

Media Manager

Project Team

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Table of Contents

1. Executive Summary	3
2. Background	5
3. Project Team.....	5
4. Project Goal	5
5. Project Objectives.....	5
6. Problem Statement	6
7. Major Tasks and Milestones	6
8. Specific Project Risks	8
9. Methodology	10
10. Included in Scope	11
11. Excluded from Scope.....	11
12. Deliverables	12
References.....	13

1. Executive Summary

The project's aim is to provide a quick and efficient alternative to the standard file management system found within windows. The project's purpose arose when the development team leader came to the realization that the windows file management system was inadequate to handle large scale organization of media files. Alongside this, the project's concept was realized when the team leader was purposed with the task of developing an idea for an application in mid-2021. Ensuing this, the development team leader has strived to develop an environment to easily access and manage media files within windows.

Opportunely, in mid-2022 the development team leader was given sixteen weeks to complete the project. Unfortunately, however, as the project's development persisted, the user requirements became more transparent, and the application grew-in-size to an unattainable level to be reached in the time given for the project.

The team leader would like to continue the project. In addition to this, the team leader would like to change the status quo of windows media libraries being a nuisance by introducing an environment to easily access and manage media files.

The project team will be comprised of a singular team member named Codie Shannon. The single man development team will develop the quick and efficient alternative management environment utilizing the WPF framework. The project team believes they would be the ideal candidate to create this project as they have the set vision of the project's endpoint, alongside the knowledge to carry out development of the project.

The team leader has identified four key objectives for the project's success. The first objective to reach within the project's development is to fix and improve upon features pre-existent in the Media Manager application environment by week 4 of the semester. Following this, the development team will create a graphical user interface upon the pre-existing Media Manager application for the TV Show, Music, and Game Emulator libraries by week 8 of the semester.

Succeeding this, the development team must add mechanisms to effortlessly access and view relevant data pertaining to the TV Shows, Music and Game Emulators by week 11 of the semester. Ensuing this, the last and final objective is to add a process for users to efficiently manage TV Shows, Music, and Game Emulators by week 13 of the semester.

The development of this project will be carried out utilizing the agile scrum methodology to develop and test the project. The project's development will consist of three stages preparation and planning, development and testing, and project finalization.

The preparation and planning stage of development will begin by creating the project proposal and gaining approval to move ahead with development. Following this, the development team will create the product backlog within a sprint document containing all tasks that must be completed in order to accomplish the objectives outlined in the project objectives. This stage concludes with sprint planning, which the development team will conduct by organizing the tasks into sprints utilizing MS Planner.

The development and testing phase of development will subsequently begin by the development team repairing and improving upon the features present in the preexistent Media Manager application environment. Following this, the team will develop the graphical user interface for the TV Show, Music, and Game Emulator libraries. Succeeding this task, the development team will come together and conduct a midpoint review. In advance of the development team expanding the project via the addition of the functionality required for the TV Show, Music, and Game Emulators libraries to become operational. The last major task of this phase is testing which will be conducted by first creating a list of test cases to be conducted, before conducting the test cases and creating bug reports of any bugs located within the project.

The project finalization stage is consequently carried out beginning with a meeting to create a written report (sprint retrospective) which states what went wrong and what went right during the entire development

process. Ensuing this, the development team will prepare to show the project to the clients, before showcasing the project on the 9th of November 2023.

The team leader has identified the top ten potential risks that could endanger the project and has provided steps to avoid these risks when they arise. The identified risks include unrealistic scheduling, poor task management, and research roadblocks among others. Helpful avoidance steps have also been outlined such as honesty, completing features and tasks in a timely fashion, and creating small applications to mitigate risks of time expansion when unfamiliar technologies are utilized.

2. Background

The project's purpose arose when the development team leader came to the realization that the windows file management system was inadequate to handle large scale organization of media files. Alongside this, the project's concept was realized when the team leader was purposed with the task of developing an idea for an application in mid-2021. Ensuing this, the development team leader has strived to develop an environment to easily access and manage media files within windows.

Opportunely, in mid-2022 the development team leader was given sixteen weeks to complete the project. Unfortunately, however, as the project's development persisted, the user requirements became more transparent, and the application grew-in-size to an unattainable level to be reached in the time given for the project.

The team leader would like to continue the project. In addition to this, the team leader would like to change the status quo of windows media libraries being a nuisance by introducing an environment to easily access and manage media files.

3. Project Team

Team Members	Name	Email	Mobile
	Codie Shannon	30013375@student.toiohomai.ac.nz	0220218471

4. Project Goal

The project will aim to deliver an environment to access and manage files of movies, tv shows, videos, pictures, music, video games, and game emulators.

5. Project Objectives

Project Objective	Project Tasks
Identify and fix current problems with the Media Manager application by week 4 of the semester.	Identify current problems with the Media Manager application.
	Fix current problems with the Media Manager application.
Expand upon the graphical user interface for the media manager application environment to include tv shows, music, and video game emulators utilizing the WPF framework by week 8 of the semester.	Create graphical user interface utilizing WPF framework.
	Organize individual elements of the graphical user interface to be turned in to custom controls.
	Create Custom Controls
	Recreate graphical user interface within the WPF framework utilizing the custom controls.
Add processes for clients to easily access and view relevant data about tv shows, music, and game emulators within the media manager application environment by week 11 of the semester.	Create a compact application to test the functionality of importing tv shows, music, and game emulators, showing the media files in windows file explorer, gathering web-based data from IMDB, MetaCritic, IGDB, and saving data to a database.
	Integrate the tested functionality into the media manager application environment.
Expand upon mechanisms for clients to effortlessly manage media files within the media manager application environment by week 13 of the semester.	Create a small application to test the functionality of deleting, editing, and removing tv shows, music, and game emulators.
	Integrate the tested functionality into the media manager application environment.

6. Problem Statement

File Explorer within Windows 10 and 11 is presently in a state of disarray in the matter of managing mass media files as it provides nothing beyond the standard file management system. Media Manager aims to provide a quick and efficient alternative to the aforementioned system.

The Media Manager file management system will go beyond the scope of Windows File Explorer and provide users with quick access to media file details, alongside relying on web-based data to provide an informative experience about movies, tv shows, music, video games and game emulators.

The development team will be heavily reliant on prior knowledge to develop the Media Manager application. The prior knowledge and skills that will be utilized to develop the application include skills in developing applications with the WPF framework, creating custom controls in the WPF framework, and utilizing previously utilized libraries to accomplish the required features of the application.

7. Major Tasks and Milestones

In the preparation and planning phase of the project's development, the project proposal will first be created by the team leader and approved by the client. Following this, the development team will create the product backlog within a sprint document containing all tasks that must be completed in order to accomplish the objectives outlined in the project objectives. This phase concludes with sprint planning, which the development team will conduct by organizing the tasks into sprints utilizing MS Planner.

The second and largest stage of development is development and testing. In this stage the aforementioned sprints are completed to accomplish the project.

The development team begins this stage by first identifying any bugs or improvements that may be performed to the current Media Manager application environment, before proceeding to fix the problematic bugs, and perform the identified improvements.

The procedure to execute stage 2 - task 2 of the project is vastly different from stage 2 – task 1, as first the graphical user interface for the tv shows, music, and game emulator libraries must be developed by creating a base design. Proceeding this, custom controls will be created for the identified GUI elements in the base design, and later reconstruction will be performed utilizing the created custom controls identified in the base design for the graphical user interface.

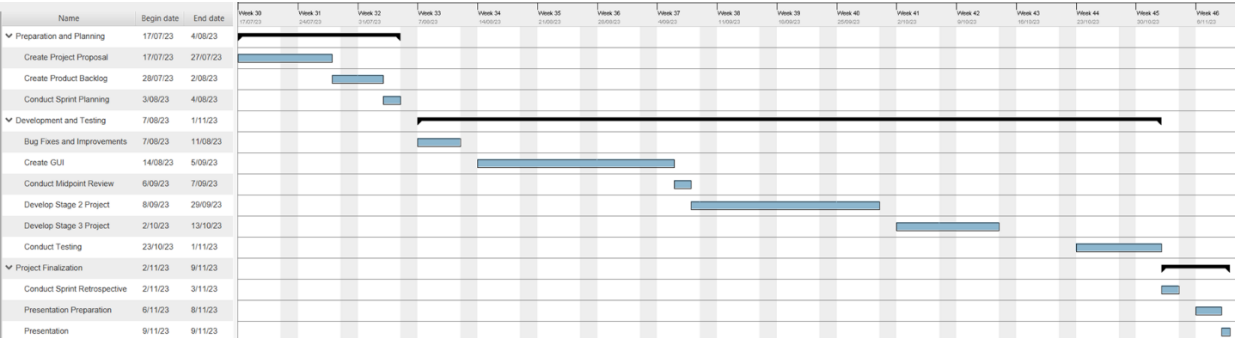
Succeeding this process, the midpoint review is conducted, which the development team conducts together to identify what has been delivered in measurable terms, give feedback about negative/positive experiences, discuss unanticipated new goals or unnecessary old goals for removal, and show appreciation for work that has been well conducted by team members. Following this, stage 2 – task 3 and stage 2 - task 4 of the project proposal are performed.

The course of action to perform stage 2 – task 3 and stage 2 – task 4 of the project proposal are quite similar as first functionality is tested in a compact application before being added to the main project. Stage 2 – task 3 of the project expands beyond the functionality to access media files and view relevant data with the addition of mechanisms to access and view relevant data regarding tv shows, music, and game emulators. Ensuing this stage 2 – task 4 of the project proposal develops the functionality of the libraries even further by adding mechanisms for management.

The last major task that is completed in this development stage is testing. The development team will begin testing by creating a list of test cases to be conducted, before conducting the test cases and creating bug reports of any bugs located within the project.

The third and final stage of development is project finalization. The development team will begin this stage by having a meeting and creating a written report (sprint retrospective) where they state what went wrong and what went right during the entire development process. Following this, the development team will prepare to showcase the project to the clients, before showcasing the project on the 9th of November 2023.

COMP.7100 Project: Project Proposal



8. Specific Project Risks

Issue	Probability	Impact	Schedule	Issue/Action
Inadequate Risk Management	Medium	High	Terminal	Inadequate risk management begins with the steps outlined in the risk assessment to avoid potential risks for the project and concludes with the genuine steps taken to avoid these risks. Due to this, to ensure adequate steps are taken to manage risks, the development team will first thoroughly think of the potential risks for the project and the steps taken to avoid the risks. Followed by, undertaking the steps outlined to avoid the potential risks when the risks arise.
Lack of Understanding of the Bigger Picture	Low	High	Terminal	The project plan may be unclear before development. This unclarity in affect, could cause unknown variables to arise such as extra unthought of features or methods. The unthought of features or methods could then cause the project time to expand by weeks or even months, if not be terminal to the project. Due to this, the team will ensure the project plan is fully thought out before going ahead with development of the project.
Unrealistic Scheduling	High	High	Months	The tasks required for the project to succeed may be more time consuming than originally planned. This time consumption could lead to the project's development time expanding by weeks or even months. Ergo, the development team will aim to be truthful with themselves about the time required to complete tasks.
Incorrect Resource Choice	Low	Medium	Days	The development team will be heavily reliant on previously utilized libraries to achieve the required features for the project. However, some new libraries are going to be utilized. When new libraries are utilized, there is always a potential risk of backfire if the new library cannot for full certain functions. Luckily, this can only cost days of development time, and does not require planning. If the problem does occur, a new library can always be found to resolve the issue of the missing function.
Research Roadblocks	Medium	High	Weeks	Research roadblocks are a common occurrence when developing with new technologies in software development, and unfortunately have no quick fix if they occur too late in the development cycle. Research roadblocks occur when you research how to perform a certain function with a new technology only to discover that online documentation is rather limited. The time consumption impact of this can be reduced by creating small applications before development of the project begins to ensure certain features can be accomplished with the selected technology.

Poor Task Management	Medium	High	Terminal	Poor task management occurs when team members expend their time fixated on a particular function or feature without moving on to the next function or feature that needs to be created. Evidently, this can expand the time frame for a project by weeks or months, if not be terminal if the team member gets project burnout. Due to this, team members will keep an eye on their work and strive to finish functions and features as quick as possible before moving on to the next function or feature that needs to be completed.
Project Creep	Low	High	Terminal	Project creep occurs when the features and functions required for a project grow uncontrollable during development. Obviously, this can get to a stage where the project scope is too large to complete in any reasonable fashion and can simply cause the project to fail. Due to this, the project scope will be clearly defined for the development team and the clients before development of the project begins to avoid any growth of the project during development.
Untamed Code	High	Medium	Days	Untamed code occurs when the development team thoughtlessly programs without thinking of the placement and/or scripts that will be needed to create a project. In turn this causes the development team to waste time organizing and cleaning up code which could otherwise be spent on developing the project. Due to this, the development team will take extra care before development begins to plan out the placement and/or scripts which will be required to create the full project.
Lack of Commitment	Low	High	Weeks	Lack of commitment occurs when a team member is uncommitted to the project. This can have a devastating affect on the project depending on the role of the individual. Due to this, team members will be required to spend x amount of time on the project each week until the end of the semester.
Application Stability	Medium	Medium	Weeks	Application stability causes issues when too many resources are being utilized by the project to run smoothly within the selected framework. This can be counteracted by optimizing the application throughout the software development lifecycle to run smoothly.

9. Methodology

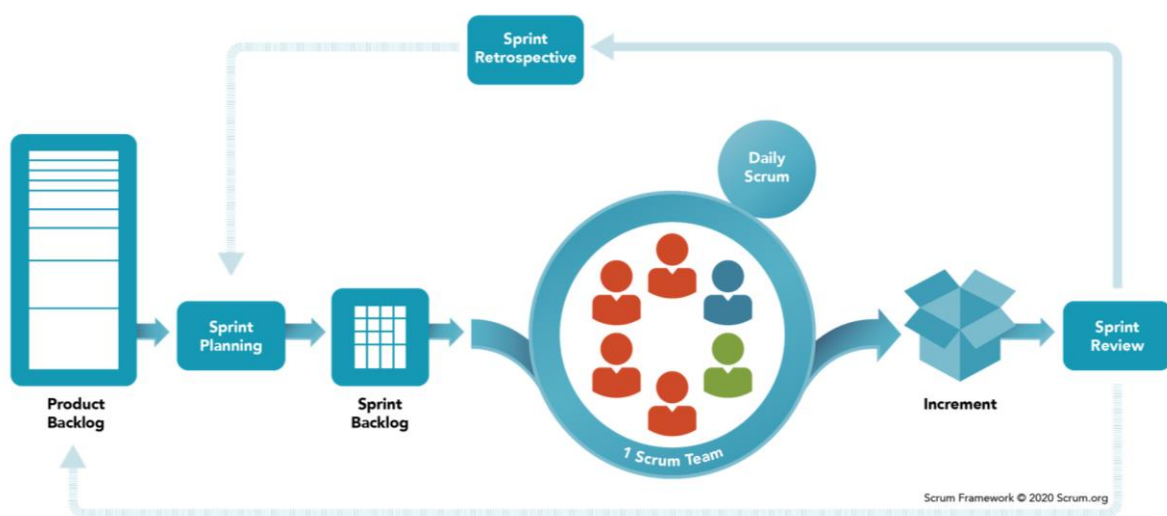
The software development lifecycle (SDLC) framework which will be utilized to build the clients media manager application environment will be agile scrum.

Agile scrum is a framework within the agile SDLC methodology family commonly utilized in small teams within software development to swiftly develop, deliver and maintain applications.

The agile scrum framework was selected to build the Media Manager application environment as it provides substantial flexibility and an effortlessly maintainable development experience. In addition to the size of the development team, it is the ideal choice for this particular project. Figure 1 is a diagram of how the SDLC framework operates in a working environment.

Figure 1

Agile Scrum Diagram



(Scrum.org, 2022)

Development of the media manager application environment will begin by creating a product backlog containing all tasks required for completion of the project. Following this, the team will organize the product backlog into individual lists (sprints) to be completed on a fortnightly basis. Once sprints have been completed, a review will take place where the team will come together and write a review stating what has/hasn't been completed and what will be moved into the next sprint. Once all sprints have been completed, a sprint retrospective will take place where a review of the entire process will be conducted by the development team.

10. Included in Scope

- Project Proposal
- Project – Stage 1: Repaired and Improved Media Manager
- Project – Stage 2: Graphical User Interface for TV Show, Music, and Game Emulator Libraries
- Project – Stage 3: Access and View Relevant Data About TV Shows, Music, and Game Emulators
- Project – Stage 4: Manage TV Shows, Music, and Game Emulators
- Sprint Documentation
- Sign-off Form

11. Excluded from Scope

- Build a REST API to Automatically Grab and Manage Data Pertaining to Movies, TV Shows, and Video Games from the IMDB, MetaCritic, and IGDB Sites (Downsize Local SQLite Database, Make REST API Store Individual User Information).
- Expand upon REST API to Automatically Grab and Manage Data Pertaining to Individual Game Emulators (Remove Need for SQLite Database).
- Redesign Media Manager to be More User Friendly
- Expand upon Media Manager Folder System to Allow End-Users to Set Individual Folder Icons
- Expand upon Media Manager Controls to Allow Other Input to be Utilized
- Make Graphical User Interface More Resolution Friendly
- Add Capabilities for Light/Dark Themes

12.Deliverables

Deliverables	Description
Project Proposal	The project proposal is a document which aims to address key questions encompassing a large project.
Project - Stage 1: Repaired and Improved Media Manager	Stage one of the project features bug fixes and improvements made to the pre-existing features within the current Media Manager application environment.
Project – Stage 2: Graphical User Interface for TV Shows, Music, and Game Emulators	Stage two of the project showcases the original Media Manager application environment with the addition of the graphical interface interaction between various pages and GUI elements for the TV Show, Music, and Game Emulator libraries. This stage of the project gives the clients an understanding of how the project will look once completed.
Project - Stage 3: Access and View Relevant Data About TV Shows, Music, and Game Emulators	Project stage three builds upon the previous stage of the project by adding limited functionality in the form of accessing media files and viewing relevant data surrounding the TV Show, Music, and Game Emulator libraries.
Project – Stage 4: Access, View Relevant Data, and Manage TV Shows, Music, and Game Emulators	The fourth and final project stage expands beyond stage three of the project via the addition of management features for the TV Show, Music, and Game Emulator libraries to finalize the project.
Sprint Documentation	The sprint documentation is a document which contains the product backlog, sprint retrospective, and all sprints and sprint reviews conducted during development of the product.
Sign-off Form	A sign-off form is a document which confirms all parties agree on the status of the completed project.

References

Scrum.org. (2022). *What is Scrum?* [Photograph].

<https://www.scrum.org/resources/what-is-scrum>