Property Management System

Sequence Diagram Document

COE 420 Software Engineering
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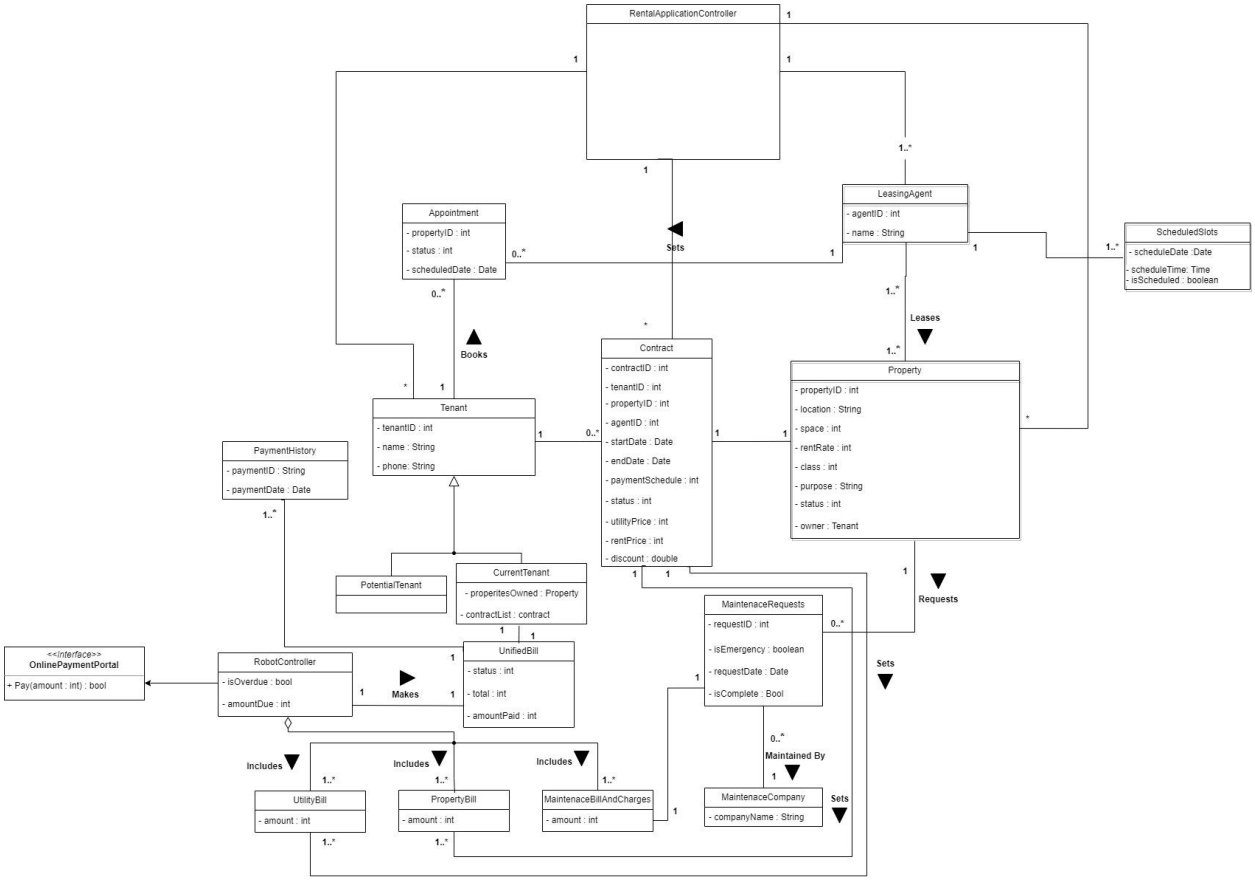
Contents

Updated Domain Model Diagram



Updated Use Case Fully-Dressed Format Descriptions

Use case: BookAppointment
ID: Base1
Brief Description: Tenant book appointment with leasing agent.
Primary Actors: Tenants
Secondary Actors: N/A
Preconditions: The tenant is required to be logged in to the system and are currently at the detail page of a property. There must exist at least one available appointment for the tenant to book.
Main flow: 1. Tenant presses the "Book Appointment" button to book an appointment with the given leasing agency. 2. For each leasing agent registered for the property 2.1 The system will retrieve the schedule of the leasing agent. 2.2 For each scheduled slot 2.2.1 agent will return available schedule slot 2.3 The system will display all schedules of all leasing agents on one page. 3. Tenant will select a suitable time to meet the leasing agent. 4. Tenant will press the "Confirm Booking" button to confirm the booking. 5. Controller will display the appointment details 6. Controller will update Leasing Agent's schedule 7. include (NotifyAgentAndTenant).
Postconditions: The tenant is now scheduled for a meeting with a leasing agent for a given property. Both the tenant and the leasing agent have received the email for the scheduled meeting. The time slot is now marked as occupied.

Use case: NotifyAgentAndTenant
ID: Include 1.1
Brief Description: Robot Automator sends an email which summarizes the details about the booked appointment to both the tenant and the leasing agent.
Primary Actors: Robot Automator
Secondary Actors: Tenant, Leasing Agent

Preconditions: Appointment is successfully booked.
Main flow: 1. The robot will generate a notification regarding the booked appointment. 2. The robot sends the notification through email to the tenant. 3. The robot sends the notification through email to the leasing agent.
Postconditions: The system has sent the notification.

Use case: RentalCollection
ID: Base3
Brief Description: The Robot will calculate and the user will make payment.
Primary Actors: Robot Controller
Secondary Actors: Tenant
Preconditions: The tenant must be logged in to the system as a tenant and are at the payment page where they can access the online portal. They must have already owned the property and are within the deadline of the property.
Main flow: 1. User presses “Go To Payment” Button, which will forward them to the Billing page 2. The robot gathers and summation calculates total payment for a tenant which includes all fees from property, maintenance and utility bills. **extension point: multipleProperties,** Extension: Apply Discount 3. The robot will create a unified bill to be sent to the tenant. 4. Tenants can view all payment history. **extension point: deadlineOverdue,** Extension: Notify Tenant of Overdue Payment 5. Tenants can click the “Pay” button to make payment. 6. Tenants will be taken to an external payment portal and pay.
Postconditions: The payment has been received and the receipt has been sent via email to the tenant.

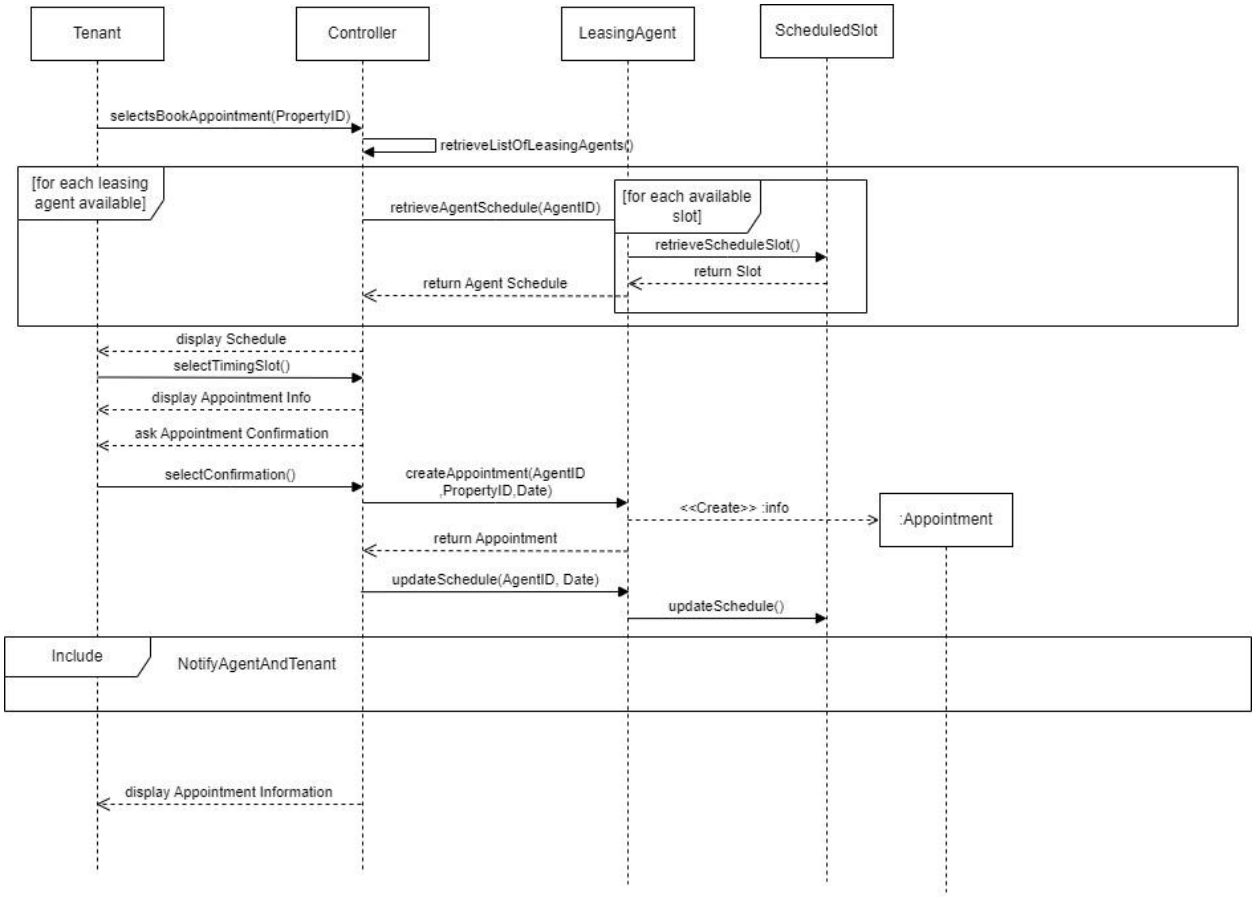
Extension Use Case: ApplyDiscount
ID: Extend 3.1
Brief Description: The system will apply a discount on rent of tenant.
Primary Actors: Robot Controller

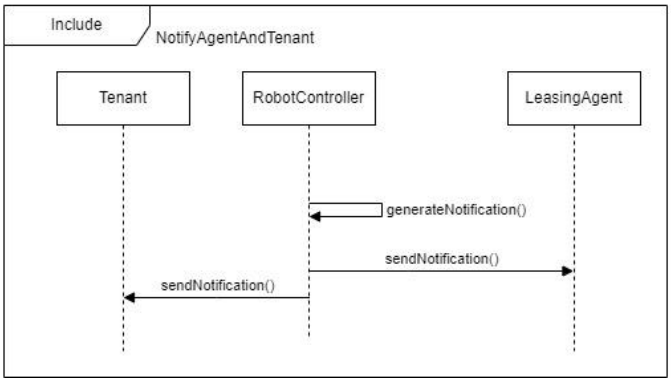
Secondary Actors: N/A
Preconditions: The tenant has multiple properties and the leasing agent has set the discount in the contract.
Main flow: 1. The system will retrieve the amount of discount from contract 2. The system applies the discount on the final rent price.
Postconditions: The system has applied the discount on the final rent price.

Extension Use Case: OverdueDeadlinePayment
ID: Extend 3.2
Brief Description: An auto generated reminder will be sent to the tenant by the system.
Primary Actors: Tenant
Secondary Actors: N/A
Preconditions: The deadline of paying the fees has passed.
Main flow: 1. The system retrieves the overdue amount from the Robot 2. The Robot sends the amount as a reminder message to the tenant.
Postconditions: The notification has been sent to the tenant.

Sequence Diagram

BookingAppointment





RentalCollection