

Use Cases

1. External - [event]: [use case]

- Property needs to be added: Add Property
- Property details change: Update Property
- Property must be removed: Delete Property
- Unit needs to be added: Add Unit
- Unit details change: Update Unit
- Unit must be removed: Delete Unit
- New occupant needs to be recorded: Add Tenant
- Tenant details need revision: Update Tenant
- Tenant vacates a unit: Remove Tenant
- Lease needs to be created: Create Lease
- Lease terms need adjustment: Modify Lease
- Lease needs to be renewed: Renew Lease
- Lease needs to be terminated: Terminate Lease
- Rent payment occurs: Record Rent Payment
- Expense occurs: Record Expense
- Portfolio overview is requested: View Owner Dashboard
- Maintenance issue is reported: Create Maintenance Request
- Maintenance progress update required: Update Maintenance Request
- Maintenance history needs review: View/Filter Maintenance Records
- Rental availability is requested: View Vacant Units
- Rental search needs refinement: Search/Filter Vacant Units
- Inquiry about a unit is submitted: Submit Inquiry
- Compliance or financial data is requested: Provide Compliance Data

- Analytics or insights are requested: Generate Analytics Reports
- Usage metrics are requested: Provide Usage Metrics
- Executive-level overview is requested: View Executive Dashboard
- Technical performance overview is requested: View Technical Metrics

2. **Temporal** - <point of time> [event]: [use case]

- <Daily> Expiring leases must be identified: Identify Expiring Leases
- <Daily> Overdue maintenance must be flagged: Flag Overdue Maintenance
- <Monthly> Financial summary must be produced: Auto-Generate Monthly Financial Summary
- <Monthly> Ledger must be closed: Perform Monthly Ledger Update
- <Lease end date reached> Lease must be processed: Process Lease Expiry
- <Inspection date reached> Inspection must be flagged: Flag Inspection Due
- <Renewal window has opened> Renewal candidates must be identified: Identify Renewal Candidates
- <Inquiry follow-up deadline reached> Inquiry must be flagged for follow-up: Flag Inquiry for Follow-up

3. **State** - [event]: [use case] → [state change]

- Unit status changes: Update Unit Status → Unit record state updated
- Maintenance request completed: Update Maintenance Request Status → Request marked as completed
- Payment posted: Update Ledger Balance → Ledger balance adjusted
- Tenant assigned to a unit: Link Tenant to Unit → Unit linked to tenant
- Lease becomes active: Activate Lease → Lease marked active
- Lease becomes overdue: Flag Lease Status → Payment flagged as overdue

Type	Event	Stakeholder	Use Case
External	Property needs to be added	Property Owner	Add Property
External	Property details change	Property Owner	Update Property
External	Property must be removed	Property Owner	Delete Property
External	Unit needs to be added	Property Owner	Add Unit
External	Unit details change	Property Owner	Update Unit
External	Unit must be removed	Property Owner	Delete Unit
External	New occupant needs to be recorded	Property Owner	Add Tenant
External	Tenant details need revision	Property Owner	Update Tenant
External	Tenant vacates a unit	Property Owner	Remove Tenant
External	Lease needs to be created	Property Owner	Create Lease
External	Lease terms need adjustment	Property Owner	Modify Lease
External	Lease needs to be renewed	Property Owner	Renew Lease
External	Lease needs to be terminated	Property Owner	Terminate Lease
External	Rent payment occurs	Potential Tenant	Record Rent Payment
External	Expense occurs	Property Owner	Record Expense

External	Portfolio overview is requested	Property Owner	View Owner Dashboard
External	Maintenance issue is reported	Potential Tenant	Create Maintenance Request
External	Maintenance progress update required	Property Owner	Update Maintenance Request
External	Maintenance history needs review	Property Owner	View/Filter Maintenance Records
External	Rental availability is requested	Potential Tenant	View Vacant Units
External	Rental search needs refinement	Potential Tenant	Search/Filter Vacant Units
External	Inquiry about a unit is submitted	Potential Tenant	Submit Inquiry
External	Compliance or financial data is requested	Tax Authority Auditor	Provide Compliance Data
External	Analytics or insights are requested	Data Administrator	Generate Analytics Reports
External	Usage metrics are requested	System Developer	Provide Usage Metrics
External	Executive-level overview is requested	CEO	View Executive Dashboard
External	Technical performance overview is requested	Technical Lead	View Technical Metrics

Temporal	Expiring leases must be identified	System	Identify Expiring Leases
Temporal	Overdue maintenance must be flagged	System	Flag Overdue Maintenance
Temporal	Financial summary must be produced	System	Auto-Generate Monthly Financial Summary
Temporal	Ledger must be closed	System	Perform Monthly Ledger Update
Temporal	Lease must be processed	System	Process Lease Expiry
Temporal	Inspection must be flagged	System	Flag Inspection Due
Temporal	Renewal candidates must be identified	System	Identify Renewal Candidates
Temporal	Inquiry must be flagged for follow-up	System	Flag Inquiry for Follow-up
State	Unit status changes	System	Update Unit Status
State	Maintenance request completed	System	Update Maintenance Request Status
State	Payment posted	System	Update Ledger Balance
State	Tenant assigned to a unit	System	Link Tenant to Unit
State	Lease becomes active	System	Activate Lease
State	Lease becomes overdue	System	Flag Lease Status

Use Case	Brief Description
Add Property	Capture and store a new property record, including essential attributes and ownership details.
Update Property	Modify existing property information to reflect updated details.
Delete Property	Remove a property record after validation that no dependent data blocks deletion.
Add Unit	Create a new rental unit under an existing property and record its attributes.
Update Unit	Update the details of an existing unit, such as size, status, or amenities.
Delete Unit	Remove a unit from the system, ensuring no active leases are attached.
Add Tenant	Register a new tenant and create a corresponding profile in the system.
Update Tenant	Edit tenant information to keep records accurate and up-to-date.
Remove Tenant	Detach a tenant from a unit and update occupancy status accordingly.
Create Lease	Generate a new lease contract linking tenant, unit, terms, and dates.
Modify Lease	Update lease terms while maintaining versioning and audit consistency.

Renew Lease	Extend an existing lease with updated dates and optionally revised terms.
Terminate Lease	End a lease early or at expiration and update unit availability.
Record Rent Payment	Log a rent payment event and update the tenant's balance and ledger.
Record Expense	Capture an expense entry and update financial tracking for the property.
View Owner Dashboard	Display summary insights and KPIs relevant to a property owner.
Create Maintenance Request	Register a reported maintenance issue and assign it an initial status.
Update Maintenance Request	Modify the status or details of a maintenance request as work progresses.
View/Filter Maintenance Records	Display maintenance history with filtering options for status, date, or unit.
View Vacant Units	Show a list of currently available units with key rental information.
Search/Filter Vacant Units	Narrow vacant units using criteria such as price, size, or location.
Submit Inquiry	Record an inquiry submitted by a potential tenant regarding a unit.
Provide Compliance Data	Generate and present compliance or financial data required by authorities.

Generate Analytics Reports	Produce analytical insights using aggregated operational and financial data.
Provide Usage Metrics	Present system usage statistics to support performance or monitoring needs.
View Executive Dashboard	Display high-level organizational metrics for executive decision-making.
View Technical Metrics	Provide system performance and stability metrics for technical staff.
Identify Expiring Leases	Automatically detect leases nearing their end date and prepare notifications.
Flag Overdue Maintenance	Identify maintenance tasks past due dates and mark them as overdue.
Auto-Generate Monthly Financial Summary	Produce monthly summarized financial statements.
Perform Monthly Ledger Update	Close and reconcile the monthly ledger to maintain financial integrity.
Process Lease Expiry	Trigger actions when a lease reaches its end date (e.g., marking unit vacant).
Flag Inspection Due	Identify upcoming or due inspections and flag them for action.
Identify Renewal Candidates	Determine which leases are within the renewal window and require action.
Flag Inquiry for Follow-up	Identify inquiries whose follow-up deadlines have passed.

Update Unit Status	Change a unit's internal state (e.g., occupied, vacant, under maintenance).
Update Maintenance Request Status	Mark maintenance requests as completed or update to next lifecycle state.
Update Ledger Balance	Adjust financial records after payment is posted.
Link Tenant to Unit	Associate a tenant with a specific unit during occupancy assignment.
Activate Lease	Mark a lease as active once the start date is reached and prerequisites are met.
Flag Lease Status	Mark a lease or payment as overdue and update financial risk indicators.