Group 7: Cowboy Property Management

We have chosen Cowboy Property Management as our semester project. Cowboy Property Management is a well aged property rental company that prioritizes their residents through the innovation and creation of good communities.

The goal of this project is to increase shareholder value by creating and organizing software that provides their residents with quick and easy access to all questions and concerns. Cowboy also plans to define each role within their company in order to assist their current decision making processes.

Each member of our group has been a rental property tenant. We are all curious as to what the internals of this company look like. We want to know what can make the rental process smoother.
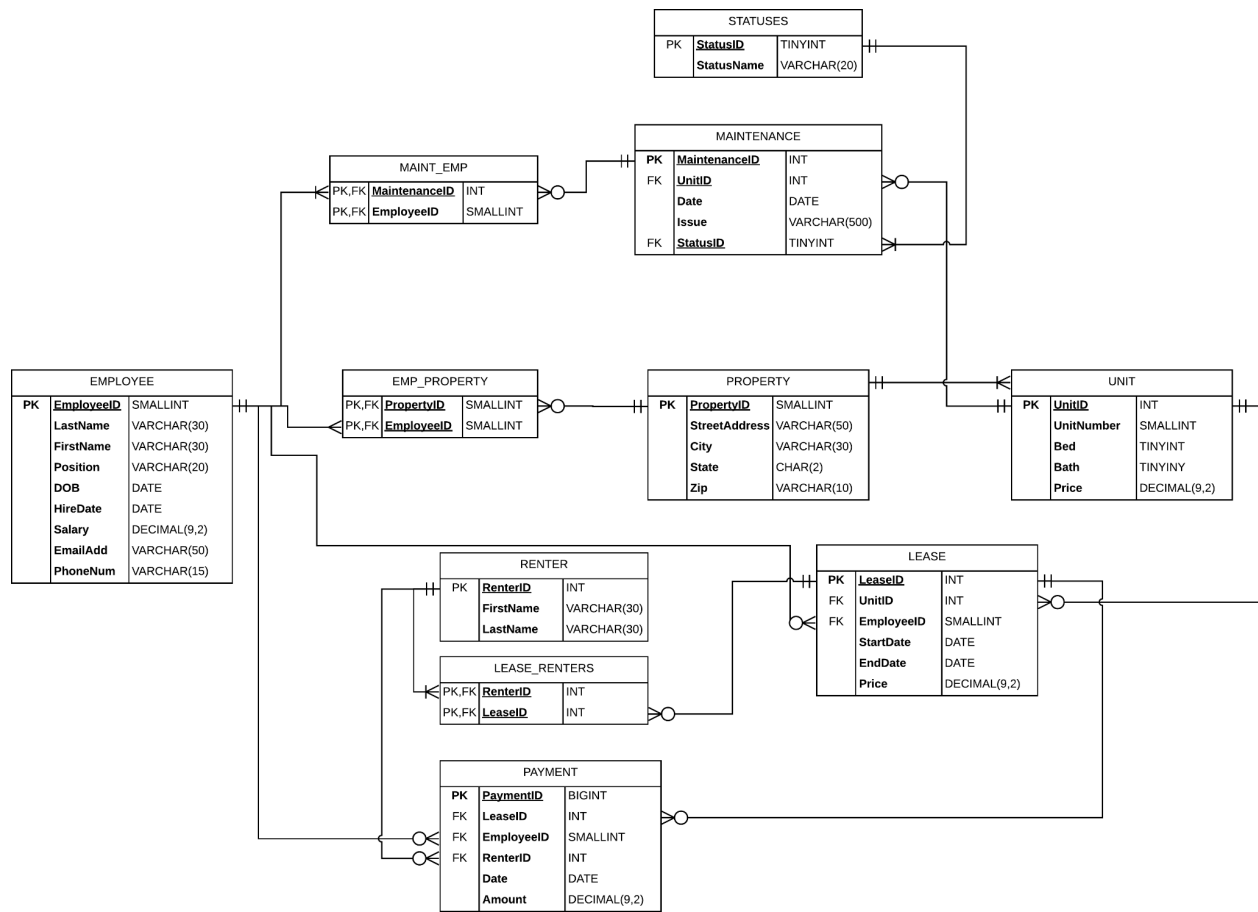
2 sets of use cases
1. The admin is able to create/read/update/delete properties and property units.
   a. This supports the goal of keeping data on properties that we manage.
2. The admin is able to create/read/update maintenance requests.
   a. This supports the objective of the project to track the maintenance, who fulfills it, and when.

Our team will employ strategies like clear communication which will be easier here in Europe than in the US because we all live together in the same building and have class everyday so getting a hold of one another should not be difficult. And creating goals and deadlines, we believe by using goals and deadlines that we can have our project done well and in a timely manner and not have to cram lots of work in at the end. We will maintain solid corporate ethics by keeping stakeholder consideration in mind and also reviewing our project's impact on the environment and society. I believe we will have no issues getting participation from all members but we will be flexible and check in often with other members of our team.

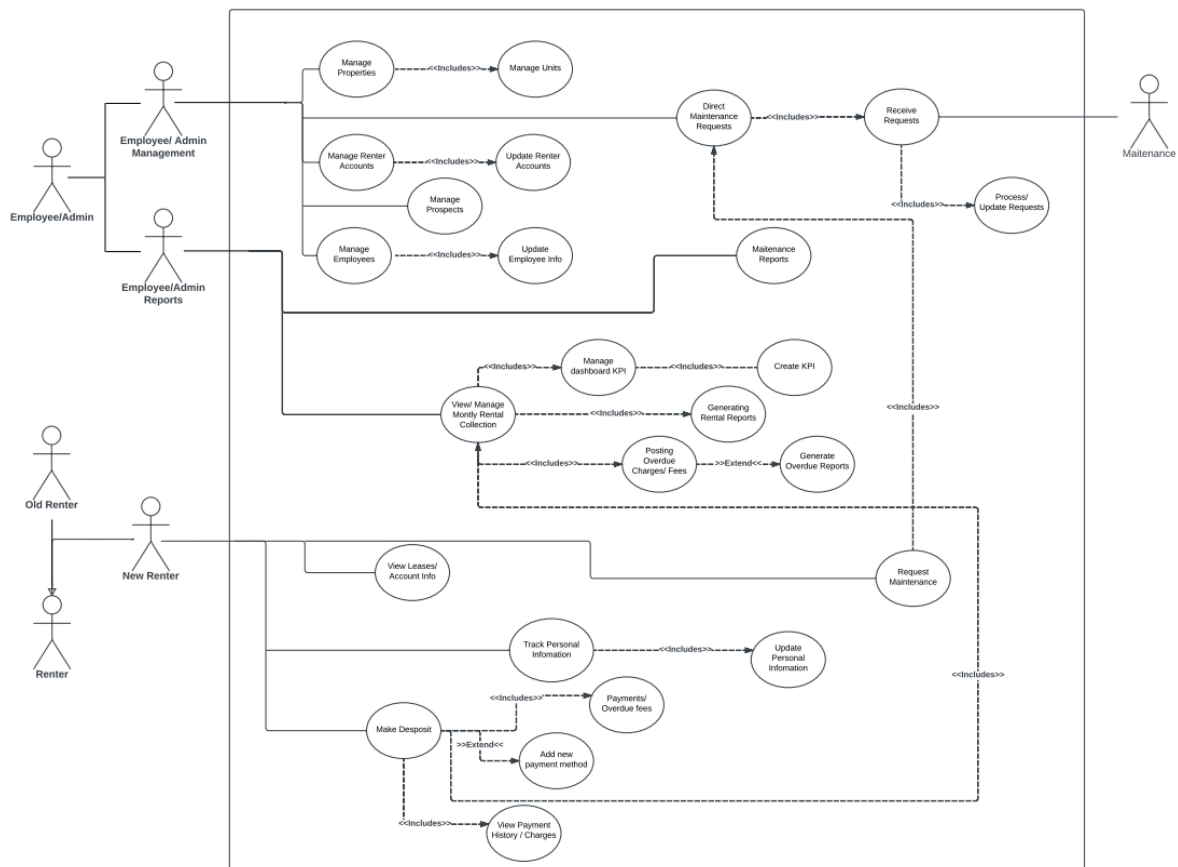**Midterm Project Submission:**
- Home and Login Pages (**Jake**)
- 1 set of CRUD: 4 use cases, 1 page each
- Use case diagram (**tay**)
- Site map (**Peter**)
- Wire frames (**Jake**)
- ERD: make it physical instead of logical ie: resolve M:N relationships (**Jake**-DONE)
- Written response(**Peter**)
    - How do you use ethics and critical thinking in developing front end pages for your application?

Physical ERD

STATUSES

PK	**StatusID**	TINYINT
	StatusName	VARCHAR(20)

MAINTENANCE

PK	**MaintenanceID**	INT
FK	**UnitID**	INT
	Date	DATE
	Issue	VARCHAR(500)
FK	**StatusID**	TINYINT

MAINT_EMP

PK,FK	**MaintenanceID**	INT
PK,FK	**EmployeeID**	SMALLINT

EMPLOYEE

PK	**EmployeeID**	SMALLINT
	LastName	VARCHAR(30)
	FirstName	VARCHAR(30)
	Position	VARCHAR(20)
	DOB	DATE
	HireDate	DATE
	Salary	DECIMAL(9,2)
	EmailAdd	VARCHAR(50)
	PhoneNum	VARCHAR(15)

EMP_PROPERTY

PK,FK	**PropertyID**	SMALLINT
PK,FK	**EmployeeID**	SMALLINT

PROPERTY

PK	**PropertyID**	SMALLINT
	StreetAddress	VARCHAR(50)
	City	VARCHAR(30)
	State	CHAR(2)
	Zip	VARCHAR(10)

UNIT

PK	**UnitID**	INT
	UnitNumber	SMALLINT
	Bed	TINYINT
	Bath	TINYINY
	Price	DECIMAL(9,2)

RENTER

PK	**RenterID**	INT
	FirstName	VARCHAR(30)
	LastName	VARCHAR(30)

LEASE

PK	**LeaseID**	INT
FK	**UnitID**	INT
FK	**EmployeeID**	SMALLINT
	StartDate	DATE
	EndDate	DATE
	Price	DECIMAL(9,2)

LEASE_RENTERS

PK,FK	**RenterID**	INT
PK,FK	**LeaseID**	INT

PAYMENT

PK	**PaymentID**	BIGINT
FK	**LeaseID**	INT
FK	**EmployeeID**	SMALLINT
FK	**RenterID**	INT
	Date	DATE
	Amount	DECIMAL(9,2)

Use Case Diagram:

Use Case Model:

Manage Properties

- Actors: Admin/Employee
- Description: Admin/Employee can add, edit, and delete properties managed by the company.

Manage Units

- Actors: Admin/Employee
- Description: Admin/Employee can add, edit, and delete units within each property. They can specify unit details such as size, amenities, and rental rates.

Manage Renters

- Actors: Admin/Employee
- Description: Admin/Employee can add, edit, and delete renters information. They can track lease terms, contact details, rental history, and payment records.

Handle Leases
- Actors: Admin/Employee
- Description: Admin/Employee can create, modify, and terminate lease agreements. They can specify lease terms, rental amounts, deposit requirements, and renewal options.

Manage Maintenance
- Actors: Admin/Employee, Maintenance Staff
- Description: Admin/Employee can receive, assign, and track maintenance requests from renters. Maintenance staff can update the status of requests, schedule repairs, and record completed tasks.

Handle Maintenance
- Actors: Admin/Employee, Maintenance Staff
- Description: Admin/Employee can receive, assign, and track maintenance requests from tenants. Maintenance staff can update the status of requests, schedule repairs, and record completed tasks.

Handle Payments
- Actors: Admin/Employee, renters
- Description: Admin/Employee can track rent payments, late fees, and other charges. Renters can make payments, view payment history, and receive notifications about overdue balances.

Generate Rental Reports
- Actors: Admin/Employee
- Description: Admin/Employee can generate various reports for management and financial analysis. Reports may include rental income, occupancy rates, maintenance expenses, and overdue balances.

User Management
- Actors: Admin/Employee
- Description: Admin/Employee can create, update, and deactivate user accounts. They can assign roles and permissions to control access to system features.

Wireframes:

Make Deposit

Select Payment Amount

• View History

Payment Info

• Add new Payment Method

Update Account Info

Name:

Email:

Password:

Reset Password?

Add/ Create Payment Method:
• Card ending in 1234
• + New Card

Submit

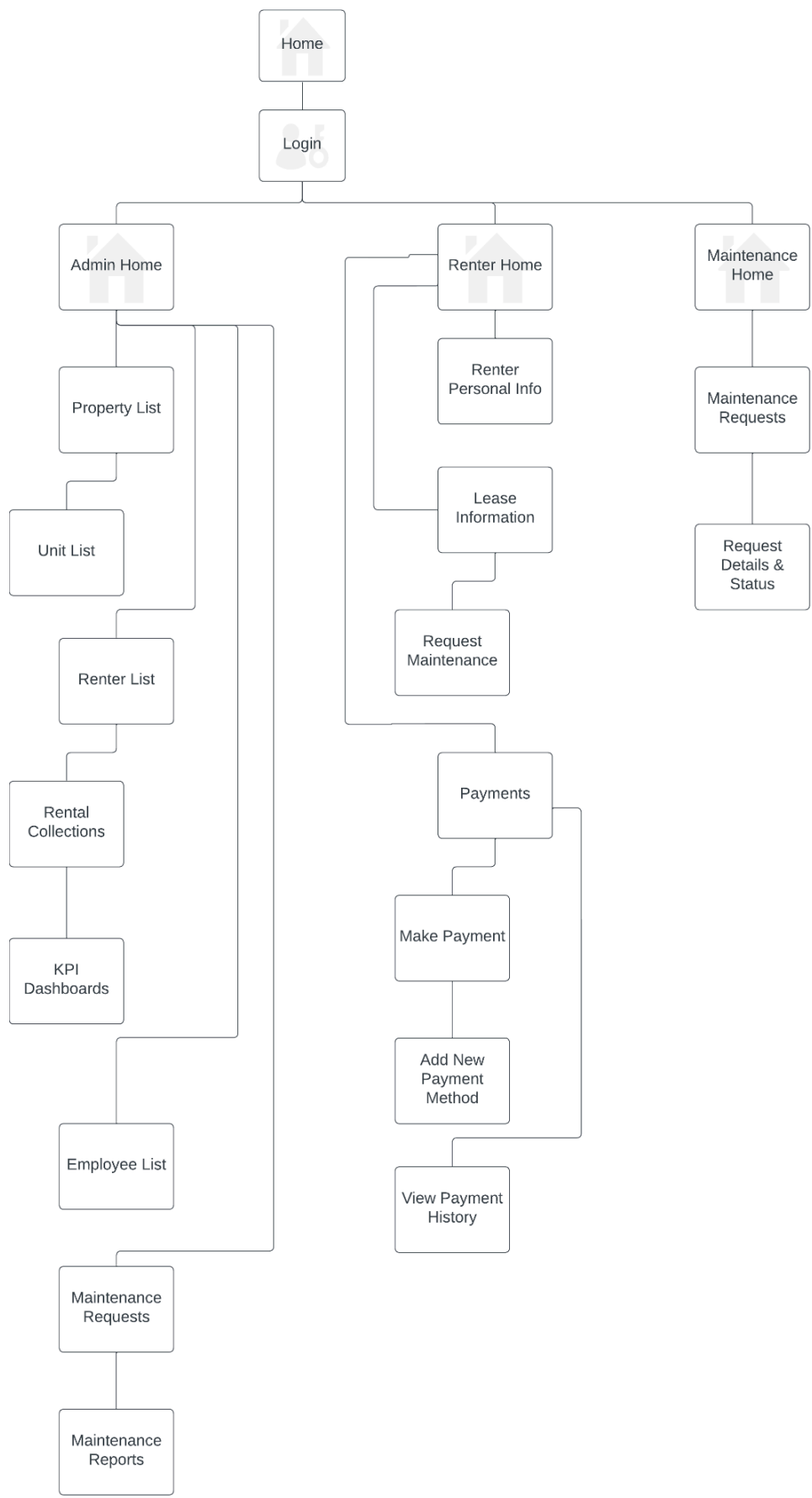**Add new Payment Method**

Confirm

View Account

Current Rental Info

• View Payment History

SITE MAP

Cowboy Property Management

Home

Login

Admin Home
- Property List
- Unit List
- Renter List
- Rental Collections
- KPI Dashboards
- Employee List
- Maintenance Requests
- Maintenance Reports

Renter Home
- Renter Personal Info
- Lease Information
- Request Maintenance
- Payments
  - Make Payment
  - Add New Payment Method
  - View Payment History

Maintenance Home
- Maintenance Requests
- Request Details & Status

In developing front-end pages for applications, the integration of ethics and critical thinking is crucial to ensure the creation of user interfaces that prioritize user well-being, accessibility, and inclusivity. With Cowboy Property Management our main goal is to increase shareholder value through prioritizing the renters. Keeping the renters in mind when designing the interface allows us to cater our interface tools to them. We then use critical thinking to work through executing these tools. As a group we have heavily discussed the position of each actor and reflected on how they benefit from our application. By incorporating ethical principles and critical analysis, we as front-end developers can strive to build interfaces that not only meet functional requirements but also align with ethical standards and promote positive user experiences for all parties.