

[Document ID, Ex: HR/.NETSRTSK/08/2022], [V1/ 10, Aug 2022]



Employment Task

Happy Company Warehouse

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Expected Duration

The expected duration to deliver the task is 5 days (around 12 hours).

Work Scope

Happy company, a company that sells products online, wants to manage their inventory in different warehouses in different countries and in different cities. Each warehouse must manage its inventory and check its levels and be able to receive updates from the outside world regardless of the source.

Framework

The application shall be built using the following technologies.

- ASP.NET CORE .NET 6 Web API for backend
- Blazor .NET 6 for Fronted
- SQLite as Database
- EF Core 6 as ORM

System Diagrams

Please check the attached file (Happy-Inventory.html).

Architecture

- Backend API that connects to the SQLite via EF Core. API shall allow outside entity as well to connect to it to CRUD data.
- Fronted that calls the API to CRUD data and manage it.

Functional Requirements

- Authentication
 - Only authorized users can login to the system.
 - Each user can only have one rule
 - JWT token is the form of authentication for any API requests
 - API endpoints shall be closed for anonymous users except login
 - No registration is needed, users are added via the system.

- App Layout

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- A login page shall be displayed that will allow the user to login and it will be the first page the user will see.
- After login, the user will see a welcome page and, on the side, will be menu items for different areas of the app (Warehouse, Dashboard, Users).
- Warehouse Management
 - Users can add warehouse to the system.
 - Warehouse name, required, unique.
 - Address, text area, required.
 - City, text, required.
 - Country, Lookup, required.
 - There shall be a list page to view all the warehouses. Also, it shall have a link to go to view the items stored in the warehouse. Max 10 items per page. There shall be a button on this page to add a new warehouse and it will redirect to the warehouse form page.
 - Each warehouse will have items added to it.
 - Warehouse items shall have the following
 - Item Name, required, unique.
 - SKU Code, text, optional.
 - Qty, number integer, minimum 1.
 - Cost Price, decimal, required.
 - MSRP Price, decimal, optional.
 - Warehouse, required.
 - Warehouse items shall be displayed on a list page. Max 10 per page.
- Users Management
 - There will always be a default user on the system and it will be the first user. This user will have the email admin@happywarehouse.com and with the password “P@ssw0rd”.
 - The users account will be disabled in the list. Each user account will have a single role assigned to it. Each user in the list will have actions (Edit, Change Password, Delete). Admin User cannot be deleted.

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- When a new user is defined, the following data will be needed:
 - Email, required, unique.
 - Full Name, text, required.
 - Role, Lookup, required.
 - Current Rules
 - Admin
 - Management
 - Auditor
 - Active, Boolean, required.
- An inactive user cannot login. A message shall be displayed for him on the login page that his account is disabled and he needs to contact support.
- Dashboards
 - Warehouse Status
 - To show each warehouse defined in the system with the count of inventory inside it.
 - Top high/low Items
 - To show the top 10 items per available quantity.
 - To show the top 10 low items per available quantity.

Non-Functional Requirements

- Architecture
 - N-Tire Application
- Testability
 - Make sure your application has an automated test.
- Structured Logging
 - Use Serilog. Make sure your logging is comprehensive.
- Log Viewer

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- There shall be a page for the admin role only to view the logs of the system.
- Clean Code
 - Make sure you have a well written code; it will affect your review a lot.

Task submission

To have your task reviewed by us, please follow the following steps:

1. Attach your code to the task email.
2. Bouns: Upload your code to GitHub, add the technical person email to access the repo.
3. Higher Bouns: Upload to GitHub, have the site up and running on Azure.

Note: Any required functional, non-functional or technical requirements this document does not include are free for you to implement or customize based on your understanding.