

Project Summary

This project is about a rental management system where a customer can rent multiple goods like AC, Refrigerator and TV for temporary usage. This is a Maven Java Application Project done using the JPA concept. The test cases are written for the entities in the project is written using Junit framework.

Design

The entities included in this model are

- 1) Store
- 2) StoreManager
- 3) Customer
- 4) Product
- 5) Inventory
- 6) Address

Cardinalities

Many to One Relationship

The description of various cardinalities in this project is listed below. One or More Store Managers can come from the same address. Hence, the relationship between StoreManager and Address Entity is many to one as Many Store Managers can come from the same address.

Many to Many Relationship

A single Customer can rent multiple products and a single product can be rented by multiple customers. This creates a many to many between Customer and Product entity.

One to One Relationship

A single Store can have only one Manager as this is a small scale business. Hence the relationship between StoreManager and Store Entity is One to One. An inventory cannot have the same product twice. Hence, the relationship between inventory and product is one to one.

Development Insights

An idea of how the JPA framework creates table in the BackEnd using the Persistence Unit which has the MySQL connection details is got in this project. The JPA annotation are used in this project for creating the entities and mapping the relationship between the entities. The data is inserted using the Junit Test Cases and the validation of CRUD operation using the test cases. If any test cases fail, the errors message gets displayed in the console. I aggregated all the test cases for the various entities by using only four functions. The test cases are independent. The test cases used in this project are mostly sunny day test cases as the validation for the CRUD is done.

Requirements

MySQL Database instance must be created with the user itmd4515 and password itmd4515 and the same must be verified in the persistence.xml file.

Pull the content from the git repository and build the project.

All the test cases will run without any issues for this project. If any test case fail, the appropriate message will be displayed in the console.