication record  When we soft delete record we change record active status to false  When you request we need to pass valid bearer token |
| Post | /medication/update/:id | {  "name":"testsss",  "description": "ddddd",  "quantity": 0  } | Update detail of medication record  When we update medical records we check name exist on other records if exist we will give error  When you request we need to pass valid bearer token |
| Delete | /medication/delete/:id |  | Delete medication record permanently  In this endpoint we delete medical record from database  When you request we need to pass valid bearer token |

2. What are the data models you would create to implement this solution?

1. User

{

firstName: DataTypes.STRING,

lastName: DataTypes.STRING,

userName: DataTypes.STRING,

password: DataTypes.STRING,

RoleId: DataTypes.INTEGER,

},

1. Role

{

role: DataTypes.STRING,

},

1. Medication

{

name: DataTypes.STRING,

description: DataTypes.STRING,

quantity: DataTypes.INTEGER,

active: DataTypes.BOOLEAN,

addedBy: DataTypes.INTEGER,

},

1. Customer

{

firstName: DataTypes.STRING,

lastName: DataTypes.STRING,

contactNumber: DataTypes.STRING,

active: DataTypes.BOOLEAN,

addedBy: DataTypes.INTEGER,

},

3. What are the frameworks / libraries you would use to build this solution?

|  | **Name of the package What would you accomplish using that?** |
| --- | --- |
| ExpressJS | Web Application Framework |
| joi | Validate request Body |
| passport | Generate user authentication |
| passport-jwt | Generate JWT token |
| rbac | All user role based access control |
| sequelize | Mysql orm |
| sequelize-typescript | is a library that provides support for working with Sequelize |
| typescript | It's a superset of JavaScript |
| ts-node-dev | is a development tool for Node.js applications written in TypeScript |
| sequelize-cli | Run sequelize migration and seeders |
| jest | Setup test environment |
| chai | Mock server |

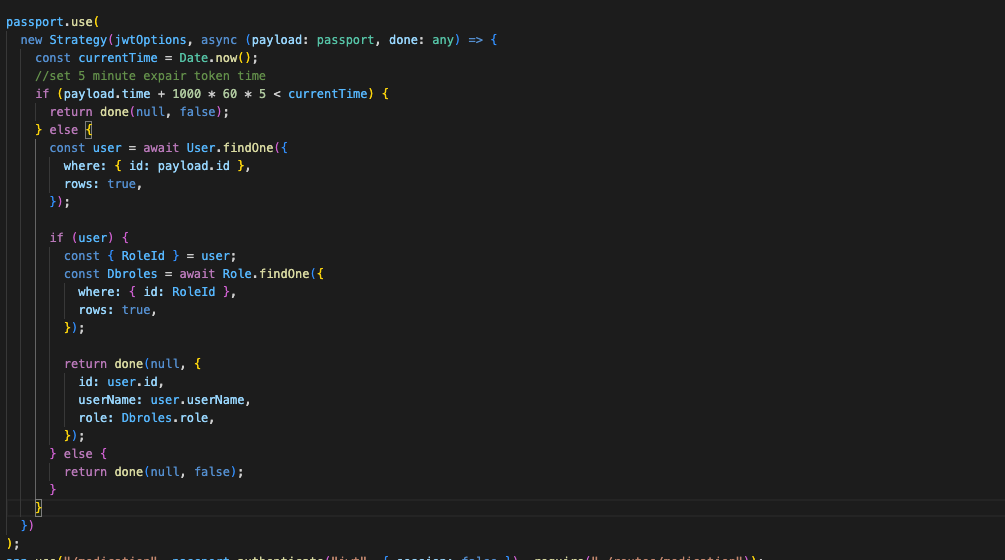
4. What are the main programs and tools you would use to build this solution?

| **Name of the program** | **What would you accomplish using that?** |
| --- | --- |
| Visual Studio Code | IDE |
|  |  |

5. What is the approach you would use to implement User Permissions based on User

Roles?

In user role based access control I used the RBAC node package . When user login with jwt token we insert user role to request parameter



Then we write a middle where in the route file . inside of middleware we check user role and whether user role have right access to path

