

## General Notes

Table	Notes	Normalisation
Users	Holds user info and roles, location applies to staff and tenants.	3NF
Tenants	Links to user_id (avoids duplicate login data) describes tenant personally.	3NF
Apartments	Each row is one apartment, linked to one location.	3NF
Locations	Stores location info and reference to location manager.	3NF
Contracts	Connects tenants and apartments, less specific info, no duplication	3NF
Payment_schedule	Auto generated schedule of expected payments for each contract.	3NF
Payments	One record per actual payment - emulation When tenant submits "payment" via dashboard, system validates card (mock) then inserts a new row in payments linked to payment_schedule.	3NF
Invoices	Could be merged with payment schedule, keeping them separate supports emulated billing - design choice. Separates tenant rental obligation (payment_schedule) and staff admin responsibility - financial documentation. Reissue invoices for eg. Late payment fee, and useful for financial reporting. Real life ERP system design principle.	Data redundancy - but design choice.
Maintenance_requests	One request per tenant/apartment, repair lifecycle data for manager overview.	3NF
Complaints	One complaint linked to one tenant - not storing any redundant tenant or apartment data.	3NF
Notifications	Optional - not redundant because it stores events/ messages, not copies of payments or maintenance data. User facing alerts - look at it as a message queue/activity feed.	3NF

## Dashboard Mapping

Feature	Database Source
View payment history	Contracts, payment_schedule, payments, invoices
Late payment alerts	Payment_schedule, payments, invoices
Submit complaint	Complaints
Submit repair request	Maintenance_requests
View repair progress	Maintenance_requests
Payment history graph	Payments, payment_schedule
Payments vs neighbours graphs (finance manager)	Contracts, apartments, locations, payments
Emulated payments	Payments, payment_schedule, invoices
Late payments per property graph	payment_schedule, contract, apartments