CSC 354-030

Team 3: The Kurial Project

Phase II Project Plan Revision



**DUE December 4th**

Date Submitted: December 4, 2020

By:

Jeff Perlmutter [IT] – Project Lead

Colton Kunz [IT] – Analyst

Anthony Guzman [IT] - Designer

Reed Ellis [IT] – SQA Tester

Tj Rosario-Rosa [CS] – Developer

|  |
| --- |
| Project Abstract |
| The idea decided upon by our group is to create an online 3D virtual space that is hosted on a website utilizing the Unity engine. This 3D virtual space could be used for a variety of things from showcasing your personal accomplishments and projects to a museum of your favorite memories. Our commercial application of this would be to showcase an artist’s portfolio. The beauty of this virtual space is the client is the overseer of it, meaning they can modify it to display whatever they want. This 3D virtual space would ideally be accessible on all platforms with a modern web browser. |
| NOTES: The above abstract is a revised abstract that was produced once we had realized our initial project idea had been implemented proficiently by an already existing website. |

# Table of Content

|  |  |
| --- | --- |
| 2.1 Overview of the Organization | 4 |
| 2.2 Current Situation and Problem Statement | 5 |
| 3.0 Statement of Purpose | 5 |
| 4.0 Project Objectives | 6 |
| 5.0 Project Requirements | 7 |
| 6.0 Project Specifications | 7 |
| 7.0 Critical Assumptions | 8 |
| 8.0 Project Constraints | 8 |
| 9.0 Project Acceptance Criteria | 9 |
| 10.0 Project Success Criteria | 9 |
| 11.0 Project Deliverables | 10 |
| Previous Project Plan | 11 |

|  |  |
| --- | --- |
| [2.1] Overview of the organization | |
| Performed by | Jeff |
| Reviewed by | Anthony |
| This organization is comprised of a class of seniors at Kutztown University. The class is then split into teams of five. The strategic goal of this organization is for each of the teams to design and implement a project of their own choosing, whether that be a pre-determined project or a unique idea.  The top management of the organization has allotted each of the teams with an 8-week period for the purposes of planning and designing their respective projects. Then, once the planning and designing phases are complete there will be a 14-week window allotted for implementation, debugging, and testing of their projects.  Once their project has been completed, each team will create a presentation to showcase their project to a panel. The panel will ask each team questions regarding the specifics of the project, field any potential concerns regarding the project, and then give their overall opinion of the project to the presenting team.  This specific team, The Kurial Project, is made up of Anthony Guzman, Colton Kunz, Jeff Perlmutter, Reed Ellis, and T.J. Rosario. The roles of each team member are as follows: Jeff at project lead, T.J. as the developer, Anthony is the designer, Reed will be performing SQA Testing, and Colton Kunz will be the team’s analyst. | |

|  |  |
| --- | --- |
| [2.2] Current Situation and Problem/Opportunity Statement | |
| Performed by | Jeff |
| Reviewed by | Anthony |
| In this current global pandemic, there exists a need for a platform that enables anyone to design, customize, and create their very own sharable 3D virtual space for free\*. Specifically, artists are finding less eyeballs on their art as more and more people choose to limit their exposure to the virus by quarantining at home. However, with a customizable 3D virtual space it is easier to share their works with as many as possible.  Unfortunate as it is, the reality of the matter is that the currently existing 3D virtual space creators do not provide their users with enough customization or simply would require their users pay a premium in order to access all their space’s features.  The Kurial Project’s goal is to fill this void with Kurations. We will provide artists with a 3D virtual space to display their art whether it is a 2D image or a 3D model. Our services will consist of semi-customizable rooms that can be adjusted by the user for free\*.  *\*Kurial will initially be free-to-use, marketability is subject to review upon completion* | |

|  |  |
| --- | --- |
| [3.0] Statement of Purpose | |
| Performed by | Anthony |
| Reviewed by | Jeff |
| The goal of The Kurial Project is to enable the current socially distanced world the ability to design, create, and share a plague-free 3D environment, all without paying exorbitant fees. This will be done by creating a web-based application, <https://www.kurial.space/>. Kurial will be a free\*, customizable, and easy-to-use 3D environment creator that is powered by Unity.    With Kurial anyone, even those without any coding experience, can design create and share a Kuration, their very own 3D environment. Kurations could theoretically be used for many different purposes, however our initial focus is to provide artists a customizable 3D environment used to share their artwork or other media with friends. There is an opportunity for a more developed product such as a stand-alone application which could allow for monetization either through fees or ads, rather than being one hosted for free through a website.  *\*Kurial will initially be free-to-use, marketability is subject to review upon completion* | |

|  |  |
| --- | --- |
| [4.0] Project Objectives | |
| Performed by | Jeff |
| Reviewed by | T.J. |
| The following Objectives are listed in order of importance, or in other words, these objectives are set up to facilitate a risk-driven iterative development process model. These objectives can be grouped into sets or by themselves as goals for specific sprint iterations. It is possible that not all of these may be achieved by the end of the project, so the Project Objectives have been split into two categories.  Main Objectives for essential objectives.  Stretch Objectives for objectives to do only if all the Main objectives have been completed. | |
| Main objectives include:   1. 100% of users can create a Kuration 2. Kurations can support at least 2 different types of media 3. A minimum of 2 base Kurations are available to choose from 4. Users can access their Kurations within 5 clicks upon entering site 5. Users can access shared Kurations within 5 clicks upon entering site 6. support for all (100%) of popular modern browsers on a computer    1. Safari, Google Chrome, Firefox, Brave, Microsoft Edge | |
| Stretch objectives include:   1. support for all (100%) of popular modern browsers on a mobile device    1. Safari, Google Chrome, Firefox, Brave, Microsoft Edge | |

|  |  |
| --- | --- |
| [5.0] Project Requirements | |
| Performed by | Anthony |
| Reviewed by | Colton |
| Kurial requires:   1. Domain name registration 2. Web hosting services 3. Web hosting software 4. Development software   We will use:   1. Namecheap – domain name registration and web hosting service 2. cPanel – web hosting software 3. Visual Studio – Development software 4. Unity game engine – Development software | |

|  |  |
| --- | --- |
| [6.0] Project Specifications | |
| Performed by | Colton |
| Reviewed by | Jeff |
| In Scope Specifications:   1. Provide a 3D “space”, a Kuration, to showcase media 2. Kuration is accessible through a modern web browser 3. Kuration is viewable without the need of an account or (separate) download 4. Provide a method for users to submit media to be showcased in their Kuration 5. Provide a method for users to create and access their accounts 6. Provide a method for users to create and modify their Kuration | |
| Out of Scope Specifications:   1. User cannot fully customize their Kuration (customization is limited to art and color, not shape or design of room) 2. There will not be any multiplayer/multiuser functionality to Kurial | |

|  |  |
| --- | --- |
| [7.0] Critical Assumptions | |
| Performed by | Colton |
| Reviewed by | Reed |
| Assumptions:   1. All team members have access to necessary software and services listed in requirements 2. Team members have access to hardware capable of handling development 3. Users have modern hardware able to access Kurial 4. There exists a need/market for a product like Kurial 5. COVID-19 restrictions are not temporary | |

|  |  |
| --- | --- |
| [8.0] Project Constraints | |
| Performed by | TJ |
| Reviewed by | Colton |
| Constraints for the creation of Kurial:   1. This is the team’s first project together 2. Communication and meetings are limited to digital (due to covid) 3. Only one team member is familiar with the Unity engine 4. Time to work on the project is limited 5. User experience is impacted by web hosting service 6. Team is self-funded 7. Scale of the project is limited to the power of the team’s hardware | |

|  |  |
| --- | --- |
| [9.0] Acceptance Criteria: | |
| Performed by | TJ |
| Reviewed by | Colton |
| The project is accepted if the user can:   1. access the web application through a modern browser 2. create an account 3. create and modify their Kuration 4. upload artwork 5. access shared Kurations 6. report Kurations   The project must also allow the administrator to:   1. modify and/or delete anything related to users 2. remove Kurations 3. access a list of Kurations | |

|  |  |
| --- | --- |
| [10.0] Success Criteria: | |
| Performed by | Colton |
| Reviewed by | TJ |
| The following will designate if the project was successful:   1. Users can access the web application 2. Users can login or create an account 3. Users can create and enter their Kuration 4. Project was completed on time 5. Project scope was fulfilled | |

|  |  |
| --- | --- |
| [11.0] Project Deliverables: | |
| Performed by | Anthony |
| Reviewed by | TJ |
| Kurial will deliver the following items to the client upon project completion:   1. A browser run 3D environment to showcase media/artwork 2. User documentation on how to use Kurial 3. Design documentation such as web design documentation | |

|  |
| --- |
| Original project plan included below for reference. |

|  |  |
| --- | --- |
| [2.1] Overview of the organization | |
| Performed by | Jeff |
| Reviewed by | Anthony |
| This organization is comprised of a class of seniors at Kutztown University. The class is then split into teams of five. The strategic goal of this organization is for each of the teams to design and implement a project of their own choosing, whether that be a pre-determined project or a unique idea.  The top management of the organization has allotted each of the teams with an 8-week period for the purposes of planning and designing their respective projects. Then, once the planning and designing phases are complete there will be a 14-week window allotted for implementation, debugging, and testing of their projects.  Once their project has been completed, each team will create a presentation to showcase their project to a panel. The panel will ask each team questions regarding the specifics of the project, field any potential concerns regarding the project, and then give their overall opinion of the project to the presenting team.  This specific team, The Kurial Project, is made up of Anthony Guzman, Colton Kunz, Jeff Perlmutter, Reed Ellis, and T.J. Rosario. The roles of each team member are as follows: Jeff at project lead, T.J. as the developer, Anthony is the designer, Reed will be performing SQA Testing, and Colton Kunz will be the team’s analyst.  *\*Kurial will initially be free-to-use, marketability is subject to review upon completion* | |

|  |  |
| --- | --- |
| [2.2] Current Situation and Problem/Opportunity Statement | |
| Performed by | Jeff |
| Reviewed by | Anthony |
| In this current global pandemic, there exists a need for a platform that enables anyone to design, customize, and create their very own sharable 3D virtual space for free\*. Specifically, artists are finding less eyeballs on their art as more and more people choose to limit their exposure to the virus by quarantining at home. However, with a customizable 3D virtual space it is easier to share their works with as many as possible.  Unfortunate as it is, the reality of the matter is that the currently existing 3D virtual space creators do not provide their users with enough customization or simply would require their users pay a premium in order to access all their space’s features.  *\*Kurial will initially be free-to-use, marketability is subject to review upon completion* | |

|  |  |
| --- | --- |
| [3.0] Statement of Purpose | |
| Performed by | Anthony |
| Reviewed by | Jeff |
| The goal of The Kurial Project is to enable the current socially distanced world the ability to design, create, and share a plague-free 3D environment, all without paying exorbitant fees. This will be done by creating a web-based application, <https://www.kurial.space/>. Kurial will be a free\*, customizable, and easy-to-use 3D environment creator that is powered by Unity.    With Kurial anyone, even those without any coding experience, can design create and share a Kuration, their very own 3D environment. Kurations could theoretically be used for many different purposes, however our initial focus is to provide artists a customizable 3D environment used to share their artwork or other media with friends. There is an opportunity for a more developed product such as a stand-alone application which could allow for monetization either through fees or ads, rather than being one hosted for free through a website.  *\*Kurial will initially be free-to-use, marketability is subject to review upon completion* | |

|  |  |
| --- | --- |
| [4.0] Project Objectives | |
| Performed by | Jeff |
| Reviewed by | T.J. |
| The following Objectives are listed in order of importance, or in other words, these objectives are set up to facilitate a risk-driven iterative development process model. These objectives can be grouped into sets or by themselves as goals for specific sprint iterations. It is possible that not all of these may be achieved by the end of the project, so the Project Objectives have been split into two categories.  Main Objectives for essential objectives.  Stretch Objectives for objectives to do only if all the Main objectives have been completed. | |
| Main Objectives  Of primary importance is that we write a **landing page for the website** that allows users to register an account or to log into a previously existing account.  From there it’s critical that we program a **framework Kuration** that all the user created Kurations will be derived from.  After that is complete, we must devise a **method by which a config file can be used to modify the framework Kuration** in order to create a user’s designed Kuration.  Once that is complete, the next step is to create **an algorithm that creates unique keys** for each Kuration that can be used to access the Kuration from the website, and for database purposes.  Following that we will need to set up an **account management system** for the website that allows users to modify their username, password, and to upload an avatar image.  Finally, our last objective will be to implement **an e-mail system** that confirms creations of account, any modifications to the account, and allows users to share their Kurations via email. | |
| Stretch Objectives  Implement the Kurations in such a way that **users can enter a shared Kuration and interact** with each other.  Create a **persistent ‘Kuration’** that users can access through the entry of a Kuration Keyinto a field once they have logged into their account.  Create **'doorways' that interlink specific Kurations** provided both exist prior to the creation of the 'doorway'.  Create **'admin' powers** that enable the creator and/or admins of a Kuration to Teleport users to other users, Mute, Kick, Promote, Demote, ban or unban a specific user. | |

|  |  |
| --- | --- |
| [5.0] Project Requirements | |
| Performed by | Anthony |
| Reviewed by | Colton |
| Kurial will require domain name registration, web hosting services, web hosting software, and development software to be completed. These requirements can be met in the following ways.    Firstly, we will utilize Namecheap for the domain name registration and web hosting services. This was decided as from our base level searching, they are the most efficient provider in terms of getting the best deal on resources.    Next, we will be using primarily the Unity game engine and Visual Studio in order to develop the application. The Unity game engine will be the heart of the project, providing the core of the Kurations code.  Finally, in order to design and implement the webpage, we will use cPanel as the web hosting software. | |

|  |  |
| --- | --- |
| [6.0] Project Specifications | |
| Performed by | Colton |
| Reviewed by | Jeff |
| In Scope Specifications  Provide a 3D "space", or Kuration, to showcase media.  Allow access to the Kuration via a web browser.  Make the Kuration available for viewing without the need for an account or download.  Provide a method for the client to submit media to be showcased.  The website should include the following pages and functionality:  Home Page  Launch Kuration button  Kuration  Register page  Log-In page  User Page  Create Kuration final touches  From the home page, users can launch a Kuration by inputting a Kuration’s name in the form located at the center of the page and hitting the “Launch” button.  From the Kuration, users can move with W, A, S, D and turn by moving their cursor.  From the Kuration, users can exit by hitting ESC and selecting “Exit” from the menu.  From the home page, users access the Register page by clicking the “Register Account” button located at the top of the screen.  From the Register page, once account creation successful, redirect user to Log-In Page.  From the home page, users can access the Log-in page by clicking the “Log-in Account” button located the top right of the screen.  From the Log-In, once page users enter valid account name and password, redirect to User Page.  From user page, user inputs desired Kuration name, customizations and assets  Once complete user clicks the “Final Touches” button located at the bottom of the page.  Final Touches opens created Kuration to allow user to finalize location of their assets  From Final Touches, users can move with W, A, S, D and turn by moving their cursor.  From Final Touches, users can select their assets by using the 1-9 keys respectively  Once asset selected, user locks in location of asset with cursor  From Final Touches, users can exit by hitting ESC and selecting “Exit” from the menu | |
| Out of Scope Specifications  The user cannot fully customize their different creations in the Kuration.  Multiplayer functionality with multiple people in the same Kuration  Product is a Standalone application | |
| [7.0] Critical Assumptions | |
| Performed by | Colton |
| Reviewed by | Reed |
| First and foremost, we must assume that all team members will have access to the required software and services that are needed in order to perform their respective roles and responsibilities regarding the creation of Kurial. Specifically, team members must be assumed to have access to and knowledge regarding the Unity engine, HTML/CSS, PHP, and mySQL.  From there the next most important assumption to make would be that our users will have access to computers that are internet-enabled and are capable of running the Kurial. This is because the need to develop video setting options for textures and models would be out of scope in terms of schedule feasibility.  After that, due to there being no dedicated time or resources allocated by corporate for research regarding current marketplace needs. Typically, it would be the findings from research such as this that would catalyze a project such as Kuration. Instead however, we are assuming there is a need in the market for Kurial due to our own personal anecdata and communal agreement of the ever-growing need for technology that repairs the proverbial connections of our society that were severed through the emergence of COVID-19.  Finally, our main expected need for this project hinges on the assumption that COVID-19 is not going to be going away anytime soon, and that our project will be released prior to any miracle cure or solution being released or devised. | |

|  |  |
| --- | --- |
| [8.0] Project Constraints | |
| Performed by | TJ |
| Reviewed by | Colton |
| The following are constraints we face when creating Kurial, ones that must be overcome in order to succeed in creating Kurial. The most obvious constraint is that this will be the first project this team has ever developed together, and this issue is further compounded by the fact that. there is no safe way for us to meet in person to enable a smoother means of communication when it comes to the design aspect of the project. It is also a major constraint that there is only one team member with major knowledge on the Unity engine, and the timeframe of this semester this is shorter than desired for a project of this scale when we will need to devote some of our time to learning Unity.  When it comes to the web hosting provider, maximum allowed users at a time will be dependent on the server bandwidth and quality, and since there is no financial backing from corporate and is instead funded by the team, we didn’t splurge too hard on the resources purchased. Beyond the provider’s resources, current iterations of projects of this scale are limited by the power of the user’s machine as well. | |

|  |  |
| --- | --- |
| [9.0] Acceptance Criteria: | |
| Performed by | TJ |
| Reviewed by | Colton |
| The end-user will be able to: access <http://www.kurial.space/> through a modern browser or cellphone, create an account, create and modify a Kuration all in the same website, upload images, access other Kurations via a provided code, and the ability to report inappropriate Kurations to [report@kurial.space](mailto:report@kurial.space).  The administrator will be able to perform the following: modify and/or delete anything relating to users, remove Kurations, and see a list of Kurations. | |

|  |  |
| --- | --- |
| [10.0] Success Criteria: | |
| Performed by | Colton |
| Reviewed by | TJ |
| When it comes to success criteria, the following will designate if the project was successful or not: users can access the web application, login to or create an account, and the ability to create and enter their Kuration. On top of that, the project must be completed within the calculated timeframe, and have delivered all items within the agreed scope. | |

|  |  |
| --- | --- |
| [11.0] Project Deliverables: | |
| Performed by | Anthony |
| Reviewed by | TJ |
| Kurial will deliver the following items to the client upon project completion: A browser run 3D environment to showcase media/artwork, user documentation that explains how to use Kurial, design documentation such as Web design documentation | |