

# HTTP 5204 - Passion Project

## Project Idea

For my passion project I will be creating a business furniture rental application called IGotYou.

IGotYou is an application geared towards black and underrepresented female business owners where they can share furniture needed for their businesses and business related events.

## Database Schema

The main rental/booking system entities are Furniture, Category, Customer and Booking. (see below)

- **Furniture Entity**
  - Primary Key
    - furniture\_id INT, NOT NULL
  - Foreign Keys
    - category\_id INT, NOT NULL
  - Other Fields
    - price INT, NOT NULL
    - name VARCHAR (100), NOT NULL
    - description VARCHAR, NOT NULL
    - height INT, NOT NULL
    - width INT, NOT NULL
    - depth INT
    - weight INT, NOT NULL
    - color VARCHAR (100), NOT NULL
    - imagepath, STRING
- **Category Entity**
  - Primary Key
    - category\_id INT, NOT NULL
  - Other Fields
    - category\_name VARCHAR (100), NOT NULL
- **Booking Entity**
  - Primary Key
    - booking\_id INT, NOT NULL

- Other Fields
  - title VARCHAR (200), NOT NULL
  - start\_date DATETIME, NOT NULL
  - end\_date DATETIME, NOT NULL
  - booking\_notes VARCHAR
- **Booking\_Furniture**
  - Foreign Keys
    - booking\_id INT, NOT NULL
    - furniture\_id INT, NOT NULL

## Description of database

- The details for the furniture products available for rent are stored in the furniture table
- The category table is only linked to by the furniture table
- The furniture and booking table are linked by a join table called booking\_furniture
  - Keeps the idea of furniture being associated with a booking separate from the furniture actually existing.
  - Can delete the furniture product from the booking without deleting the actual furniture product from the database.

## Entity Relationships & Justifications

The 2 furniture product **categories** will be:

- Chairs
- Tables

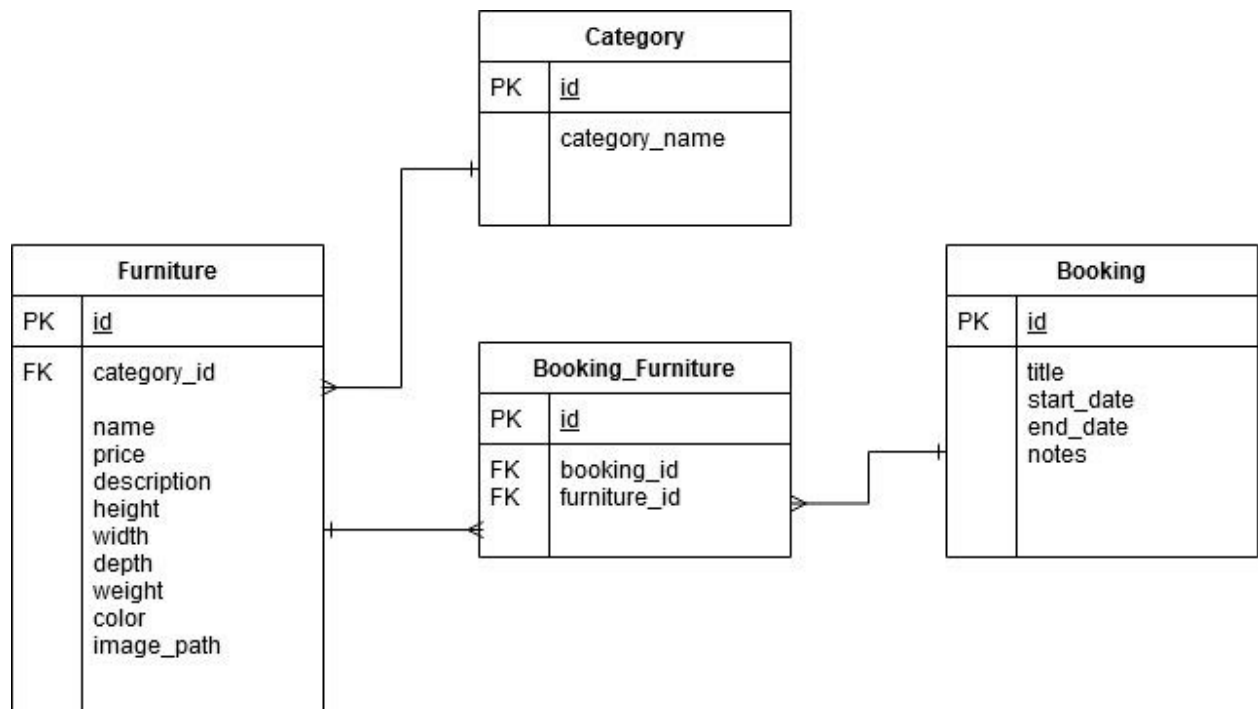
### One to Many Relationships

- One booking for many furniture products
  - **Justification:** Multiple furniture products can belong to the same booking
    - Mya has a booking that includes a Lola Roo Two Seater and a Emma table for 14 days
- One category for many furniture products
  - **Justification:** Different furniture products can belong to the same category
    - The Lola Roo Two Seater, Gemma Lounge Chair, Fuxxy Executive Chair and Gemma Lounge Chair belong to the Chairs category
    - Both the Emma Executive Desk and Slate Writing Desk belong to the Tables Category

### Many to Many (bridging table)

- Many furniture products to many bookings
  - **Justification:** Furniture products can have many bookings
    - The Lola Roo Two Seater and Gemma Lounge Chair can be booked by Mya for 7 days and the same products booked by Kerry for 2 days (after they are returned by Mya).
  - Bookings can have many furniture products
    - See above justification

## Entity Relationship Diagram



## Wireframes

## CREATE/INSERT

Page Title

### Add Product \*required

Product Name\*

Category\*

Color\*

Height\*

Width\*

Depth

Weight\*

Description\*

Text Input

Input Label

ADD PRODUCT

Button

### Add Booking \*required

Title\*

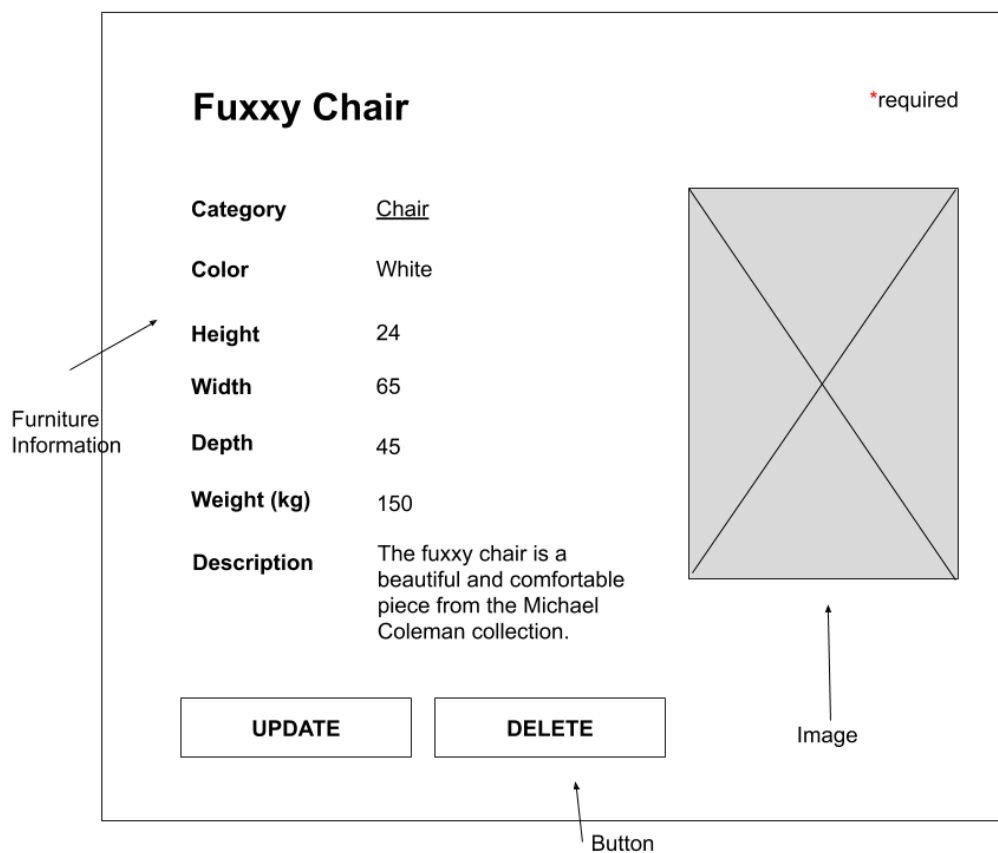
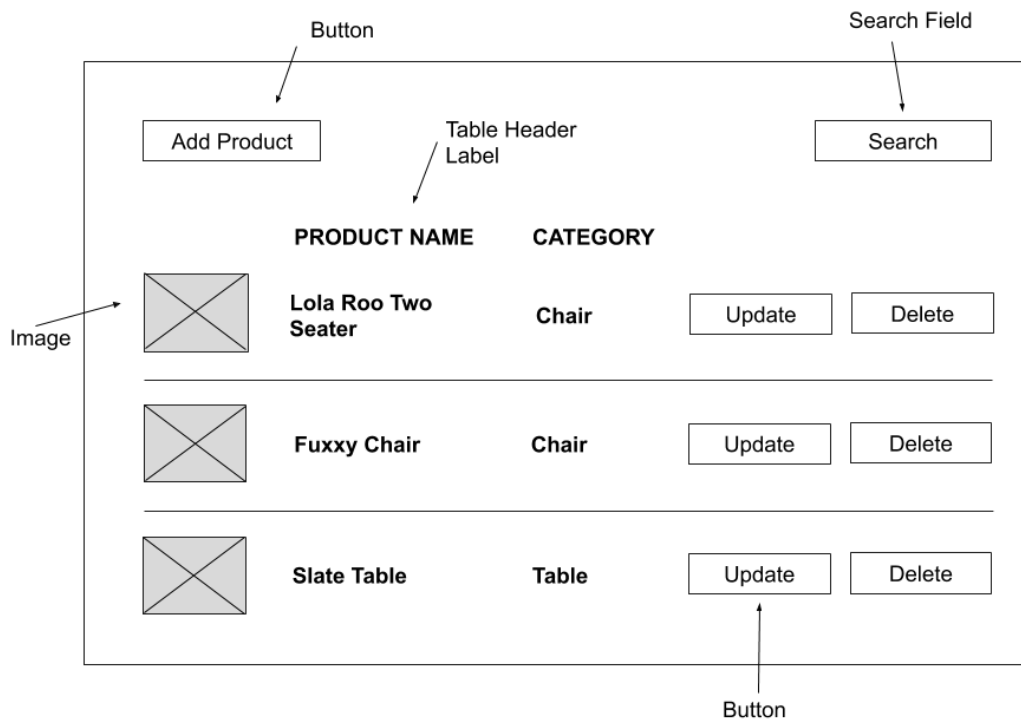
Start Date\*

End Date\*

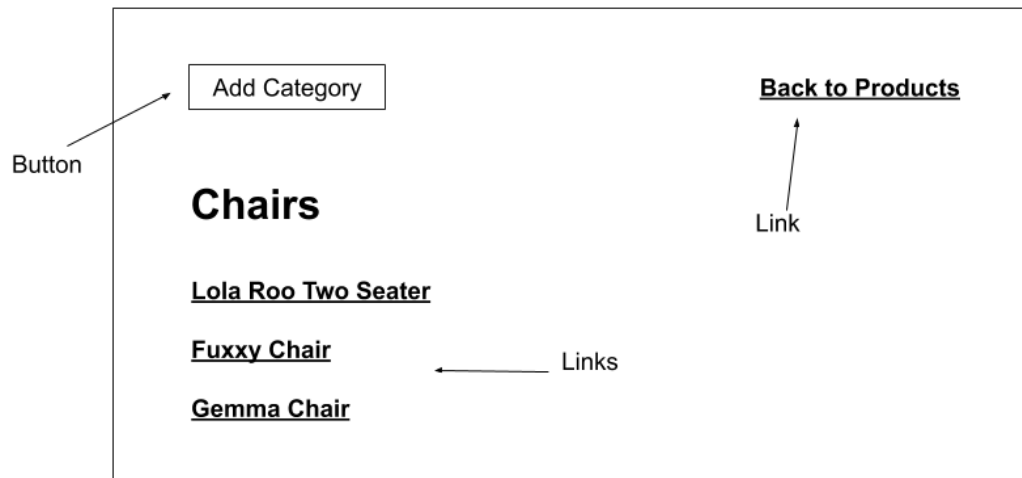
Notes\*

ADD PRODUCT

## READ - LIST AND PAGE VIEW



## READ - CATEGORY PAGE VIEW



UPDATE

# Update Fuxxy Chair

\*required

Product Name\*

Category\*  

Color \*

Height\*

Width\*

Depth

Weight(kg)\*

Description\*

Image

DELETE



## Fuxxy Chair

Are you sure you want to delete this product?

YES

CANCEL

Button

Challenges

- **ERD Diagrams**

- Confused with where to put the foreign keys for bridging tables
  - Does it go in the bridging table itself or the two connecting tables?
- Naming properties in entity tables. Is this just me?
  - Visual Studio doesn't like furniture\_id but likes id
  - Visual Studio doesn't like furniture\_name but instead likes name
- What the heck is up with web.config and connection string issue? Not properly connecting to database.

## **Future Plans**

- **Include further categorization options for tables and chairs**

- Lounge Chairs category
- Executive Chairs category
- Writing Desks category
- Executive Desk category

- **Include additional products for rent**

- Books
- Office Tools
- Rooms
- Electronics

- **There will be two available account types - admin and user.**

- Admin (full access with username and login credentials required)
- Customer (view access)
- The admin will be able to add items, update items and delete items.
- Users can then view and "rent" the available furniture items that the admin user has inputted into the system.

- **Add important business rules/restrictions. Make it more of real application.**

- Customers can only rent a product for the following time periods
  - 1-6 days
  - 7 days
  - 2 weeks (14 days)
  - 28-31 days (1 months)
- A customer can only rent/book 3 products at a time
- One product can only be rented at a time. The product can't be rented to multiple people at the same time.

- BONUS: Add quantities! - If there are multiple quantities of the same product then each time it is rented the quantity will be reduced in the database.