CMMC Fledge

CMMC Fledge System Proposal

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**Executive Summary:** With the growing importance of CMMC compliance, organizations lack inexpensive and straightforward ways to start their compliance journey. CMMC Fledge is here to meet that need. This will be conducted through a web-based portal known as the “CMMC Fledge System”. This system is designed to take input from its customers and supply them with the Information needed for their CMMC journey. This information will be presented in easy-to-understand summaries and documentation.

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# Introduction

The Cybersecurity Maturity Model Certification (CMMC) is a DoD compliance framework. Gaining CMMC compliance or any certification is a difficult journey for many organizations. Though there are companies that offer compliance services, there is little in the way of free, easy to understand, aggregated resources. The CMMC Fledge System will fill that gap within the market.

## Background

Recently, the current administration within the United States has made CMMC compliance mandatory for many government contracts. These contracts are extremely lucrative to organizations. This has led to an increase in those interested in CMMC compliance. Many of these organizations have never been through the compliance process before. This can add stress to both the Organization Seeking Compliance (OSC) and businesses that offer CMMC assistant services. There are services out there to take companies from start to finish but come with a large cost. This cost drives numerous organizations away. To combat the cost, many organizations try to find free solutions online. In doing so, they discover that free resources require far more time and effort as they are difficult to decipher.

## Description

The CMMC Fledge System will fill in the gap that is left with the current options available to organizations. This system will allow organizations to start their compliance journey at no cost. The CMMC Fledge System is a web application that will allow organizations to realize the benefits of CMMC by giving basic information about their system. The CMMC Fledge System will inquire about certain high-level information such as Controlled Unclassified Information (CUI) types, how their system is managed, types of environments, etc. This information will allow the CMMC Fledge System to output easy to comprehend summaries along with the official documentation related to their needs. The CMMC Fledge System shall also recommend, at a high level, a next course of action and list accurate benefits if the OSC decides to pursue CMMC. This project will only include CMMC L1 and CMMC L2. Due to time constraints and the complexities of CMMC L3 it will not be included in the final output of this project.

# Proposed Solution

## Development Approach

The CMMC Fledge system will be built using an iterative waterfall development method. This allows for the stages of the project to be delineated from one another. This sets clear goals and work structure. Project requirements are broken into well understood pieces with little anticipated change. Utilizing an iterative approach allows for backtracking which may be crucial in the testing phase. By defining clear goals, it is believed that the CMMC Fledge System can be produced on time and meet all milestones and deliverables.

## High Level Plan

To see the CMMC Fledge System through completion, project steps have broken down into four (4) distinct high-level phases. These phases include research, writing, implementation, and testing. Research must be conducted to lay the foundational information for the CMMC Fledge System. This allows the CMMC Fledge System to identify what resources and information is to be used for presentation. After the completion of the research phase, CMMC Fledge will move onto its writing phase. Here all information gathered for CMMC Fledge will be written into a format usable by the CMMC Fledge System. The writings compiled will be clear and written in a non-technical fashion. This is so it is understandable to Information System Security Officers (ISSOs), ISSO equivalents, and non-technical leadership alike.

Once the foundation has been set the project will begin implementing the CMMC Fledge System. Within this phase a development environment will be created using XAMPP. XAMPP is a locally hosted web application development kit that supports the development of PHP and HTML. Additionally, XAMPP supports MySQL database development that will work in tandem with the web application. Upon completion of the development environment, AWS will be used to create a production environment. This will include AWS EC2 and RDS instances. Once the production environment has been established, testing will take place to make sure the CMMC Fledge System meets the established requirements.

# Project Schedule

## Work Break Down Structure

The four (4) phases of the project have been further broken into tasks. The research phase will take twenty-five (25) hours to complete. This phase includes proposal changes, project setup, and research. The next phase, the writing phase, will require forty-five (45) additional hours of work. Including creating research implementation statements, database Entity Relationship Diagrams (ERDs), application story boards, and system diagrams. To support the implementation of the CMMC Fledge System, sixty (60) hours of work will be conducted. This phase will include standing up the database, development, and production environments, building those environments, and writing documentation. The reminder of the allotted project time will be spent on testing. This will include development and production environments. Twenty-five (25) hours should be allotted for this phase. View Project Timeline, Intermediate Milestones, and Weekly Updates for a further breakdown.

## Project Timeline

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## Intermediate Milestones

### Intermediate Milestone #1 (10/12/2025)

* Research Completed
* Implementation Writing Drafted
* System Mockups Drafted

### Intermediate Milestone #2 (11/2/2025)

* Development Web Application Implemented
* Development Database implemented
* AWS Environment Built

## Weekly Updates

### Weekly Update #1

* Weekly Standup (1 hour)
* Finalizing Proposal Changes (1 hour)
* Project Initial Setup (Workflow Management) (3 hours)
* Research (5 hours)

### Weekly Update #2

* Weekly Standup (1 hour)
* Research (10 hours)
* Research Implementation (5 hours)

### Weekly Update #3

* Weekly Standup (1 hour)
* Research Implementation (5 hours)
* Application Story Board (6 hours)
* System Diagrams (1 hour)
* Database Entity Relationship Diagrams (ERDs) (3 hours)

### Weekly Update #4

* Weekly Standup (1 hour)
* Milestone #1 Presentation Delivered (2 hours)
* Finalizing Research Implementation Statements (5 hours)
* Standup Development Environment (XAMPP) (3 hours)
* Start Web Application Outline Implementation (4 hours)

### Weekly Update #5

* Weekly Standup (1 hour)
* Web Application Outline Implementation (20 hours)
* Database Implementation (2 hours)

### Weekly Update #6

* Weekly Standup (1 hour)
* Web Application Outline Implementation (5 hours)
* Adding Research Implementation (5 hours)
* Testing (3 hours)
* UI Improvement (4 hours)

### Weekly Update #7

* Weekly Standup (1 hour)
* Milestone #2 Presentation Delivered (2 hours)
* Finalize Development Environment (5 hours)
* AWS Environment Standup (3 hours)
* Start Production Migration (3 hours)

### Weekly Update #8

* Weekly Standup (1 hour)
* Testing Production Migration (5 hours)
* User Input from Classmates (2 hours)
* Changes to System Based on Input (5 hours)

### Weekly Update #9

* Weekly Standup (1 hour)
* Final Testing and Improvements (5 hours)
* Review and Prepare all Deliverables (7 hours)
* Final Presentation Prepared (7 hours)

# Project Deliverables

Documentation

* System Vision Document
* Stake Holder Identification
* Milestone Presentations
* Final Presentation
* Application Story Boards
* Standup Logbook
* Project Time Sheet
* System Diagrams
* Database Entity Relationship Diagrams (ERDs)

Technical

* Zip archive of all code, files, and scripts used in production.
* Link to URL for production web application.
* Access and link provided to development GIT repository.

# Conclusion

CMMC Fledge fulfills a gap that exists within the market. It combines free and convenient solutions for the CMMC process. By working through the four (4) phases, this project can be seen to its completion. The Research phase will allow The CMMC Fledge System to give the best possible information to its customers. The Writing phase should articulate information in an easy to understand, but informative matter. Implementation shall see that the customer can gain knowledge tailored to their situation. Finally, testing will make sure all these pieces come together.

This project should take approximately one hundred and fifty-five (145) person-hours to complete. Should delays occur, the project would be greatly affected. Time is the largest constraint within this project and should be taken note of. To mitigate this issue a project time sheet shall be created. There, hours will be logged to verify proper scheduling of the CMMC Fledge System implementation.