Employee Laptop Delivery Tracking

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Introduction

Employees in an organization are frequently on the move. Laptop is a device that can be quickly carried across locations. Frequent updates related to device requirements and allocation are required.

An employee has to go through the lengthy process to connect the IT support to get the request for a registered laptop, and has to frequently follow up with IT team to cross check delivery status.
This consumes lot of time.

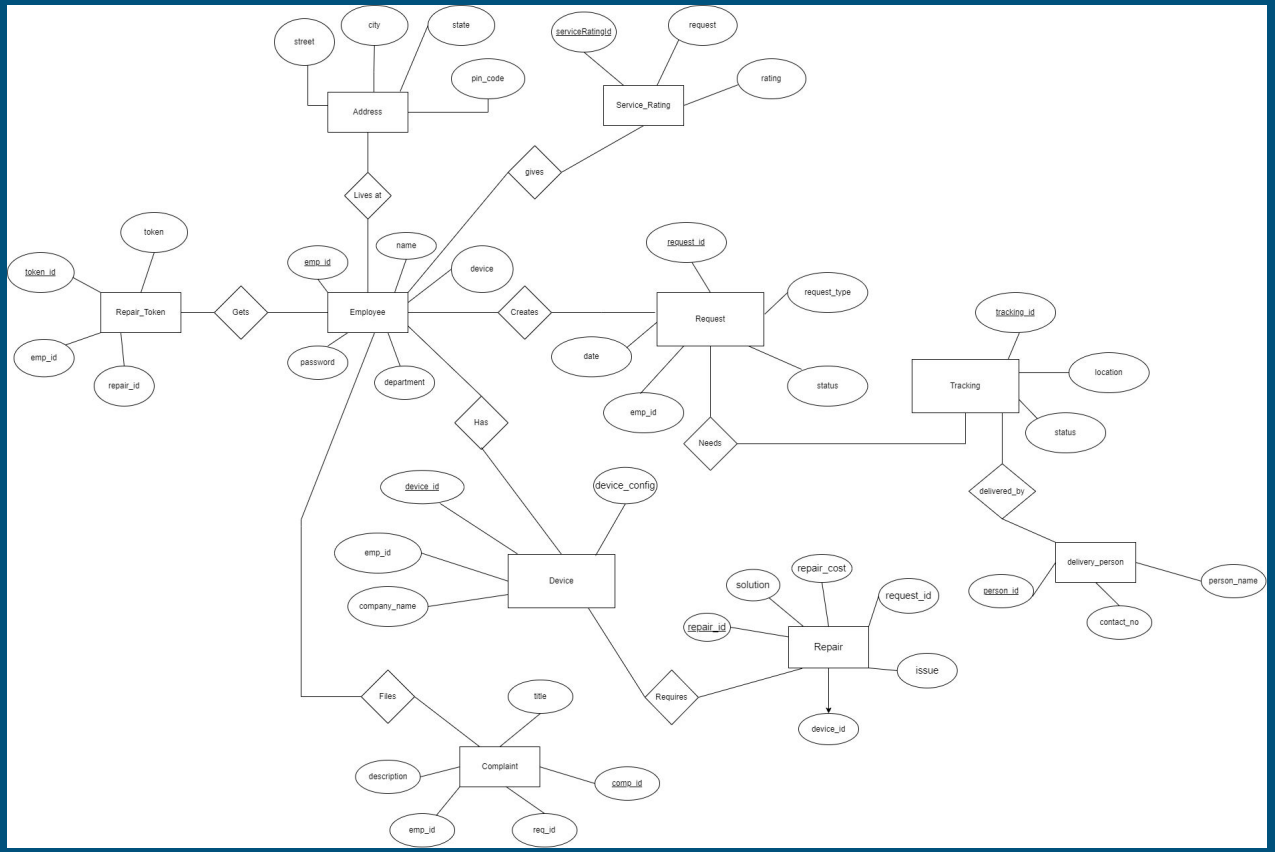
Quick repair, update and tracking of delivery will ensure faster services. Tracking of delivery status of devices will ensure safe delivery of device across location.

Our solution

We have created a RESTful API using Spring Boot based on the problem statement.

Primary tools used: Spring Tool Suite (Development), Git & GitHub (Version control and code deployment), PostgreSQL, Swagger UI (Testing the API) and Jenkins (Build Automation, CI/CD tool)

ER-Diagram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state
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Address
serviceRatingId
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gives
Lives at
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repair_id
Repair_Token
Gets
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name
device
password
department
Employee
Creates
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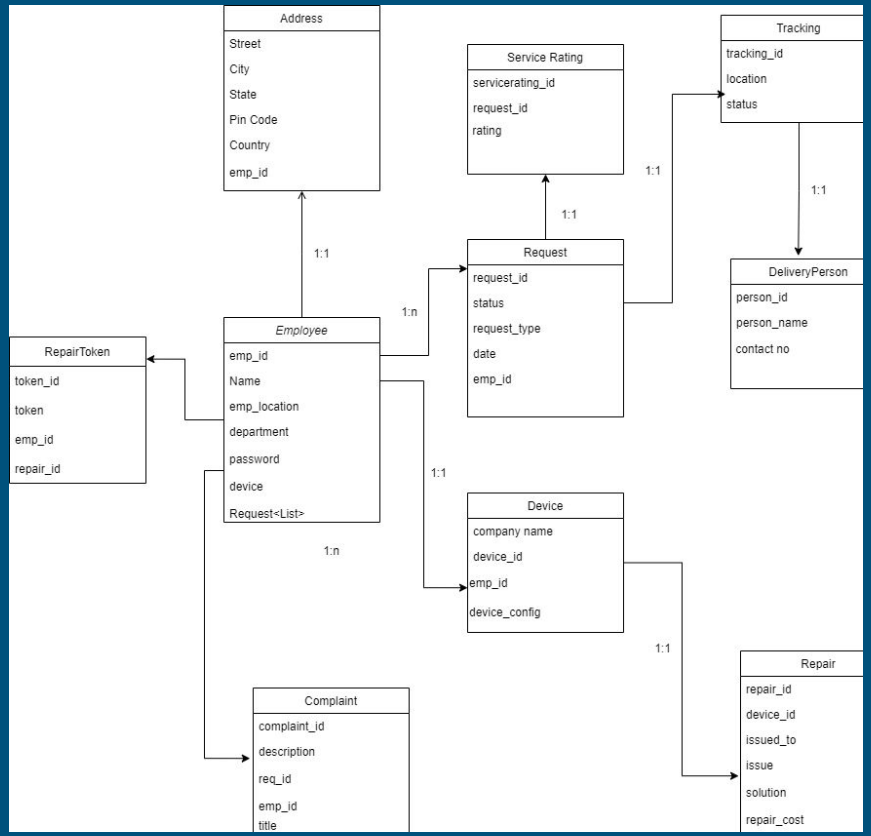
status
emp_id
Request
Has
tracking_id
location
status
Tracking
Needs
delivered_by
device_id
device_config
emp_id
company_name
Device
solution
repair_cost
request_id
repair_id
Repair
issue
device_id
Requires
delivery_person
person_id
person_name
contact_no
Files
title
description
comp_id
emp_id
req_id
Complaint

Database Diagram



Authentication: Registration (User Story 1)

- An employee registers by providing basic personal information such as their name, email, username, password and information regarding their address.

- Unique Constraints: An employee’s username and email should be unique. Upon entering the details, an employee id is generated, which too is unique for each registering employee.

Authentication: Signing in (User Story 2)

- To sign-in, an employee needs to provide correct user credentials (username and password) which they chose while signing up on the service.
- Once an employee has logged in, a session pertaining to the logging in user is created. Session information is stored on the web client as a cookie.
- A session ID is stored in the client side whereas the data associated with it is stored on the server side.

Accepting Request from Employee (User Story 3 & 4)

- The application will accept request for new laptop from an employee and pass the request to IT team(Administrator) .

- Application will accept Request Type along with request.

- IT team(Administrator) will able to check and validate the request to be confirmed ,waiting or rejected ,with specific reason .

Processing Request (User Story 5 & 6)

- If the request is for a new laptop, employee will be able to track the delivery status of laptop.

- If the request is for repair, the IT team will be able to track the status of laptop that has been collected for repair by IT person .Also IT team will validate on app once the laptop is received and repair/updating process for laptop has started

Status of Laptop Repair (User Story 7 & 8)

- The status of laptop repair should be frequently updated on application by the IT team.

- The status of repair complete and date of delivery of updated laptop should be updated on application.

Sort and Filter Requests (User Stories 9 & 10)

- The employee will be able to see previous and current requests date wise

- The IT team(Administrator) will be able to filter requests date wise ,region wise,department wise,employee wise

Add Delivery person & Repair Details (User Story 11 & 12)

- Contact details of person responsible for delivery of laptop, should be available to both employee and IT Team(Administrator)
- While collecting laptop for repair, entry for current status of laptop should be filled which can include below details

1. Employee name
2. Device details like device serial no, company name
3. Issue as mentioned by employee
4. Solution as given by IT Team
5. Configuration of laptop
6. Repair cost

Generating a Token for repair (User Story 14)

- Once the repair has been initiated after capturing the details, a token is generated which is available on the employee side.

- The employee can track the device status using this generated token.

Giving a service rating (User Story 15)

- After request has been successfully completed, request will be closed by employee on his side along with service ratings.

- While Storing rating in database application will check if request Id exist or not.

Employee Complaints (User Story 16)

- A separate module for complaints regarding services will be available to employee

- The employee will be able to submit any complaints that he has here.

Tracking Data (User Story 17)

- The device that is on the move should be trackable. Data related to delivery like location of device, delivery person of delivery should be readily available.