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## **Tables**

Used PostgreSQL database. Designed tables considering the normalization rules.

Used Unique Identifier as primary key.

Tables are as follows

- 1) User To store application user information
- 2) Item To store Item information
- 3) ItemDetails To store details information of items

## **Architecture**

Used Client Server architecture considering the separation of concerns (SOC). Application has 3 parts

## 1. Model.

For data binding on both web and API project used only one Model Class library

- a. User.
- b. ItemCategory.
- c. Item.
- d. ItemTran:- Complex object class used to perform insert operations on Item and ItemDetails tables using transaction scope
- 2. User interference.(UI)
  - a. Asp.Net Core Web MVC app. Using HttpClient class I'm calling web APIs
  - b. Wrote own WebAPIClient static class to call the APIs from UI.
  - c. GET,POST, PUT methods are async to scale the avoid the latency
  - d. Used JWT token for authorization and token stored in session.
  - e. Used Serilog to log the errors.
- 3. Web API.
  - a. ASP.Net Core Web API version 3.1 project, Layered architecture.
  - b. Designed considering the Solid principles
  - c. Used Repository pattern
  - d. Created a separate configuration class for dependency injection

- e. DataAccessLayer has 2 layers abstraction layer and concrete implementation.
- f. BuisnessLayer designed as per the repository pattern.
- g. Used OOPs concepts when required.
- 4. Unit Test project is added to test the methods. Used MOCK objects to test the methods.
- 5. To run the application. Right Click on the main solution and click on properties.
  - Select multiple startup project option and start the UI and Web API projects. As shown in the below.

