CIDM 6330 Final Project

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Problem Identification

The Problem

The problem I would like to solve is having a system to track assessments I perform for customers at my job.

The Domain

Information Technology

Professional Interest

I currently work for an MSP (Managed Service Provider) called Runbiz, and I am a Technical Alignment Engineer. A part of my job involves performing alignments. These alignments usually require me to meet with one of our business contacts at a customer's location and walk through the building to see all the technology. I also ask a lot of questions, basically trying to understand the business and how they leverage their technology. This involves pre-assessment work, going through all the systems and networks we have access to, and reviewing their configurations to our standards. After an assessment, I must process my notes (in OneNote) and pictures. I then update our documentation in ITGlue for that customer and make recommendations to vCIOs at Runbiz so they can build budgets and plan projects for the customers.

To assist me with this process, we utilize software called LCI or Lifecycle Insights. Specifically, it has an assessment function. It does significantly more, but the feature I use the most is the assessment function. LCI does a lot of great things, but the assessments seem to be an afterthought. Not to mention there is no app, and the web app does not adapt well to a phone or tablet.

System To Prototype

The ideal prototype would be a system where we can build out custom questions and answers that help us see if the customer is in alignment. It would need to be mobile-friendly. If we could take site photos through it so they automatically uploaded to OneDrive or our computers or (dreaming big) auto-upload to ITGlue. It needs to be able to create tickets in our ticketing software. It needs to be able to take the questions that are answered negatively and create recommendations on how they need to solve them. An audio recording and potentially a dictation function would be very useful. It would also need an open notes section that allows writing with a stylus.
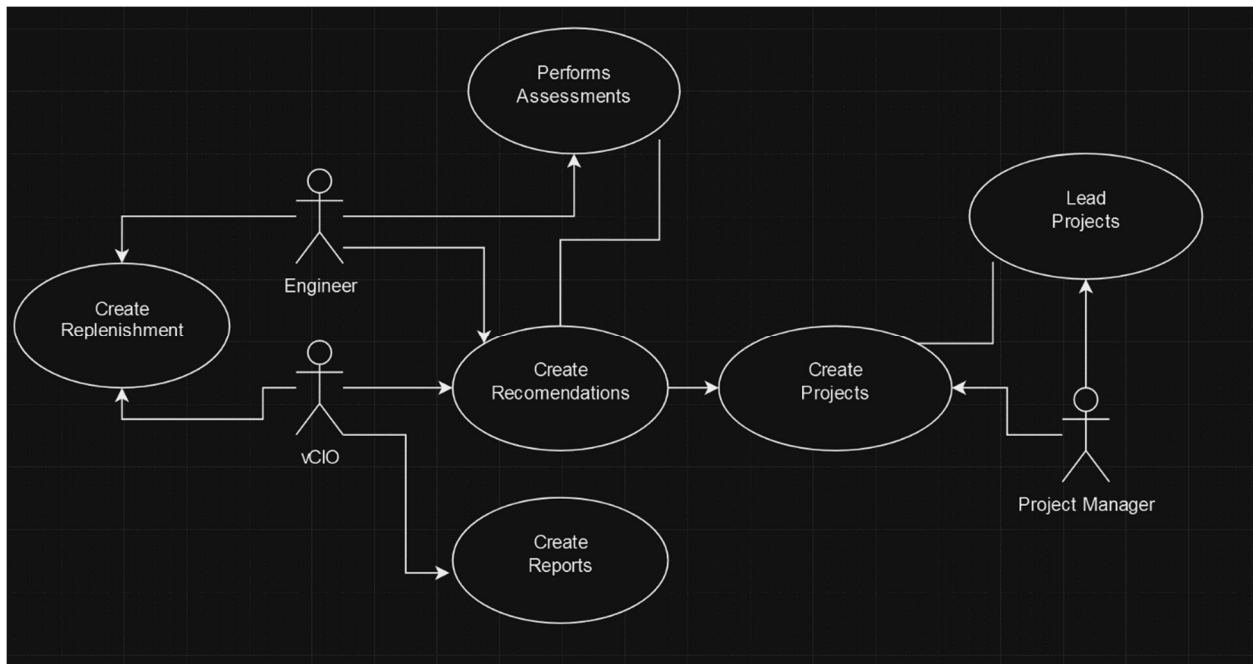
Domain Modeling

Business Rules

- There will need to be a customer's table with information about that customer.
- Each customer can have many projects, many proposed projects, many assessments, many recommendations, multiple site locations.

- Each customer has a name, Primary Locations, an Alignment Engineer, a vCIO, and potential site locations.

- There are three types of users Alignment Engineer, vCIO, and Project Manager

- Each user needs a name, email address, and Security group.

- Each customer is assigned only one Alignment Engineer and only one vCIO.

- An Alignment Engineer performs assessments, creates recommendations, creates proposed projects. They can perform many of each.

- Recommendations are linked to none or many Proposed projects, and assessments.

- Recommendations have a customer, a status (Completed, In Progress, Approved, Declined, On hold, Proposed), name, completion date, description, linked assessments, linked Proposed projects, priority (1-10 and 10 being the highest.)

- Projects can be made freely but normally proposed projects convert into projects. They need a status, project manager, cost, description, one customer, name, completion date.

- Proposed projects are linked to recommendations. They have one customer, name, completion date, description.

- Assessments uses an assessment template. They are performed by an Alignment Engineer for one customer. They need a date, score (based on the assessment itself 0-100), percent complete, comments, and a status (Completed, In Progress, On hold, Scheduled), site location.
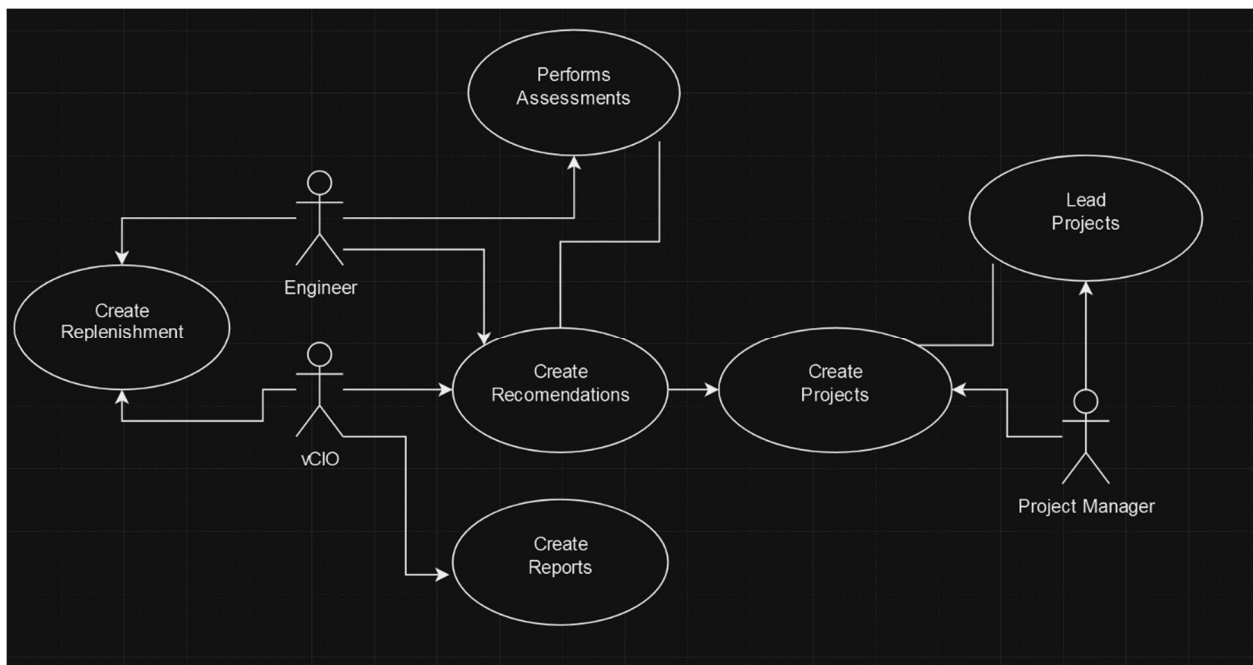
- Assessment templates are made up of one or many Assessment questions, an assessment name, an assessment type (Baseline, Health Check), and a description of it.

- Assessment questions is a list of all available assessment questions. Any questions can be linked to many assessment templates. The questions need a questions field, answer field, support field.

- After an assessment is completed. An Alignment Engineer creates recommendations from the assessment. They then create proposed projects to accomplish the recommendations.

- After the recommendations are made a vCIO coordinates with a customer then can modify proposed projects or Recommendations. They then convert proposed projects into Projects.

- Projects are worked on by project managers.

- Each Customer has a technology inventory. This data is imported from other systems. It can be added manually.

- The technology inventory needs to track device name, site locations, type (Server, workstation, firewall, switch, ups, other, unknown), make, model, Serial number, Operating system, data purchased, date warranty expired, age in years, date data was last updated.
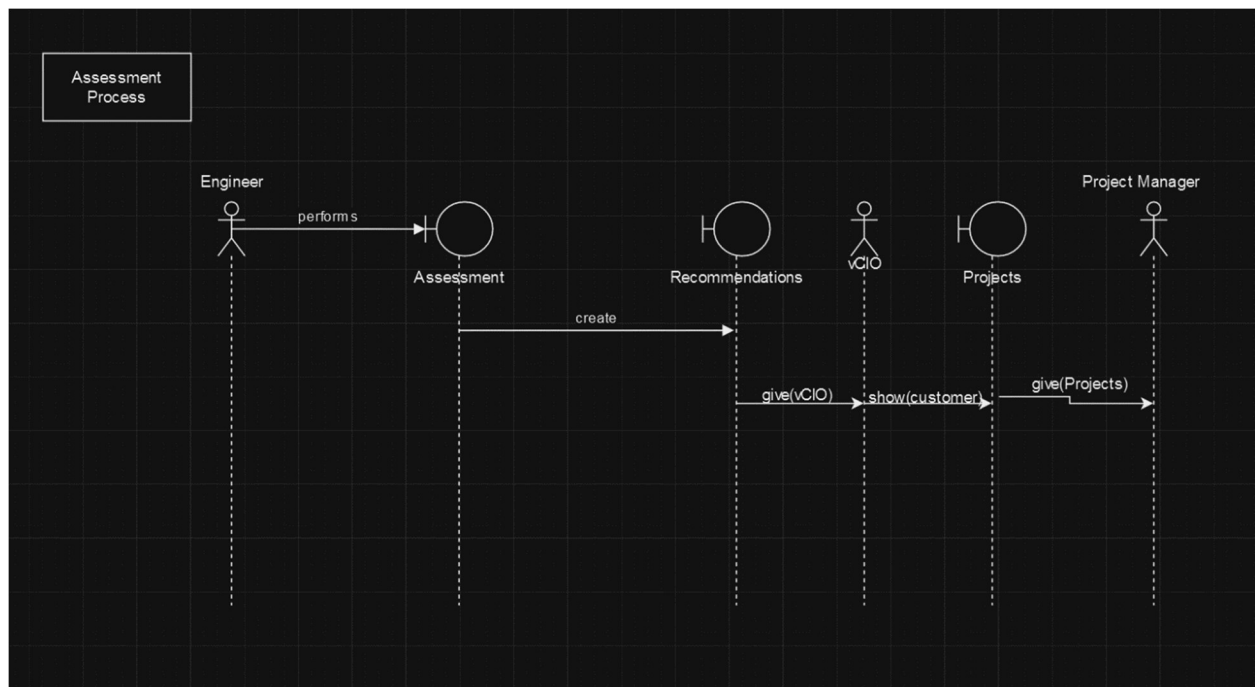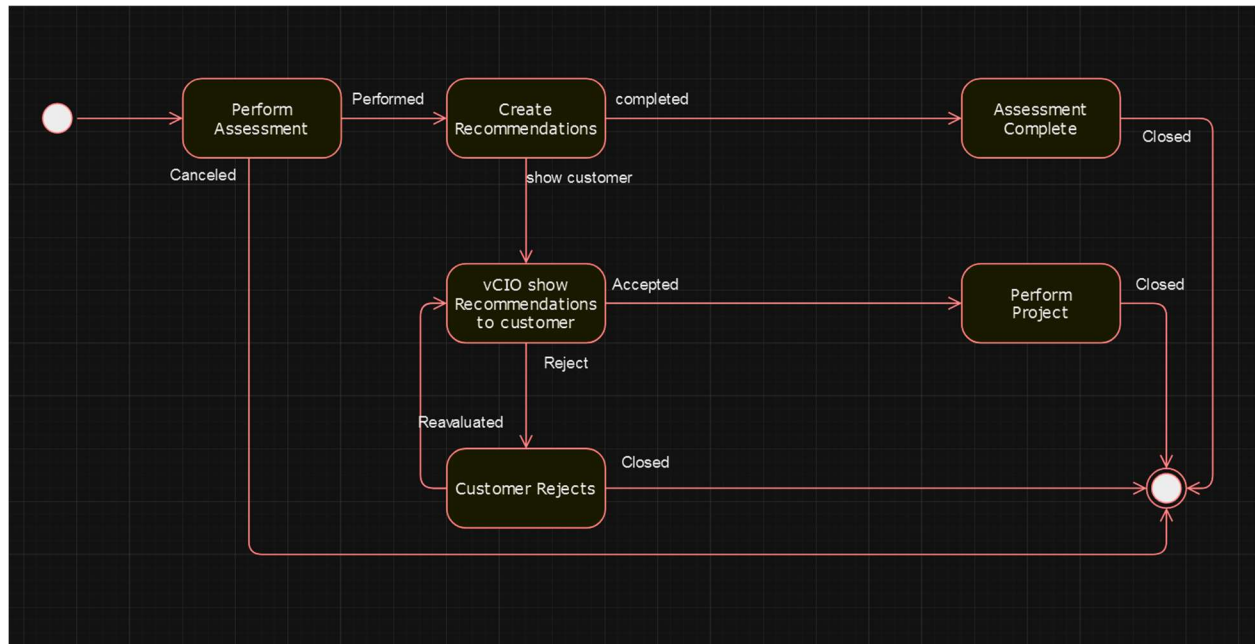
Use Modeling

Use Case Diagram

Activity Diagram

Sequence Diagram

State Machine Diagram

Class Diagram

Customer
- Business Name
- Business Contact
- vCIO Name
- Engineer Name
- Age of endpoints

Projects
- Project Name
- Deliverables
- Customer
- Start Date
- Status
- Employee Name
- End Date
- Project Manager

Employee
- + field : type
- Permissions
- Employee Type

Endpoints
- Endpoint Name
- Type
- Purchased Date
- Warranty Expire
- Operating System
- CustomerName

Replenishments
- Endpoint Name
- Warranty Status
- Customer

Recommendations
- Recommendation Name
- Assessment
- Assessment Question
- Customer
- Status
- Recommendation Type
- Internal Notes
- Employee Name
- Details

Engineer
- + field : type

vCIO
- + field : type

Project Manager
- + field : type

Integrations/API
- Integration Name
- Intergration
- API Key

Assessments
- Assessment Type
- Internal Notes
- Public Notes
- Assessment Questions
- Assessment Date
- Employee Name
- Customer

Assessment Questions
- Questions
- Answer

Relationships/labels:
- At — 1
- 0..*
- Assigned To — 0..*
- Created
- Created
- Need
- imported
- ticket creation
- Linked
- Related
- Assigned
- Performs
- For
- 0..*, 1..*, 1