**Whizlabs Inventory Management System**

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5. **Project Setup**

The Simple Inventory Management system is a web application that allows users to manage inventory items. It provides a single collection for managing items with the following fields:

* id (Unique Identifier)
* name (Name of the Item)
* description (Details about the Item)
* category (Category to which the Item belongs)
* price (Price of the Item)
* quantity (Number of Items in Stock)

The application exposes RESTful APIs for CRUD operations and includes a React-based frontend for user interaction.

1. **System Architecture**

The system follows the Client – Server architecture with RESTful Api design. The key components are:

* Frontend (React JS)
* Backend (Express)
* Database (MongoDB)

Back End

Front End

Database

User

1. **Api Explanation**

|  |  |  |
| --- | --- | --- |
| **API** | **Description** | |
| **Method**: Get **Path**: /items | **Purpose** | To get all the items from the database |
| **Request Body** | None |
| **Expected Response** | All the items from the database |
| **Method**: Get **Path**: /items/:id | **Purpose** | To get the particular item with the given :id from the database |
| **Request Body** | None |
| **Expected Response** | If(id present in database) -> Details of the particular Item  Else -> 404 Error |
| **Method**: Post **Path**: /items | **Purpose** | To add new item to the database |
| **Request Body** | {  itemName : String,  description : String,  category : String,  Quantity : Number,  Price: Decimal  } |
| **Expected Response** | If(Validated) -> Adds item to the database with statusCode 201  Else -> Request Error with 400 statusCode |
| **Method**: Put **Path**: /items/:id | **Purpose** | To edit the existing item to the database |
| **Request Body** | Request Body: {  itemName : String,  description : String,  category : String,  Quantity : Number,  Price: Decimal  } |
| **Expected Response** | If(id present && Validated) -> Edit item to the database with statusCode 200  If(id not present) -> 404 error with Item not found response  Else -> Request Error with 400 statusCode |
| **Method**: Delete **Path**: /items/:id | **Purpose** | To delete the existing item from the database |
| **Request Body** | None |
| **Expected Response** | If(id present) -> Deletes the item from the database with statusCode 200  Else -> Item Not found Error with 404 statusCode |

1. **Instructions to use**

**Prerequisites**

Before setting up the project, ensure the following software is installed:

* Node.js (v20 or later)
* npm (for dependency management)
* Git (for cloning the repository)

**Git Clone**

Download or clone the following repository and store it in your system.

Github Link: <https://github.com/Santho257/whizlabs-assessment>

**Database Setup**

Install MongoDB

Start Mongo Server

No manual setup is required for database since backend creates necessary collections.

**Backend Setup**

* Open the project in terminal.
* Change current dir to backend

*cd ./whizlabs-inventory-back-end*

* Install dependencies

*npm install*

* Copy env files

*cp .env.dev .env*

* Change the .env as needed, setup MongoDB URL to your local database
* Run the back end

*npm run dev*

**Front End Setup**

* Open the project in terminal.
* Change current dir to frontend

*cd ./whizlabs-inventory-front-end*

* Install The Dependencies

*npm install*

* Change the constants.js BACKEND values as needed
* Install Chakra Snippets

*npx @chakra-ui/cli add snippet*

* Run the front end

*npm run dev*