

Software Project Management Plan

# Magic: The Gathering™ - Unofficial Collector’s Compendium



Version: 1.0.0

Written: 04/25/2023

[GitHub Repository](https://github.com/CSmith1998/MagicTheGathering-UnofficialCollectorsCompendium)

Pittsburgh Technical College

REVISIONS

Within this document, being the first in its series, no revisions to previous documents or plans are present. Instead, this version (v1.0.0) of the Software Project Management Plan (SPMP) for the project of the working title “Magic: The Gathering™ - Unofficial Collector’s Compendium” shall set forth the first iteration of this documentation to act as a basis for any future changes or revisions.

# Revision Chart

|  |  |  |  |
| --- | --- | --- | --- |
| Version | Primary Author(s) | Description of Version | Date Completed |
| Draft | Caine Smith | Initial draft. Created for distribution and comment review. | 04/25/2023 |

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INTRODUCTION

# Project Overview

The purpose of this project is to design, test, and ultimately deliver a finished product within the span of nine (9) weeks. The product, entitled “Magic: The Gathering™ - Unofficial Collector’s Compendium,” seeks to provide a resource for collectors of the popular trading card game “Magic: The Gathering™” to keep track of, and catalogue their collection.

During the lifecycle of this project, collaborators will maintain formal Institute of Electrical and Electronics Engineers (IEEE) documentation as well as sprint plans and burndown charts and will submit these documents on request to ensure that progress towards relevant milestones is being made. These milestones include Database Finalization, User Registration Interface Completion, Two-Factor Authentication Implementation, Custom Web API Establishment, CRUD Functionality Integration, 3rd Party API Connection, Search Functionality Resolution, and Administrative Functions Realization. During these milestones, collaborators are anticipated to additionally work on fleshing out the Graphical User Interface (GUI) of the product, ensuring a consistent and visually appealing format is achieved and maintained throughout.

# Project Deliverables

| Deliverable | Delivery Date | Delivery Recipient | Delivery Method |
| --- | --- | --- | --- |
| Initial Project Pitch | 04/27/2023 23:59:00 | Cottrell, Lee | Brightspace (D2L) |
| Software Project Management Plan | 04/27/2023 23:59:00 | Cottrell, Lee | Brightspace (D2L) |
| Software Requirements Specifications | 04/27/2023 23:59:00 | Cottrell, Lee | Brightspace (D2L) |
| Software Design Description | 04/27/2023 23:59:00 | Cottrell, Lee | Brightspace (D2L) |
| Software Test Documentation | 04/27/2023 23:59:00 | Cottrell, Lee | Brightspace (D2L) |
| GitHub Repository Establishment | 04/27/2023 23:59:00 | Cottrell, Lee | Brightspace (D2L) |
| Project Checkpoint (Demonstration) | 05/04/2023 20:00:00 | Cottrell, Lee | Brightspace (D2L) |
| Project Checkpoint (Demonstration) | 05/18/2023 20:00:00 | Cottrell, Lee | Brightspace (D2L) |
| Software Project Management Plan | 05/26/2023 23:59:00 | Cottrell, Lee | Brightspace (D2L) |
| Software Requirements Specifications | 05/26/2023 23:59:00 | Cottrell, Lee | Brightspace (D2L) |
| Software Design Description | 05/26/2023 23:59:00 | Cottrell, Lee | Brightspace (D2L) |
| Software Test Documentation | 05/26/2023 23:59:00 | Cottrell, Lee | Brightspace (D2L) |
| Sprint Report | 05/26/2023 23:59:00 | Cottrell, Lee | Brightspace (D2L) |
| Burndown Chart | 05/26/2023 23:59:00 | Cottrell, Lee | Brightspace (D2L) |
| Project Checkpoint (Demonstration) | 06/01/2023 20:00:00 | Cottrell, Lee | Brightspace (D2L) |
| Project Checkpoint (Demonstration) | 06/15/2023 20:00:00 | Cottrell, Lee | Brightspace (D2L) |
| Software Project Management Plan | 06/22/2023 23:59:00 | Cottrell, Lee | Brightspace (D2L) |
| Software Requirements Specifications | 06/22/2023 23:59:00 | Cottrell, Lee | Brightspace (D2L) |
| Software Design Description | 06/22/2023 23:59:00 | Cottrell, Lee | Brightspace (D2L) |
| Software Test Documentation | 06/22/2023 23:59:00 | Cottrell, Lee | Brightspace (D2L) |
| Sprint Report | 06/22/2023 23:59:00 | Cottrell, Lee | Brightspace (D2L) |
| Burndown Chart | 06/22/2023 23:59:00 | Cottrell, Lee | Brightspace (D2L) |
| Finished Product | 06/29/2023 20:00:00 | Cottrell, Lee | Brightspace (D2L) |

# Evolution of the Software Project Management Plan

|  |  |  |  |
| --- | --- | --- | --- |
| Version | Primary Author(s) | Description of Version | Date Completed |
| Draft | Caine Smith | Initial draft. Created for distribution and comment review. | 04/25/2023 |
| Preliminary | Caine Smith | Second draft. Integrating initial reviews and comments, distributed for final review | 04/28/2023 |
| Final | Caine Smith | First Complete draft, placed under change control. | 05/05/2023 |
| Revision 1 | Caine Smith | Revised draft. Revised according to the change control process. Placed under change control. | 05/26/2023 |
| Final Revision | Caine Smith | Final revised draft. Revised according to the change control process. Placed under change control. | 06/22/2023 |

# Reference Materials

The following document is available for viewing in the attached folder and, additionally, in the linked GitHub repository in the event that the attachment to this document fails.



# Definitions and Acronyms

* API – Application Programming Interface
* CRUD – Create, Read, Update, Delete
* D2L – Desire2Learn
* GUI – Graphical User Interface
* IEEE – Institute of Electrical and Electronics Engineers
* LMS – Learning Management System
* MtG-UCC – Magic: The Gathering™ - Unofficial Collector’s Compendium
* SDD – Software Design Description
* SPMP – Software Project Management Plan
* SRS – Software Requirements Specification
* STD – Software Test Documentation
* TBD – To Be Determined

PROJECT ORGANIZATION

# Process Model

This project, being under tight time and budget constraints, shall be accomplished using an agile lifecycle model to promote speed and accuracy while reducing the growth of scope.

# Project Responsibilities

Being undertaken as a solo project, all responsibilities fall under the manager, Caine Smith. These responsibilities include, but is not limited to, creation and upkeep of documentation, UI / UX design, frontend and backend coding, etc.

# Tools and Techniques

This project will be developed using computing systems operating on Microsoft Windows. The delivered product will be a web application coded utilizing ASP .NET MVC, including Cascading Style Sheets and possible JavaScript code. Additionally, a web service will be developed utilizing Spring Boot and Java which will interface with an Azure Database utilizing Structured Query Language. Finally, testing shall be performed with any combination of JUnit, XUnit, and Selenium to ensure that the project functions as intended.

PROJECT MANAGEMENT PLAN

# Tasks

## Task – Database Deployment

### Description

Completion of this task indicates that the database that the project will utilize to handle critical data and functionality has been successfully established and made available for coders to utilize.

### Deliverables and Milestones

The deliverables for this task include one or more connection strings, as well as a(n) Entity Relationship Diagram for the database so that coders can easily reference the database’s layout and contents.

Milestones include:

* Initial Design Mapped and Approved
* Tables and Relationships Established
* Triggers and Functions Finalized
* Final Check and Approval

### Resources Needed

The only required resources for this task is an active Azure account and the capital necessary to maintain said account.

### Dependencies and Constraints

Most of the critical functions of this project rely upon the establishment of a database. As such, this task is a Finish-to-Start dependency and should be the very first item to be completed.

## Task – Custom Web Service Initialized

### Description

Completion of this task indicates that the custom web service that the project will utilize to handle CRUD operation and other standard functions has been established and made readily available.

### Deliverables and Milestones

Deliverables for this task include, but are not limited to, a working web service application, and documentation of available methods, functions and handlers.

Milestones include:

* Get Handler(s) Completed
* Post Handler(s) Completed
* Put Handler(s) Completed
* Delete Handler(s) Completed
* Additional Method(s) / Function(s) Completed
* Final Testing Completed

### Resources Needed

No major/critical resources of note required.

### Dependencies and Constraints

This task depends upon the database to be deployed. As the primary method for interacting with the database, the web application that user’s will interface with relies upon this task for functionality. However, certain tasks can be completed on the web application before this task is complete. As such, this task is considered to be a Start-To-Start dependency.

### Risks and Contingencies

The major risk involved with this task related to Azure and the ability to get the service hosted online. Failure to accomplish this will result in a less desirable product. No contingency exists.

## Task – 3rd Party Software Integrated

### Description

Completion of this task indicates that the 3rd party API(s) have been selected, their role(s) finalized, and a connection established between the API(s) and the rest of the code.

### Deliverables and Milestones

The only deliverable of note for this task is documentation for any special methods, functions, or handlers that are created for interfacing with the 3rd party API(s).

Milestones include:

* API selection(s) finalized
* API connection(s) established
* Documentation provided
* Testing of connection(s) completed

### Resources Needed

The only resource(s) required for this task are an internet connection and the 3rd party software.

### Dependencies and Constraints

This task relies on the existence of the custom web api and database for full functionality. As the source of some critical data, this task is a requirement for full functionality of the web application, although some work may be accomplished on the web application task without this task being complete. As such, this task is considered to be a Start-To-Start dependency.

## Task – Website Online

### Description

Completion of this task indicates that the user’s interface, the website application, is successfully completed and hosted for ease-of-access.

### Deliverables and Milestones

The sole deliverable for this task is the product, a functional, if not fully completed, website. This is, arguably, the most important task as this is the portion of the product that users will see and interact with.

Milestones include:

* User Login and Registration complete w/ email verification & 2 factor auth
* Search functionality linked to appropriate API(s)
* Users’ collections display accurately
* CRUD functionality works reliably
* Administrative Tools integrated
* UI / UX design is established and consistent

### Resources Needed

An account with a hosting service, preferably Azure, an internet connection, 3rd party API(s), custom API, an account with an email service such as SendGrid, and Database access.

### Dependencies and Constraints

This task relies on the completion of all previous tasks in this document to be completed successfully. However, due to the nature of a website, the task may be begun before the other tasks have been started. Due to this, and the requirement for this task to be completed before the final task can begin, this task is designated as a Finish-To-Start task.

### Risks and Contingencies

The major risk involved with this task related to Azure and the ability to get the website hosted online. Failure to accomplish this will result in a less desirable product. No contingency exists

## Task – Project Finalization

### Description

Completion of this task indicates that all tasks have been completed and final tests, checks, edits, and changes have been completed.

### Deliverables and Milestones

The sole deliverable for this task is the final and complete product in its finished state.

Milestones include:

* Webservice testing concluded with all tests ending in success
* Website testing concluded with all tests ending in success
* UI / UX for website finalized
* Webservice and Website successfully hosted online
* Any final feature additions completed and successfully pass tests

### Resources Needed

Completed products from previous tasks.

### Dependencies and Constraints

As this task is the final task and relies upon all previous tasks to be completed, this task is designated as a Finish-to-Finish task.

### Risks and Contingencies

The sole risk is whether the project can be successfully hosted online. No contingency.

## Assignments

All tasks are assigned to Caine Smith, being the only person participating in the project.

## Timetable

The following is a very rough timeline for the completion of the aforementioned tasks.

|  |  |  |  |
| --- | --- | --- | --- |
| Task Name | Estimated Time | Start Date | End Date |
| Database Deployment | 1 Week | 04/28/2023 | 05/05/2023 |
| Custom Web Service Initialized | 2 Weeks | 05/06/2023 | 05/20/2023 |
| 3rd Party Software Integrated | 1 Week | 05/21/2023 | 05/28/2023 |
| Website Online | 3 Weeks | 05/29/2023 | 06/19/2023 |
| Project Finalization | 1 Week, 1.5 Days | 05/20/2023 | 06/29/2023 |