

Project 1: Apartment Maintenance Database System

Relevant Verbs and Nouns:

As a building manager, the task of assisting rental maintenance needs effectively can be quite demanding. With **handling** of **requests** from renters, **checking** **availability** with **contractors**, and **keeping track** of **repair progress**, there is a need to have a system made to manage the processes of maintaining **apartment units**. This system should be made to **capture** and **organize** information related to maintenance requests, including the apartment number, **description of the issue**, **priority level**, **date and time** of the request, and **status** of the maintenance work. It should also include information about the tenant who submitted the request, such as their **name** and **contact information**. Furthermore, the system should keep up with **maintenance staff**, including tracking their availability, cost and completion status.

User

- name: full name
- user_id: number
- apt_number: number
- email: number

Maintenance

- request_id: number
- timestamp
- priority[Low, Medium, High]
- status[Pending, In-Progress, Completed]
- details: text

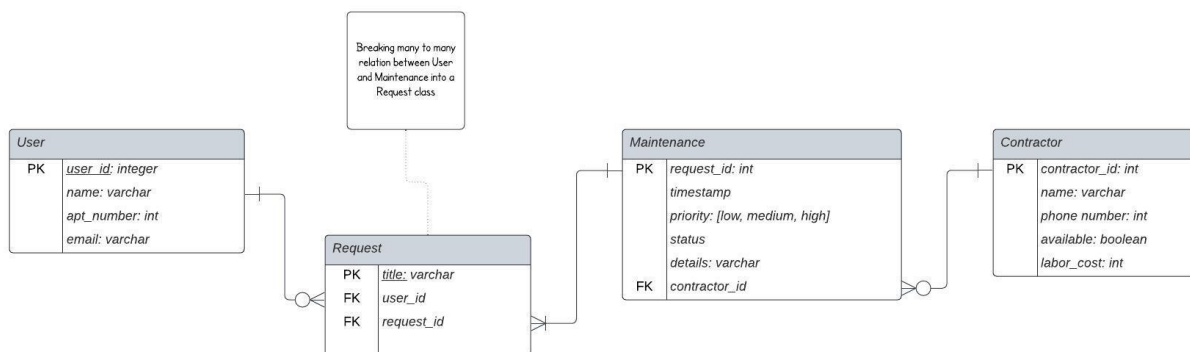
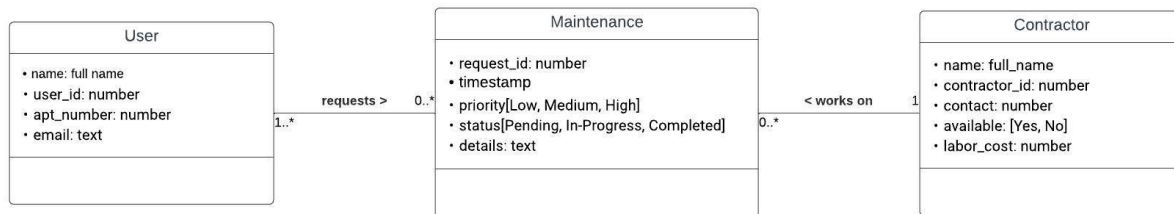
Contractor

- name: text
- contractor_id: number
- phone: number
- availability: [Yes, No]
- labor_cost: number

Rules:

- ❖ A user can place multiple requests
- ❖ Each request must have a user
- ❖ A maintenance project have at most 1 contractor
- ❖ Maintenance requests can have no contractor
- ❖ A contractor can work on multiple maintenance projects

UML & ERD



Relational Schema:

- User(user_id, name, apt_number, contact)
- Maintenance(request_id, timestamp, priority, status, details)
- Request(title, user_id (fk), request_id(fk))
- Contractor(contractor_id, name, phone, availability, labor_cost)

Project Proposal: Apartment Building Maintenance System

Objective: Implement a system to capture and organize information related to maintenance requests, including the apartment number, description of the issue, priority level, date and time of the request, and status of the maintenance work

This database will provide the following:

- Serve as a tool for building management to organize the apartment maintenance history

- Check availability of contractors, keep track of repair progress and cost of labor
- Store information about the tenants who submitted the request, such as their apartment number and contact information
- Facilitate the planning of maintenance work for tenants and building management

Example queries:

- Show all tenants that have issued a maintenance request on a given day
- Display all contractors that are currently available to work on maintenance
- Track the high priority requests made by tenants
- Provide maintenance history for each apartment