Software Project Management Plan

Pokémon League Manager Discord Bot

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Part 1 – Introduction

1.1 Project Overview:

- This project is intended to be a Discord bot that streamlines the process of managing a Discord server for a Pokémon League. The bot will allow the moderators of the server to easily set up weekly random matches, allow players to register and edit their information and statistics, as well as update leaderboards in real time based on players' wins and losses.
- Few resources will be required for the initial state of the bot. All that will be required is a hosting service so that the bot can be online 24/7.

1.2 Project Deliverables:

- The deliverables to the customer will be the bot in its completed form, documentation on how to use the bot, and project design documentation for future development teams' use.
- Included is a SQLite3 database that will store all of the player data which will be organized and maintained by the admins of the server through the associated commands.

1.3 SPMP Evolution:

- Anticipated Changes:
    - This document will be updated if more features are added to the bot to share more information with possible future developers.
- Unanticipated Changes:
    - The client will be notified of possible delays in deliverable submission dates and the document will be updated to reflect these changes.

1.4 Reference Materials:

- PowerPoints provided by Professor Broadwater
- Documentation for the Discordjs package utilized by the project.
- Documentation for Vultr hosting
- Organization of the Discord server utilizing the finished bot.

1.5 Definitions and Acronyms:

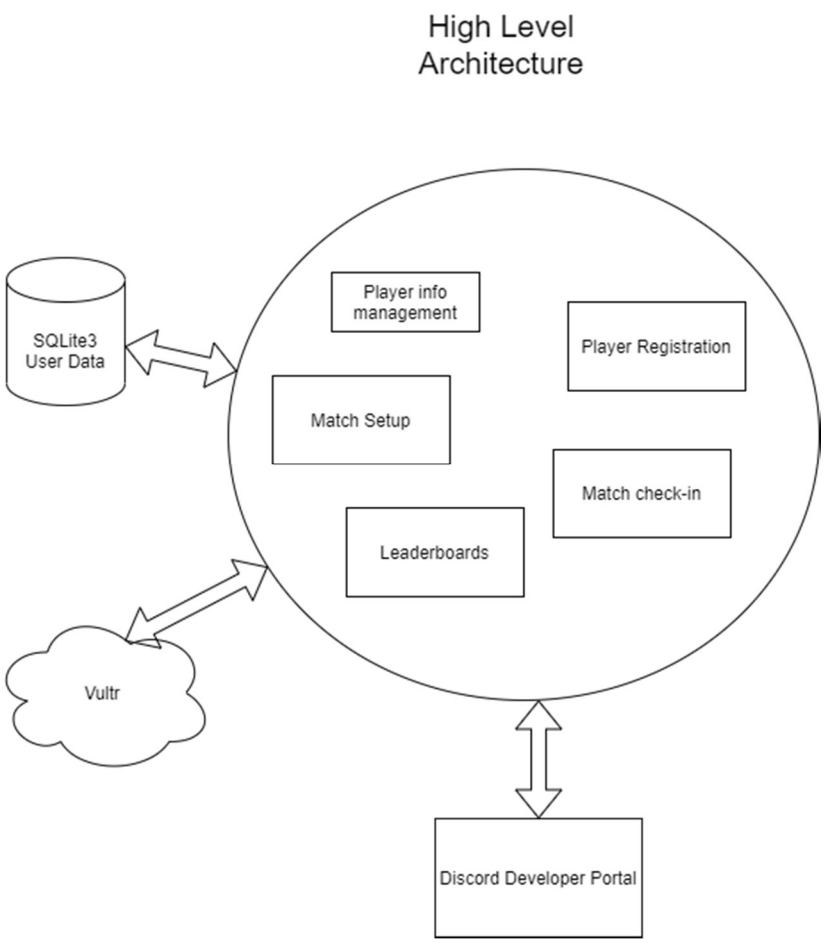
- HLA – High Level Architecture
- SPMP – Software Project Management Plan
- WBS – Work Breakdown Structure

- Discord Bot – An automated process activated by adding the bot as a member of a Discord server that allows users to access extra features not provided by the application's initial install.

Part 2 – Project Organization

2.1 Process Model:

- The project will make use of the agile development model. As I am the sole developer for the project, the only other party affected is the client. I will be prepared to deal with any unexpected circumstances by making sure to keep a constant dialogue with the client.
- The projects major milestones will be:
    - Completing the implementation of player info functionality (Already completed)
    - Completing the implementation of the match scheduling and check-in functionality (early April 2021)
    - Completing the implementation of the leaderboard functionality (mid to late April 2021)
    - Delivering the completed product as well as presenting it to the clients (early May 2021)
- The HLA visualization has been provided below:



2.2 Organization Structure:

- Since I am the sole developer of the bot, there isn't an organization structure.
- There will be a constant line of communication between the client and myself to ensure the projects' functionality meets the client's standards. There will also be a constant line of communication with Professor Broadwater, as she is also a client in for this project, other than the Discord server's moderators.

Part 3 – Managerial Process

3.1 Project Constraints:

- Time: There is a strict due date for the project in order to obtain a grade for it.
- Skill: As I am new to developing bots, there will be extra time needed for me to become accustomed to the language regarding it.
- Schedule: As I have many other responsibilities, it may be difficult to set aside work time on this project with other responsibilities.

3.2 Risk Management

- A possible risk could be that the subscription for the hosting service could fail to be payed, leading to the bot going down and therefore unavailable for use.

Part 4 – Technical Process

4.1 Methods, Tools, and Techniques

- Operating System: Windows 10
- IDE: Microsoft Visual Studio Code
- Programming Language: JavaScript
- Pre-built Library: Discord.js, Sequelize
- Runtime: Node.js
- Data Storage: SQLite3

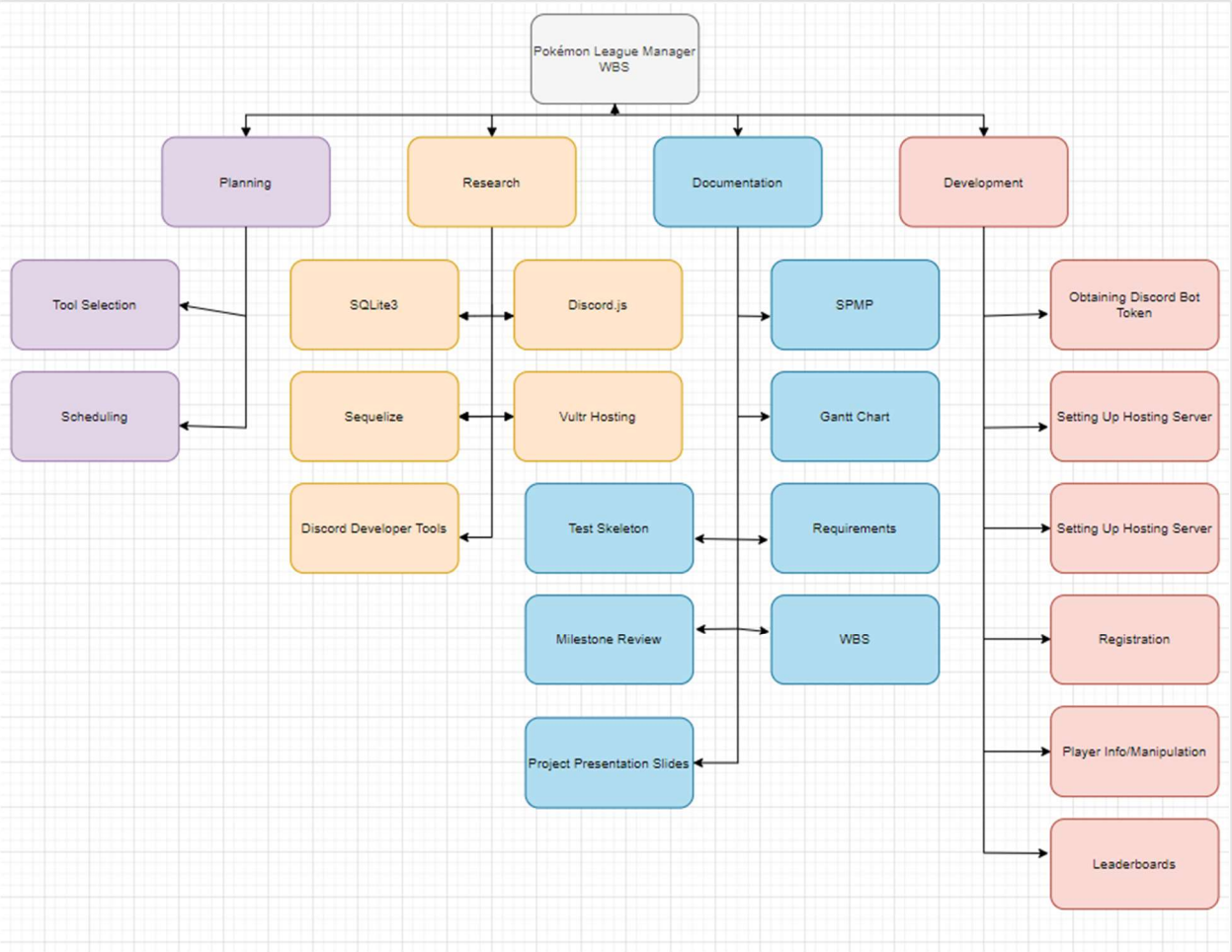
4.2 Software Documentation

- SPMP
- HLA
- Use Cases
- Interface Diagram
- Project Requirements
- Object Identification
- Case Diagrams
- Sequence Diagram
- Project Skeleton
- Test Cases

4.3 Project Support Functions

- Use Discord for communication with clients
- Use GitHub for project documentation, distribution, and tracking progress.

Part 5 – WBS


Pokémon League Manager WBS
Planning
Research
Documentation
Development
Tool Selection
Scheduling
SQLite3
Sequelize
Discord Developer Tools
Discord.js
Vultr Hosting
Test Skeleton
Milestone Review
Project Presentation Slides
SPMP
Gantt Chart
Requirements
WBS
Obtaining Discord Bot Token
Setting Up Hosting Server
Setting Up Hosting Server
Registration
Player Info/Manipulation
Leaderboards