

MICHIGAN STATE

UNIVERSITY

Project Plan Presentation

Application Lifecycle Framework

The Capstone Experience

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*From Students...
...to Professionals*

Project Sponsor Overview

- Largest automotive company in the United States, and largest in the world until 2008
- Currently makes Buick, Cadillac, Chevrolet, and GMC cars
- Between 2020 and 2025, GM is expected to invest \$35 billion in EV and AV research and production
- Based in Detroit, MI



Project Functional Specifications

- Create application that tracks, automates, validates, and orchestrates application distribution process to GM devices
- Company previously used Sharepoint, but moving to Sharepoint Cloud which breaks current system
- Sends automated emails to whoever is responsible for the next step in the process
- Handles deployment to assorted devices (desktop, laptop, smartphone, tablet, etc)



Project Design Specifications

- Website takes in information about application to be distributed
- Request is processed and assigned to reviewer, email sent to appropriate parties
- Users manually review at whatever step the process is at, and checks off when they are done
- Email sent to next person in review process, and process is repeated until all steps are done
- Application distributor can check status of review process at any time



Screen Mockup: Client Request Form

gm

Submit Request | View Your Requests

Client Solutions Request Form

App Team
tasks
sign out

ASMS Number*
100834

Request Overview*
Describe your request...

ASMS Owing Organization*
Enterprise Technology Services

Business Function Group*
Global Development Services

Application Owner*
Matthew Sprague

Application Owner Operation*
Edward Muller



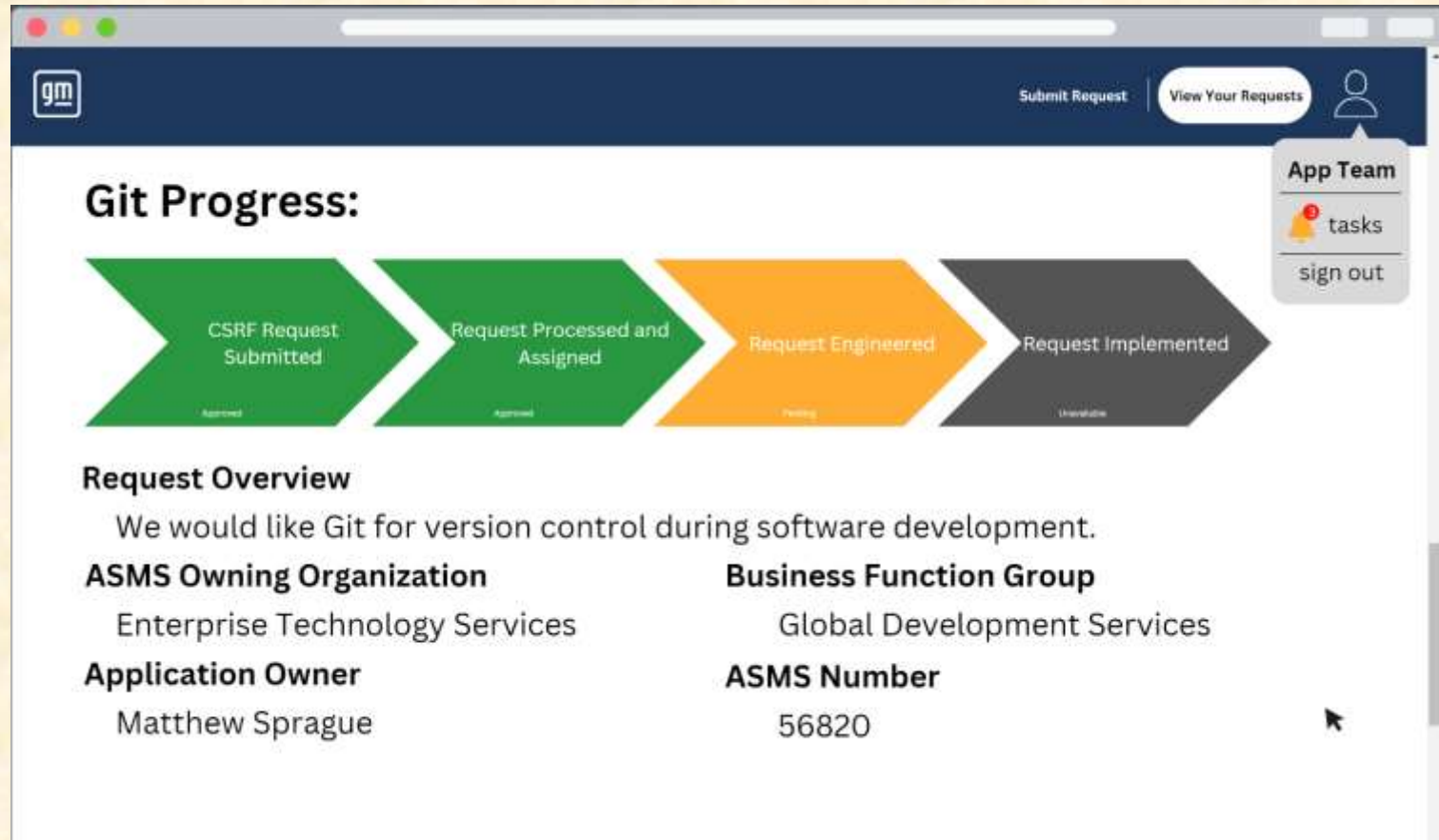
Screen Mockup: View User Requests

User Requests: Search: Active: Past:

Product Name	ID	ASMS	Status	Actions
Git	6825	100834	Pending	view
Camtasia	6783	47341	Pending	view
Visual Studio...	6131	49352	Pending	view
Microsoft Word	5983	47341	Pending	view
WinZip	9382	49352	Pending	view



Screen Mockup: In-Depth Request View



Screen Mockup: View Client Requests

Client Solution Requests: Search: Active: Past:

Product Name	ID	ASMS	Status	Actions
Git	6825	100834	Pending	Review
Camtasia	6783	47341	Pending	Review
Visual Studio...	6131	49352	Pending	Review
Microsoft Word	5983	47341	Pending	Review
WinZip	9382	49352	Pending	Review



Project Technical Specifications

- Angular to create front end of website
- Uses Spring Boot to communicate between back end server and website
- Maria DB server for storing information about applications and employees
- SMTP server to send emails to whoever is handling next step in distribution process



Project System Architecture



Project System Components

- Hardware Platforms
 - Rack Server in Lab
 - Ubuntu
 - ❖ Tomcat Server
- Software Platforms / Technologies
 - Angular
 - Spring Boot
 - Maria DB
 - Google SMTP Server



Project Risks

- Risk 1
 - Handling user permissions
 - As of right now, engineers can approve their own requests/stages of the request, so each type of user must have specific permissions
- Risk 2
 - Handling of notifications of process updates for users
 - Many emails will have to be sent for each stage of the deployment process, so minimizing emails, only sending emails for certain parts, or implementing a priority system may be optimal
- Risk 3
 - Making the UI usable by non-technical users
 - Not everyone using application will be a technical user, so layout of website is being simplified
- Risk 4
 - Finding an effective method to implement request priorities
 - Most requests are taken care of in a first in, first out method, but admin can change priorities of certain requests, so we need to weight each request



Questions?

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