

## INTRODUCTION

### 1.1 Project Overview

This project entails designing and developing a bot to facilitate quick and easy administration and other miscellaneous functionality for the free online social platform Discord by leveraging their public API. The purpose of the project is to simplify administrative duties to ease the strain put on community moderators. The project will be hosted on GitHub. The project's repository is currently private and will be switched to public when it is completed.

### 1.2 Project Deliverables

\*\*See Gantt Chart for more detailed information

- 1) Topic Proposal
- 2) Gantt Chart Schedule
- 3) Design Review Meeting
- 4) Tool Selection Review Meeting
- 5) Milestone Review
- 6) System Test Plan
- 7) Final Project Presentation

### 1.3 Evolution of SPMP

N/A

### 1.4 Reference Materials

<https://cs.uwaterloo.ca/~apidduck/se362/Assignments/A2/spmp.pdf>  
<https://existek.com/blog/sdlc-models/>  
<https://www.softwaretestinghelp.com/software-development-life-cycle-sdlc/>

### 1.5 Definitions and Acronyms

Discord: A popular free proprietary VoIP application and digital distribution platform originally designed for gaming communities, which has since spread to be adopted by many different groups.

Bot: A non-human account used to automatically perform certain functions.

API: Applications Programming Interface

Community Moderator: An individual that has certain permissions to enforce the rules of a particular server by deleting messages, muting/kicking/banning members, etc.

Server: A community space that is able to be created by any Discord member for free.

## PROJECT ORGANIZATION

### 2.1 Process Model

The process model used for this project will be the waterfall model; this model has several phases where each phase depends on the deliverables of the previous one. The phases follow the following order: Requirements Analysis, Design, Implementation, Verification/Testing, and Maintenance. This model was chosen for its relative simplicity due to the rather linear nature of this project.

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Deliverables

Design

Code

Testing

Maintenance

### 2.2 Organizational Structure

N/A

### 2.3 Organizational Interfaces

N/A

### 2.4 Project Responsibilities

Christan Sauls – the sole project developer – will be in charge of all project responsibilities.

## MANAGERIAL PROCESS

### 3.1 Management Objectives and Priorities

Project Dimension	Fixed	Constrained	Flexible
Cost		X	
Schedule	X		
Scope/Functionality			X

### 3.2 Assumptions, Dependencies, and Constraints

Assumptions:

1. Discord's public API will not significantly change during this project's development.

Dependencies:

1. The project will be dependent on the Discord public API

Constraints:

1. No funding is being received as this project is providing a free tool to be used by Discord community moderators.
2. The project needs to be completed within a few months' time. The project will be due in the month of May.

### 3.3 Risk Management

Risk 1: Although highly unlikely, Discord may discontinue being a popular platform.

Risk 2: Since our bot operates on top of Discord, any downtime of their service equally affects the downtime of our bot.

Risk 3: Our bot must properly handle all administrative requests as to not accidentally cause damage to the server.

### 3.4 Monitoring and Controlling Mechanisms

Any bugs or issues with the bot should be reported to the bot's GitHub repository.

### 3.5 Staffing Approach

N/A

## TECHNICAL PROCESS

### **4.1 Methods, Tools, and Techniques**

The waterfall model shall be used for this software project. Tools to be used include Visual Studio Code, GitHub, JavaScript + TypeScript, and the Discord.js API wrapper.

### **4.2 Software Documentation**

Documentation will be incrementally provided within the code itself; external code documentation is not necessary for the purposes of this project. The functions of the bot will be documented with the intent of displaying available commands to the end user.

### **4.4 Project Support Functions**

Quality assurance will be provided by allowing users to report issues to the project's GitHub repository.

## Description of Work Packages

### **5.1 Work Breakdown Structure**

