



Corporate Equipment Allocation

Presented By

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Corporate Equipment Allocation and Tracking System



A corporate office requires a Corporate Equipment Allocation and Tracking System to streamline the process of distributing and tracking shared office equipment like laptops, projectors, and tablets. The system allows reception staff to manage equipment allocation and ensure that each item is tracked for availability, condition, and timely return.



System Requirements

Equipment Allocation and Return

- Reception staff manages equipment allocation requests, recording employee details(name, department, and purpose) along with the expected return date.
- A record is created for each item allocated, including employee details, allocation date,and expected return date.
- Upon return, the system verifies the equipment's condition and logs return details,alerting the maintenance team if servicing or repairs are needed.



System Requirements

Automated Notifications:

- **Overdue Reminder:** Sends an automated reminder email to employees if equipment is not returned by the expected date.
- **Maintenance Team Notification:** Alerts the maintenance team if an item is flagged as damaged or due for servicing upon return.
- **Inventory Team Notification:** Notifies the inventory team whenever equipment is allocated or returned, ensuring up-to-date availability tracking.



System Requirements

Backend and Deployment:

- Develop the system using the Play Framework with REST APIs to manage allocation/return operations and track equipment status.
- A dedicated microservice using Akka Actors will handle asynchronous notifications, including overdue reminders and maintenance alerts.
- Use Kafka as a message broker to queue and manage notifications to maintenance and inventory teams, ensuring reliable communication.
- All components should be containerized with Docker for scalable and consistent deployment.



Actors Involved

Employees: Request equipment allocation and receive notifications. If Reception approve or reject the allocation request.

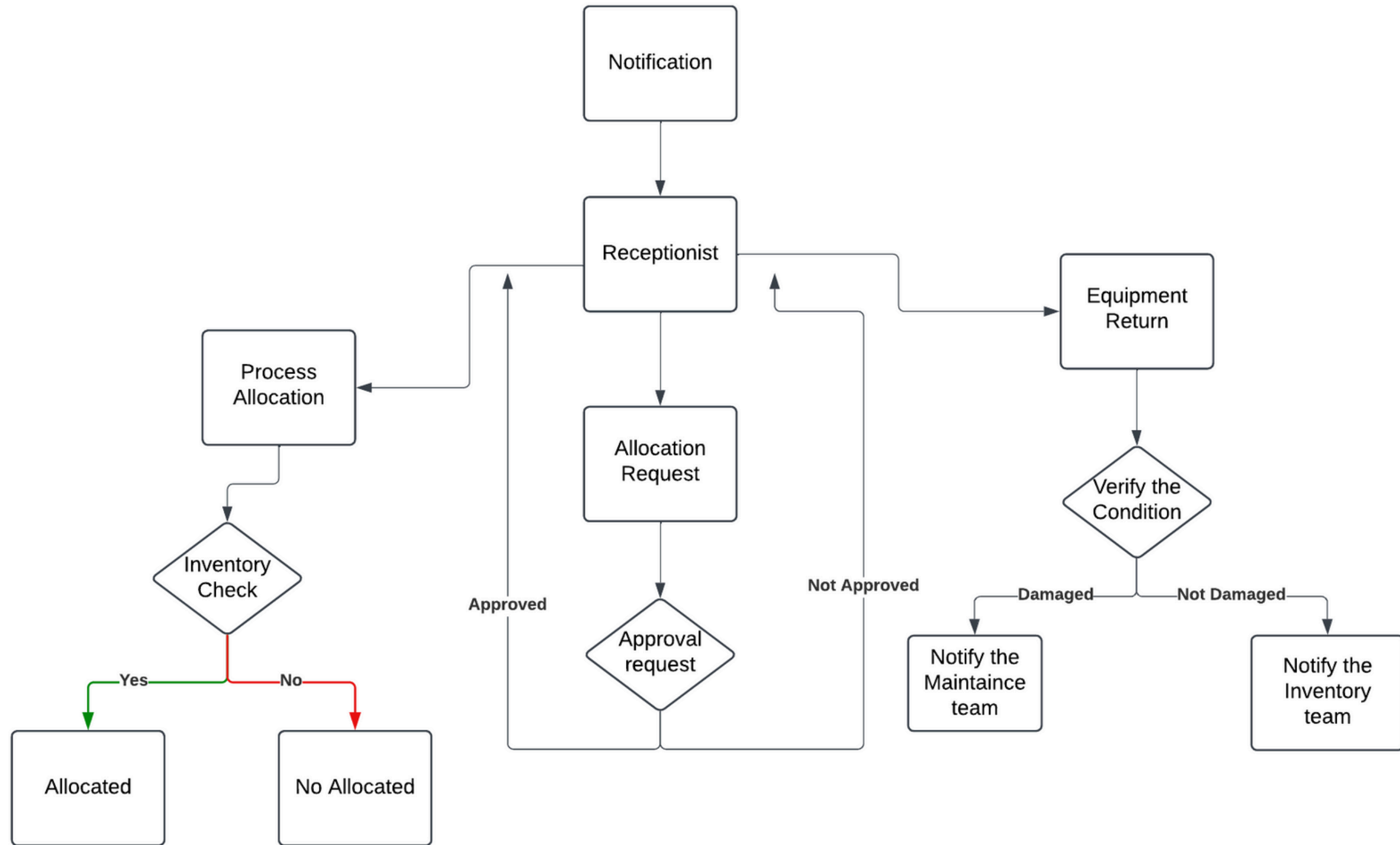
ReceptionStaff: Manage allocation, requests, process and verify equipmentavailability. Process return equipment requests.

Maintenance Team: Inspect and service returned equipment as necessary.

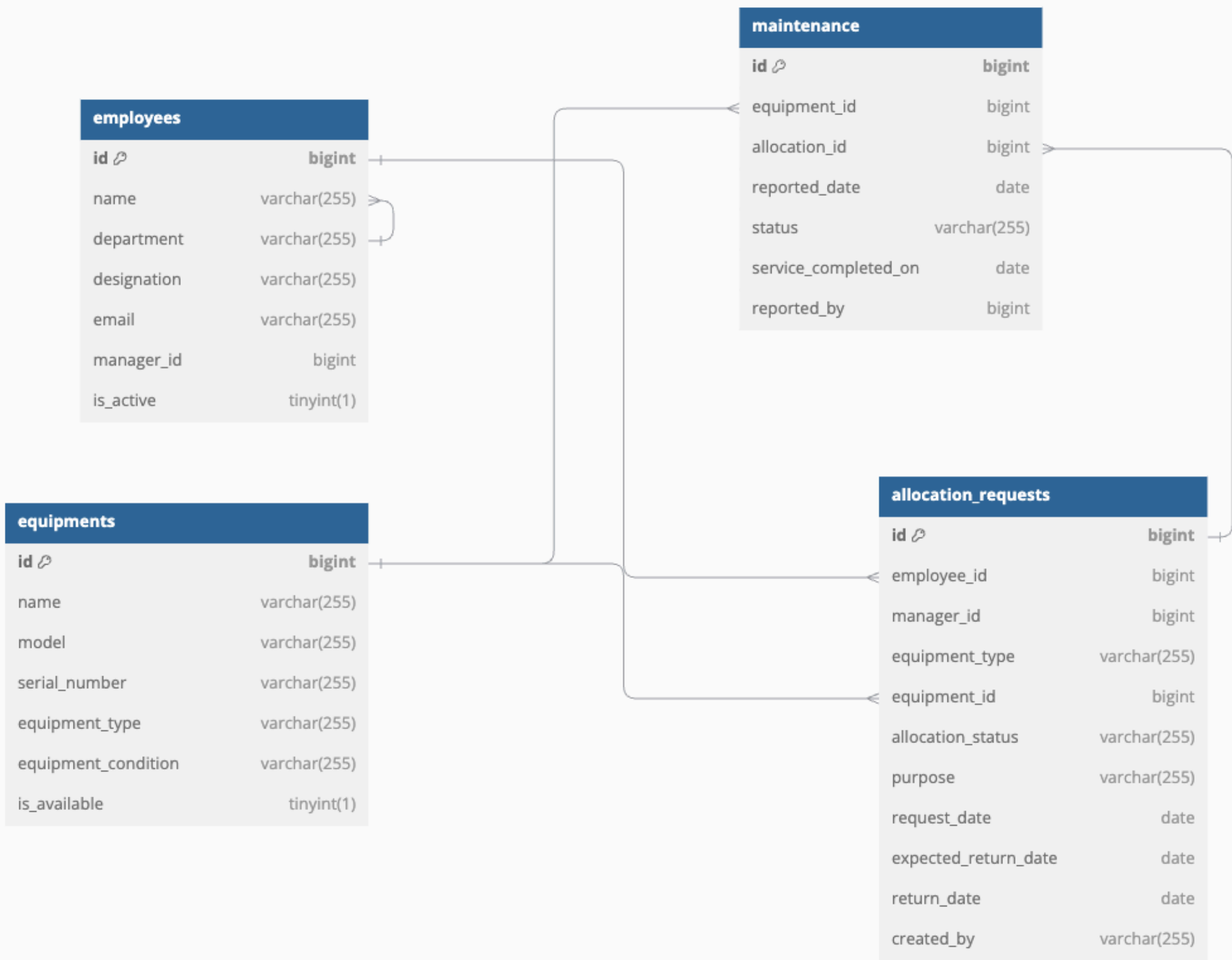
Inventory Team: Maintain records ofavailable equipment and updateinventory status.



workflow diagram



ER Diagram



API Documentation

Allocation Request APIs

Corporate Employee Request APIs



Thank you

