

Home Furnishing Application

Introduction:

This report outlines the development process and features of the Home Furnishing Application, which is aimed at automating the process of renting home furnishing items online. The application, developed using Python Django framework and MongoDB, facilitates customers to rent items for various durations and provides administrative capabilities for managing categories, products, and orders.

Project Overview:

The project, undertaken for RentFurlax, a home furnishing rental company, focuses on transitioning their business from offline to online. The primary goal is to provide customers with a convenient platform to rent home furnishing items for short to medium-term durations. The application allows customers to register, log in, view available categories and products, place orders, and track order status. On the admin side, it enables managing categories, products, and orders efficiently.

Key Features:

1. **Customer Authentication:** Secure user authentication system using Django auth handles customer registration and login. It includes validation of user input, storing hashed passwords in the MongoDB database, and returning relevant success or error messages.
2. **Product Management:** API endpoints are developed to handle products, including creating categories, creating products by category, viewing products by category, and fetching all product details. Validation is implemented for required fields and input data.
3. **Invoice Management:** API endpoints facilitate fetching invoices for customers based on status (ORDERED, CANCELLED, DELIVERED) or creating new invoices. Validation ensures proper data handling and consistency.

API Endpoints:

1. Register customer
2. Login customer
3. Add categories
4. Add Products
5. Get Categories
6. Get Product by category
7. Get Invoices based on status
8. Create Invoice

Development Guidelines:

- The project was divided into four sprints, each delivering a Minimal Viable Product (MVP).
- Proper sprint planning with user stories was performed for all project components.
- Python Django framework and MongoDB were used for backend development, ensuring high performance and scalability.

- Git branching was utilized for basic automation testing and version control over GitHub.
- A responsive and user-friendly front-end was developed to enhance the user experience.

Validation and Business Logic:

- Field-level validations ensure mandatory form fields are not empty during form submission.
- Only admin privileges allow adding, updating, or deleting items, ensuring security and data integrity.
- Unique username validation prevents duplicate records in the database, enhancing data consistency.

Tools and Technologies Used:

1. Python Django: Cross-platform framework for building modern, RESTful API applications.
2. Django ORM framework: Handles database operations and data management efficiently.
3. MongoDB: Non-relational database management system for storing and managing data securely.

Conclusion:

The Home Furnishing Application successfully addresses RentFurlax's need to transition its business online, providing customers with a seamless renting experience and administrative capabilities for efficient management. The use of Python Django framework, MongoDB, and adherence to project development guidelines ensures a robust and scalable solution.

This project demonstrates the effective utilization of modern technologies and development practices to meet business requirements and deliver a high-quality software solution.