How to use this template:
1. If you haven't done already, create a google drive folder named, "TeamName", and share the folder with your team members and me inssong@gmail.com
2. Make a copy of this template into your team folder: Goto File menu -> click Make a copy
3. Move the copy to your team folder: File -> Move-To-Folder, select the shared folder.
4. Please read the referencing instruction to use the Google research tool for writing reports.

[Make sure to work on a copy of this file in your shared folder "TeamName" with your team]

_____

_____

_____

_____

_____**[marking notes]**

CP3046 & CP5046 ASSESSMENT TASK 3: **Project Audit**
This assessment task has been prepared by Dr. Dmitry Konovalov for James Cook University. Updated 18 February 2015.

Aligned BIT course & CP3046 subject learning outcomes	• SLO - Subject Learning Outcome: SLO-1, SLO-2, SLO-3, SLO-4, SLO-5; • BLO - BIT Course Learning Outcome: BLO-K1, BLO-K2, BLO-K3, BLO-S2, BLO-S5, BLO-A1, BLO-A3.
Group or individual	*Individual.* **Students from the same team may be awarded different marks for this assessment item**
Weighting / Length	*65%*
Due date	*before the last workshop*
Aligned MIT course & CP5046 subject learning outcomes	• **SLO - Subject Learning Outcome: SLO-1, SLO-2, SLO-3, SLO-5;** • **MLO - MIT Course Learning Outcome : MLO-K1, MLO-K2, MLO-S4, MLO-S5, MLO-A1, MLO-A3.**
Group or individual	*Individual.* **Students from the same team may be awarded different marks for this assessment item**
Weighting / Length	*50%*
Due date	*before the last workshop*

ASSESSMENT TASK DESCRIPTION
This task is the Audit of: (i) your group ICT solution delivered to the client, and (ii) ***individual contributions*** to the overall team effort and results. In terms of the Agile Software development, this is the ***iteration-2***. It delivers the ***alpha release*** to the client, and makes planning for ***iteration-3*** (***beta release***), which is due middle of CP3047/CP5047.

[Total awarded _____ out of 100 marks] ASSESSMENT TASK CRITERIA SHEET
NOTE! Students from the same team may be awarded different marks for this assessment item. To arrive at the individual student marks, your lecturer may consider all or some of the following contributing factors: your team overall marks; team feedback forms; personal observations of the student project contribution; student workshop attendance and subject participation; student competency during workshops, this audit and the project presentation.

The following is the list of items which are required to be completed in this assignment. Maximum possible marks are given in brackets at the beginning of each item. Where relevant, the SLOs and BLO/MLOs from the preceding table are specified.

[____/Prerequisite for marking] Assignment is completed using electronic copy of **this** document and submitted to LearnJCU electronically. One submission per team.

Student Name-1, Project role(s), specific ***individual*** contributions to each of the assessment items (Documentation, Presentation, Audit):

Note: Each student ***must be present*** at the audit, and must be ready to answer any questions regarding the student's individual contribution.

Write group members here:

- Jimena Yu Qing Muchsel
- Firnaz Luztian Adiansyah
- Sushmitha Manyambal Venkatesh
- Nathanael Neria

Jimena Yu Qing Muchsel

Roles:

- Conducting Training in Unity Engine
- Tracking the work of team members
- Responsible for a coherent look of the game (Game Design) and its progress
- Responsible for keeping a clear overview of the project
- Clarifying problems and issues with client
- Responsible for Level Design
- Responsible for Unity Management and how to organize the assets
- Creation of 3D Characters and Assets

Contribution:

Project

- Communication with Client
- Splitting Tasks between team members
- Creation of Blueprint Architecture for each Level 1, Level 2 and Basement
- Building a Tileset in Maya
- Texturing the Tileset
- Preparing Tileset, Materials and Prefabs in Unity
- Writing a useful guideline for Unity
- Teaching team members how to use Unity
- Creating an account to join Unity for adding one member seat (for free version only 3 seats were available)
- Building parts of Level 1 Scene and correcting Tileset placement
- Creation of Game Menu for "In Darkness"
- Logo Design for Until Dawn Studios

A1 Documentation

- Introduction of "In Darkness" with Project description, Goals description, A.G.E. Framework
- Giving Justification for "In Darkness" and stating why certain theme,platform and multiplayer were chosen
- Description of issues that can happen within project as well as possible solutions
- Listing of Constraints that are bound to the project "In Darkness"
- Description of personal milestones and each milestone's tasks

- Documentation of the Milestones from Alpha Release to Final release with help of Firnaz Luztian Adiansyah
- Weekly communication with client in meetings and e-mail
- Writing of Project Scope Contract and Client Project Agreement and obtaining signature from client
- Providing overview of project development and ICT infrastructure with detailed diagram
- Giving description of project tools and adding icons of tools
- Screenshots of assets

A2 Presentation

- Justification
- Architecture Graph
- Configuration Management Graph

A3 Documentation

- Documentation of changes of Alpha Phase and deviations of each Milestone
- Screenshots of Assets, Materials

Audit

- Deviations of Milestones and further changes
- Screenshot of Textures, Normal maps, Specular maps
- Configuration Management Graph

Firnaz Luztian Adiansyah

Roles:

- Fullstack (participate in both front end and back end development of the project)
- Responsible of maintaining project documentation and repositories
- Responsible for managing sprint for each week
- Responsible for testing and getting client's feedback
- Responsible for scripting and fixing bugs

Contribution:

Project

- Implement scripts in C# for:

    - Player interaction
    - Ghost interaction
    - Candle interaction
    - Winning / losing condition
    - Handling mic input
    - Door animation
    - Main menu UI
    - Flashlight switch on/off animation
    - And more basic interaction scripts

- Constant communication with the client to get useful feedback
- Constant communication with the front end team to ensure the back and front end can be merged without having issues
- Use premade Tileset, Materials and Prefabs by the front end team to build the second floor of the mansion
- Adding furnitures and 3D ghost models from the unity asset store
- Test and debug the overall program life cycle
- Provide template, convert user stories into requirement and identify ETA

A1 Documentation

- Provide description for the whole development environment, listing needed programming languages

- Provide explanation for source code repositories (Configuration Management), project collaboration tools, provide prototypes, and explain development tools.
- Build unit and system testing according to the most important game interactions
- Identification of project goals, requirements, constraints, scopes, and milestones.
- The creation of configuration, milestone, and git version control diagrams.
- Weekly communication with the client and other team member, Jimena Muchsel to get client's feedback and obtain the signed project scope contract.
- Prioritize tasks according to their importance in every milestone

A2 Presentation

- Provide tools, development, configuration slides
- Graph the burndown chart and burndown velocity charts
- Product, release, sprint backlogs
- Development tools

A3 Documentation

- Provide description and demonstrate the Project development and release ICT infrastructure including development environment, programming languages, source code repositories (Configuration Management), project collaboration tools, and development tools
- Provide screenshot of the gameplay and the UI

Audit

- Review all lectures regarding software management
- Prepare notes of short summarization to better understand topics

Sushmitha Manyambal Venkatesh

Roles:

- Audio designer
- Background sets
- Networking
- Responsible for project outlooks and project management.
- Assets management

Contribution:

Project

- Communication with team members
- Coordinating with team members
- Took guidelines of how to use unity
- Used premade materials by the team to build bedroom

A1 Documentation

- Goal description
- Description of individual milestones
- Listing out risks that are certained to the project "In Darkness"
- Identification of project goals, requirements, constrains, scopes, and milestones.

A3 Documentation

- Provide description.
- Configuration and management.

Nathanael Neria

Roles:

- Programming
- Assets management
- UI/UX

Contribution:

Project

- Communication and coordination with other team members
- Setting up the bedrooms walls, doors, etc with the assets provided by other team members

A1 Documentation

- General audience and non-ICT-technical stakeholders project description
- Description of the milestones
- Project timeline
- Project scope release

A2 Presentation

- Made burndown chart for each iteration by using the provided template in excel
- Problem statement and analysis description
- Project goals
- Tools used for project description

A3 Documentation

- Description
- Burndown chart

[_____/40 marks, SLO-1, SLO-2, BLO-S3] Report and demonstrate the _ACTUALLY_ delivered alpha-release (see your user stories in iteration-1). Any deviations from the alpha-release-iteration-1 must be documented and briefly explained. Screen-shots (or illustrations) of running alpha-release with comments or explanations. Write here: Minimum **TWO** pages, maximum **TEN** pages.

Planned Alpha-Release Milestones

Changes were marked in Red

User Story Title	Description	Priority	Days
Milestone 1	Week 1, 2, 3, 4	Total PEDs	16 days
Player can move their character in first person	Player can move their character by pressing the designated keys in their keyboard and can move around in 3 Dimensional space	High	3 days
Mansion Layout	Designing the layout for the Mansion	Low	2 days
Living Room Tileset	Creation of a textured tileset for the Living Room	Medium	1 day
Bathroom Tileset	Creation of a textured tileset for the Bathroom	Medium	1 day
Bedroom Tileset	Creation of a textured tileset for the Bedroom	Medium	1 day
Kitchen Tileset	Creation of a textured tileset for the Kitchen	Medium	1 day
Library Tileset	Creation of a textured tileset for the Library Room	Medium	1 day
Basement Tileset	Creation of a textured tileset for the Basement Room	Medium	1 day
Ghost and Player Interaction Script	The ghost can interact with the players by chasing them when they are near.	High	3 days
Door Script: Player can open the door to enter a room	The player can open the door by pressing a designated key in their keyboard to enter an unlocked room	High	1 day
Flashlight Script: Player can use the flashlight	The player can turn on and off the flashlight by pressing a key on the keyboard	Medium	1 day
Milestone 2	Week 5, 6, 7	Total PEDs	19 days
Ghost 3D Model	Creation of 3D Ghost Model	High	3 days
Living Room Props	Creation of a textured props for the Living Room	Medium	2 days
Bathroom Props	Creation of a textured props for the Bathroom	Medium	2 days
Bedroom Props	Creation of a textured props for the Bedroom	Medium	2 days
Kitchen Props	Creation of a textured props for the Kitchen	Medium	2 days
Library Props	Creation of a textured props for the Library Room	Medium	2 days
Basement Props	Creation of a textured props for the Basement Room	Medium	2 days
Player can interact with the objects surrounding him	The player can trigger a script when colliding with game objects such as: key, ghost, exit, and door	High	3 days

Player can choose to continue or exit the game in the menu scene	The player can click two buttons in the menu scene that will trigger a script when clicked. One to continue the game and one to exit the game.	Low	1 day
Milestone 3	Week 8, 9, 10	Total PEDs	17 days
Ghost boost script when specific conditions are met	The ghost will get a buff or debuff when a condition met such as player has blown all the candles	Medium	3 days
Logo Design	Create a Logo for Until Dawn Studio	Low	2 days
Show Logo at start of the game	Show the logo of Until Dawn Studio when the game launches	Low	3 days
Player debuff when specific conditions are met	The player will get a debuff when a condition met such as when the player collides with the ghost	Medium	3 days
"Blow into Microphone" Script	The player can use the microphone to blow into it to blow out the candle	High	3 days
Game Mechanic Scripts	The game will have scripts that control the game mechanics such as winning the game, losing the game,etc.	High	3 days
Alpha release ICT1		Total PEDs	52 days

Total days: 52 days

Alpha Release		
Milestone 1		
User Story Title	**Description**	**Deviations**
Show Logo at start of the game	Show the logo of Until Dawn Studio when the game launches	There is no extra Logo Screen featured in the game yet. The game starts with the menu.

Alpha Release		
Milestone 2		
User Story Title	**Description**	**Deviations**
Ghost 3D Model	Creation of 3D Ghost Model	Due to time shortage, it was not possible to create a good ghost model specific for the game. Therefore a simple ghost was created to make the game playable.
Basement	Create a basement for the level	The level does not have a basement
All Room Props	Creation of a textured props for the Living Room	For props, assets from Unity have been used for the game. Textures however are made by us.

Further Changes:

During the development of "In Darkness" there have been a few changed to adjust the gameplay and make it more fun.

Doors	Instead of using mouse interaction with the doors, the door is pushable. The player has to push the door open to peak.
Objects with Rigid Bodies	The objects such as furniture were changed to rigidbodies to enable pushing and moving them when the player touches the objects
Multiplayer	Because multiplayer requires payment we might not be able to feature a multiplayer mode for the game
Ghost	Ghost cannot walk through walls
Levels	There should be 3 more levels
Candle	Candles should spawn randomly

Screen-Shots:

Level 2 screenshot from above and perspective view

Flashlight off

Flashlight on

Furnitures

Long dark Hallways

Current ghost model - simple but effective as an enemy

Samples of Textures with Normal Maps and Specular Maps

The client was very satisfied with the overall progress of the project and gave his approval for all the changes from iteration 1.

The team is asked by the client to improve:

- Sound effects to further improve the horror environment
- Furniture replacements
- Object interactions by adding rigidbody to the objects

Developers:

Name : Jimena Yu Qing Muchsel — Sign: _____
Role : Game Designer, Level Designer

Name : Firnaz Luztian Adiansyah — Sign: _____
Role : Front end and Back end Developer

Name : Sushmitha Manyambal Venkatesh — Sign: _____
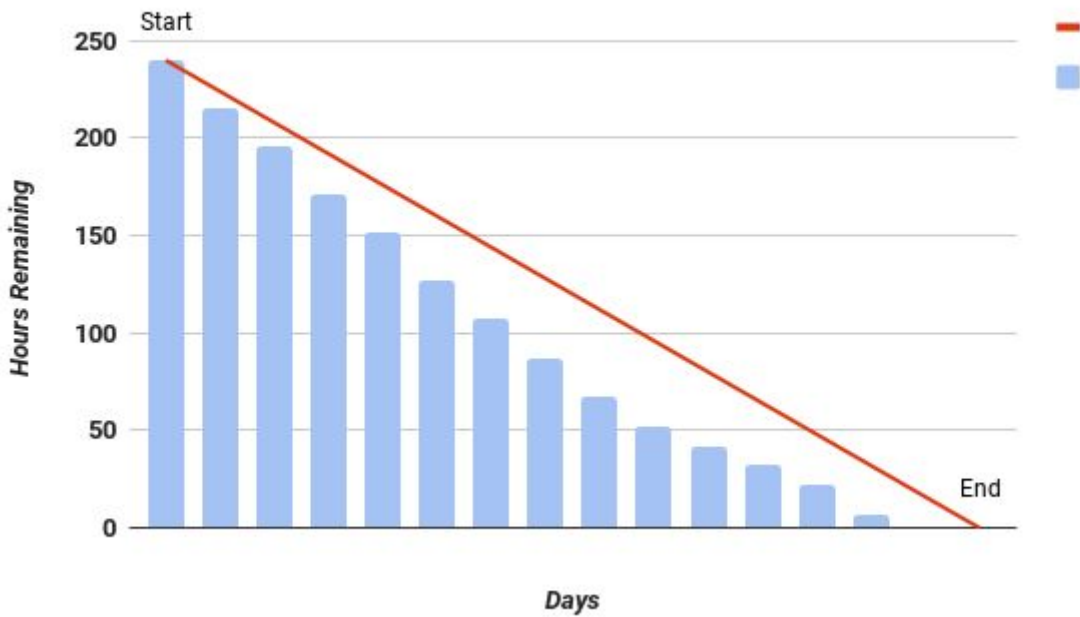Role : Audio designer, Background sets

Name : Nathanael Neria — Sign: _____
Role : UI/UX developer

Client name : Asst. Prof. Roberto Dillon

Company : Adsumsoft

Sign : _____

Position : CEO

Date : 15 / 05 / 19

- [_____/5 marks] Provide the burn-down and velocity charts/values for iteration-2, and how they are used to plan beta- and final-releases.

Burndown charts

Burndown Chart iteration 1
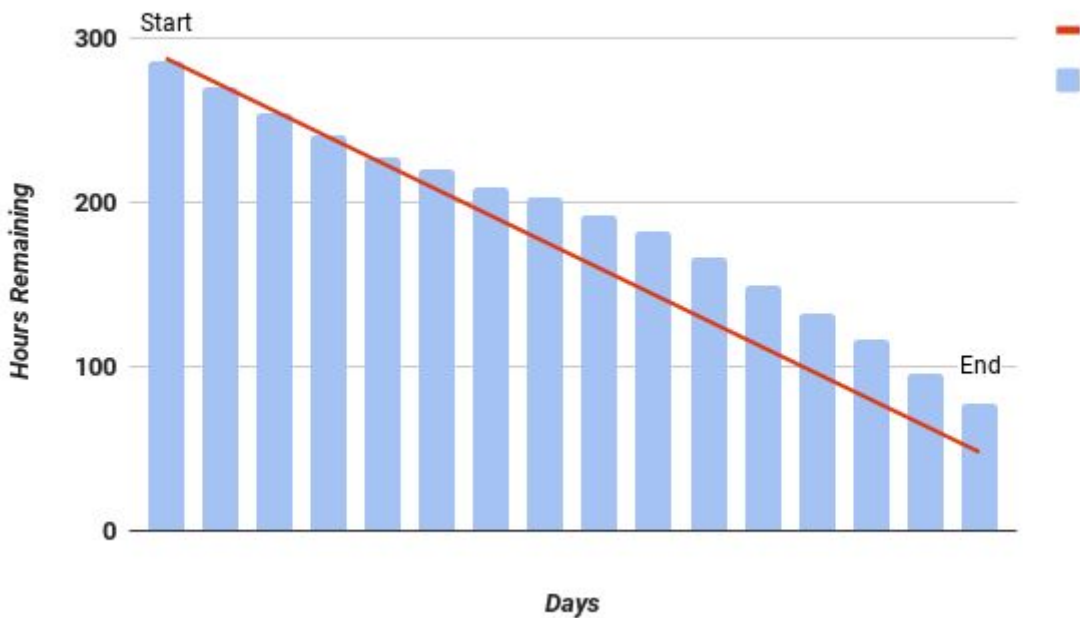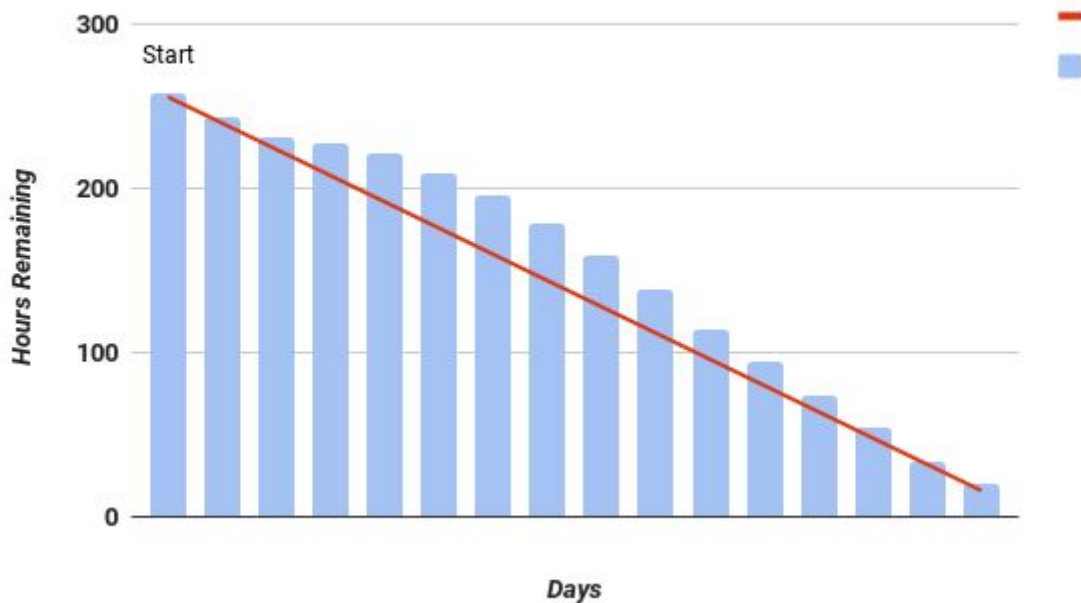

During the first sprint or iteration, all team members were highly motivated, causing the iteration to be completed ahead of the expected schedule. It caused the team to overwork and most of the tasks were able to be completed earlier than scheduled. From the graph we are able to observe how the tasks are being progressed way earlier than the velocity.

Burndown Chart iteration 2

For iteration 2, we can observe that the team was way past the schedule. The first couple of days were around the expected velocity. However, after the 6th, the team was distracted with some changes in user stories by the client. The client proposes solution to use prefabs of assets instead of building furnitures from scratch.
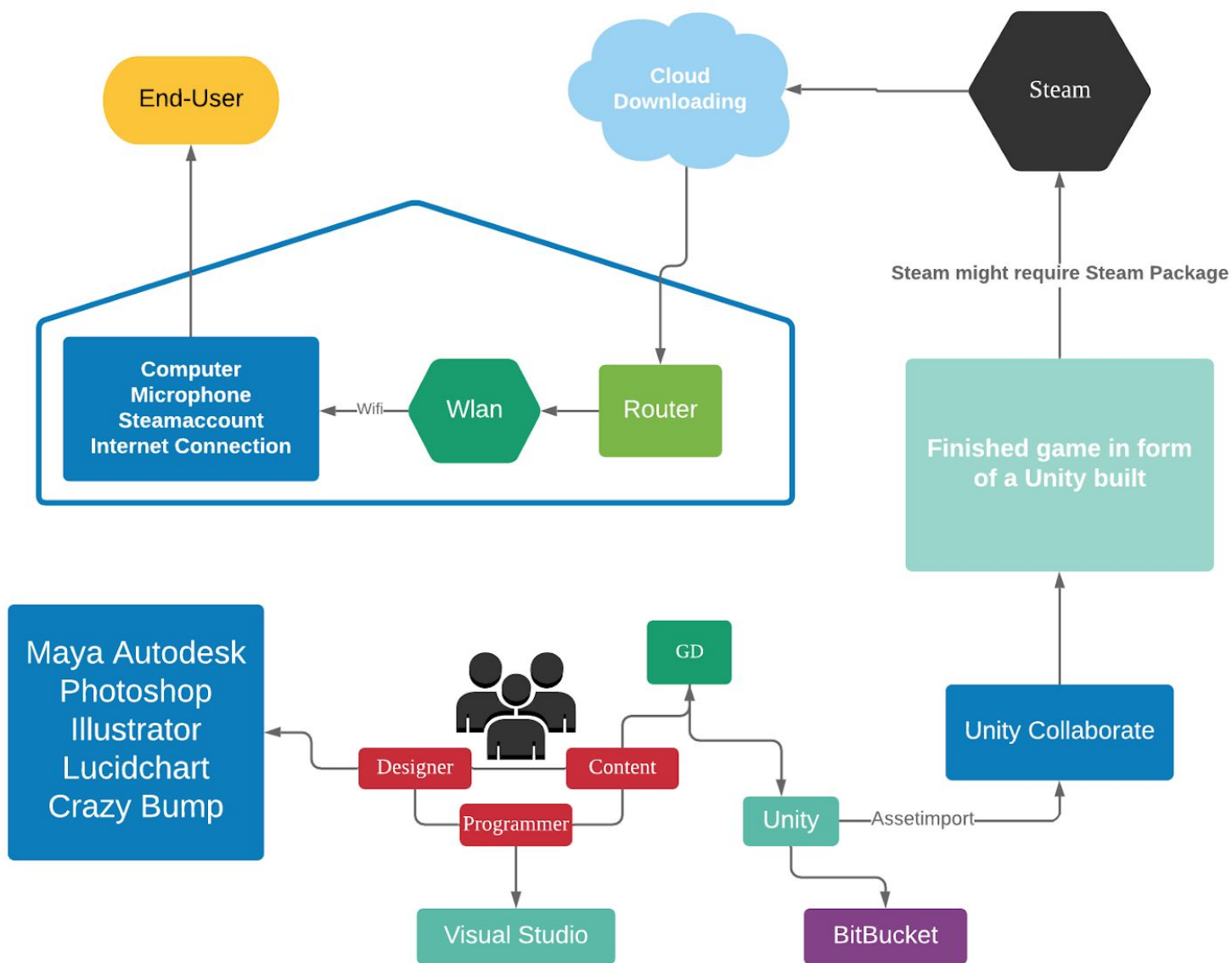
Burndown Chart iteration 3

In Iteration 3, from the burndown chart we may see that we are on schedule. We managed to control and finish all the tasks on schedule without having too much issues. There was a complication regarding the merge of scripts and the mansion in the middle of the sprint. However, it managed to be fixed relatively fast. Thus, the team was able to progress and completed the release for iteration 3

Planning for BETA and FINAL releases

By observing the three burndown charts and velocity from the Alpha release. We conclude that the beta and the final release could be done according to the original planning. While the Alpha focuses on more about level design and basic gameplay. Beta focuses on more in game features such as adding more objects to interact, adding more levels to allow more exploration, and so on. It will not require as high as complexity as the Alpha phase. By looking at the charts, we know that the team struggled at designing tiles from scratch since they are quite a time consuming task. Instead we were advised to use free assets from Unity asset store that may fasten our development process. Furthermore, in the final phase, we will be focusing on the multiplayer aspect and how the appearance of another player in a session will be affecting the gameplay. We believe the plan is well thought and our original user stories for the Final release have proper priority and workloads.
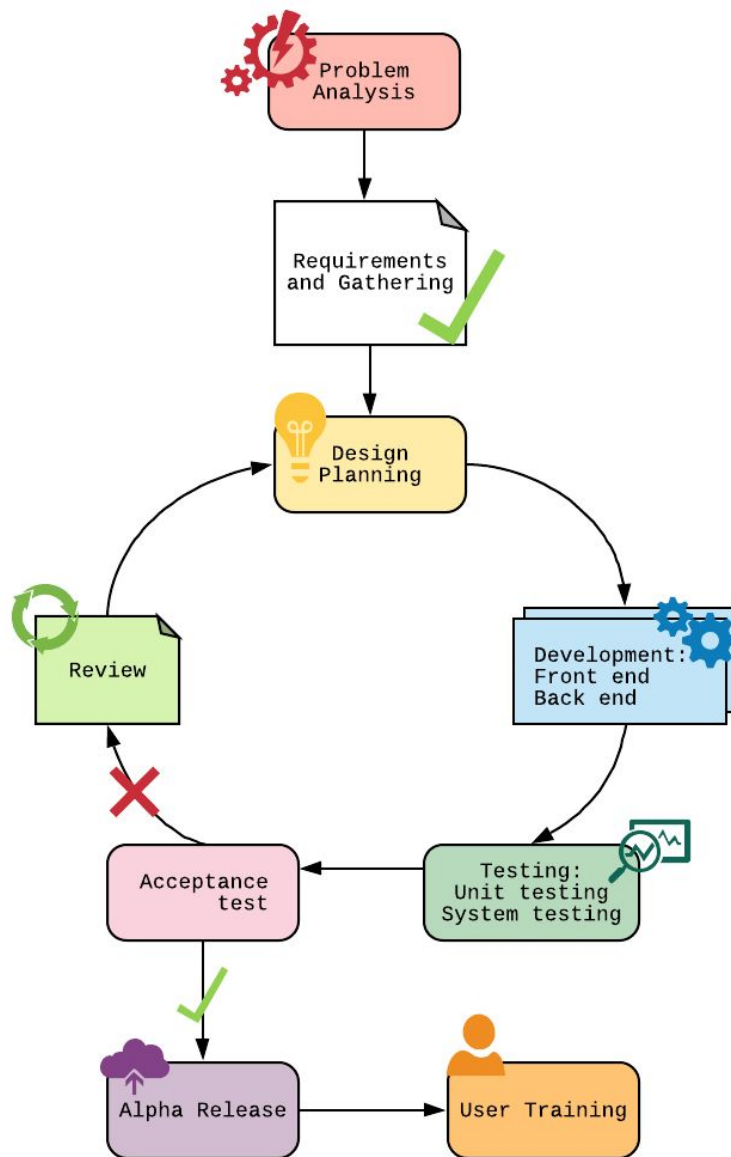
Project development and release ICT infrastructure

Configuration Management

Phase	Execution	Project Tools
Problem analysis	Initial meet up with the client discussing regarding the project	The team contacts and meets up with the client to discuss the project goals, client needs, user stories, project budget, and more. All important documentations is shared through the team using Google docs
Requirement gathering	Converting user stories into requirements	The team translates the gathered user stories from the client into requirements and estimates their difficulties and time estimation to complete for each of the requirements
Design Planning	Prioritizing requirements according to their importance	Gathered requirements from the previous phase is divided based on their importance, difficulties, and time estimation. Requirements that are the most important such as game foundations are selected as high priority while extra features are set as low and placed in last milestones. All of these will be documented in the A1 document using Google docs

Development: Front end and Back end	In every cycle, requirements are selected from the highest priority to the lowest for each milestone. Front end and back end will be done separately but with constant communication on both developers	Front end development: The UI will be designed in Unity and Autodesk Maya. All designs such as character creations, level design, and other 3D related objects will be done independently from the backend part in order to focus more into designing high level 3D modeling objects without worrying into the interaction parts. Back end development: The back end development will be tasked to implement the required logic and interactions between objects. In order to build a proper interaction, we need to build basic container of the objects using Unity. The interaction and logic will be scripted using C# in Visual Studio. Every function should have a clear purpose, input, and output to ease the testing phase.
Testing: Unit and System	Testing will be done in 2 sub phases: unit and system. Unit testing will be done individually for both front end and back end implementations. While system testing is done after the merge between the two has been completed	Unit Testing: For the front end, developers need to check if the animation and object 3D modeling are free of bugs using either Unity and Maya. For the back end, every function will be checked and should return the expected output for every unique cases. The tools that will be used is the visual studio debugger and Unity debugger tools. In order to test correctly for the back end parts, initial basic container objects for the design should also be implemented before the testing is conducted. System Testing: After the merge of both front and back end is completed. We test the working game as a whole. The testing will be done in Unity using the debugger and run game. One team member is expected to play and check for every possible interactions and mechanics in order to test that all interactions and animations are working properly and errors are being handle correctly
Acceptance test	The team demonstrates the finished applications for that iteration to the client for a feedback and validation of the software	The game project will be built for windows platform and being run in the client's machine. The client is also expected to clone the project file from the master repository in order to see documented code and progress of the software to check if every requirements for the iteration has been satisfied and implemented
Review	After all the test has been completed, the client and the team evaluates the current project and decided to add or remove some requirements for the next cycle	The client and the team will be discussing the next step of the design process and decide if there is a need of improvement or additional requirements. All of this will be documented in Google Docs for the clients and the team to see and check. After all has been completed the team moves to the next iteration phase in the SDLC
Alpha release	At this point all three iterations have been completed and tested. The software is released to the client as the alpha release	The alpha release will be sent to the client and lecturer for a review. The game will be published to the steam platform or unity asset store if the client approved
User Training	In order to use the software to the fullest, documentation and tutorials will be provided in the end of the project	The team will provide a documentation using microsoft word on the game rules, mechanics, etc. The team could also design a tutorial in game that will be better suited for users convenience but this will not be a high priority as in the alpha phase

Project Tools Summary

Programming Language	C#
IDE	Unity, Visual Studio
Object Modeling tools	Autodesk Maya, adobe Photoshop
Collaboration Tools	Google docs, Whatsapp messenger, Gmail
Version Control	Unity Collaboration
Digital Distribution Platform	Steam
OS	Windows

Unity

Unity is one of the well known game engines to design and program games. It is user-friendly and has many useful tutorials for Scripting, Leveldesign, etc. Its asset store offers a great selection of tools and 3D models. Furthermore, Unity offers a web-based collaboration, where different users can work together on the same Unity project. The changes are not automatically updated, but have to be uploaded manually, to prevent mistakes or unwanted results.

Autodesk Maya

Autodesk Maya is a very useful tool for 3D-Modelling, Rigging, Texturing and Animation. The version used for this project is the Student Autodesk Version. Autodesk Maya will be used to design characters and other complex objects such as the mansion tileset and interior props.

Visual Studio

Visual studio is the main IDE for C# programming. Visual Studio is developed by microsoft, that also owns the gaming console company, Xbox. Therefore, it is also used as an IDE for scripting editor in Unity. We will be using Visual Studio for scripting the game's logic and algorithms.

C#

We use C# as our main programming language to write object interaction and events. There are 3 main programming languages that is supported by Unity: C#, JavaScript, and Boo. From the 3 programming languages supported by Unity, C# is the most stable and multiplatform friendly, thus we will be using C# for this project.
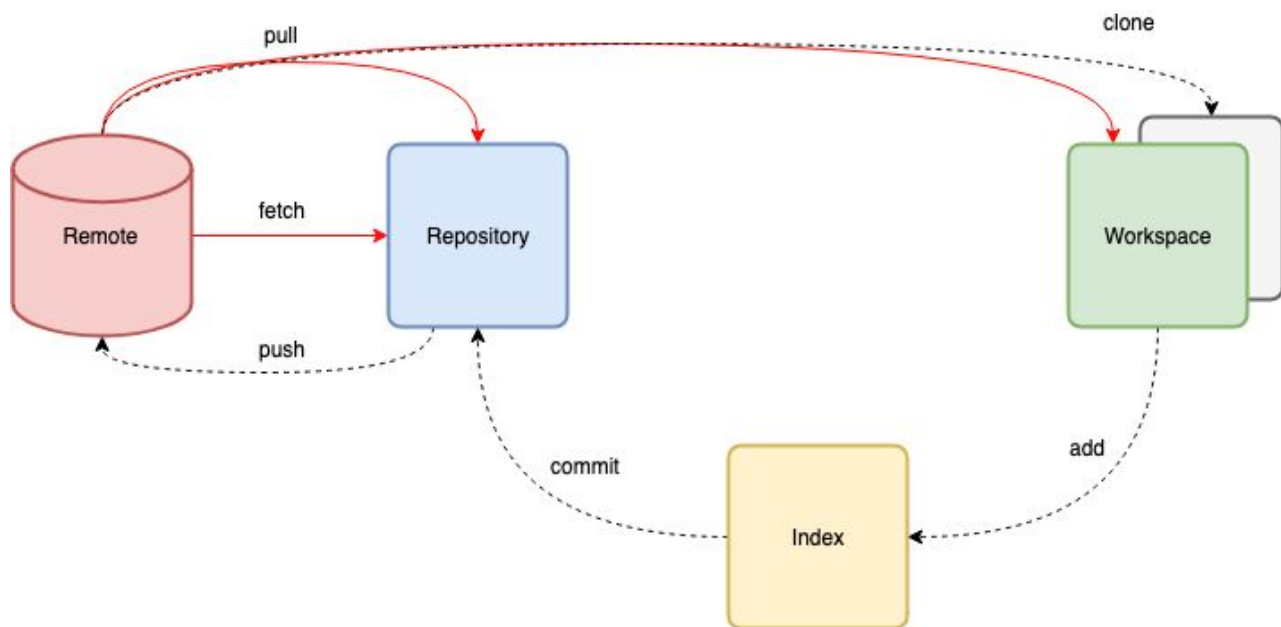
Unity Asset Store Library

Unity Asset Store offers design templates that developers may import to their project files and use them to speed up their software development process. We will be implementing some of the basic function and animation such as players movement in order to focus more on the game mechanics and game interaction designs.

Collaboration tools

Version Control

Version control is one of the most important aspects in a software development. It does not only allow team members to collaborate in a project. Moreover, it provides progress documentation as well as code management features. Whenever the client is not satisfied with progress, using version control we can simply refer back to an earlier version of the project using only a couple lines of commands. Git can be easily implemented in the project and is the most widely used by developers. Collaboration using Git is simple, each member needs to have a basic understanding of Git basic commands such as commit, push, pull, clone, branch, and more basic commands.

Unity Collaborate instead of Bitbucket

For this project, we have decided to not use Bitbucket. There was a discussion on what version control the team needs to use and the two main considerations were Github and Bitbucket. However, in the end we decided to use Unity built-in feature called Unity Collaborate. It offers the same functionality as your everyday version control, but in a more simpler way to allow non programmers such as a graphic designer to be able to collaborate easier with the rest of the back-end team. Using Unity Collaborate we may easily change, share, and manage your Unity project. Unity allows developer to do push, pull, merge using a single click of a button (GUI) instead of a command line.

Google Docs

Google doc is a free document editor that is web-based, meaning that it can be only conducted over the internet. It works within the Google Drive Service and also includes other useful office software such as Google Sheets, Google Slides and Powerpoint. Google Docs can be accessed on different platforms such as Web Applications, Mobile App for Android, iOS, Windows. The application is compatible with Microsoft Office file formats and allows to edit on cloud. Google Docs offers the function of sharing the same files online with other users. Users then can collaborate with other users through real-time editing and also track each user change. The changes are automatically updated and if mistakes occur, a backup can save the old file.

Whatsapp messenger

Whatsapp messenger is a multi platform messaging application available on Windows, Mac, Android and iOS. It is a useful communication application for exchanging information, keeping track of the progress and asking questions, if difficulties appear. Files of any format can be shared as well, which is faster than using email.

Lucidchart

Lucidchart is a web-based proprietary platform that is used to create different kinds of diagrams, charts, graphs and other visual architectures. It offers many different shapes and graphs can be easily drag-and-dropped into the spreadsheet. It allows multiple users who are located in multiple locations to collaborate via Lucidchart in sharing and revising diagrams. For this project, we will use the educational Lucidchart version that allows the creation of a maximum of 10 documents at a time as well as a great selection of shapes and diagrams.

Crazy Bump

Crazy Bump is a stand alone texturing software that easily creates bump maps, normal maps, specular maps, and occlusion maps. It is a useful tool and makes the texturing process faster.
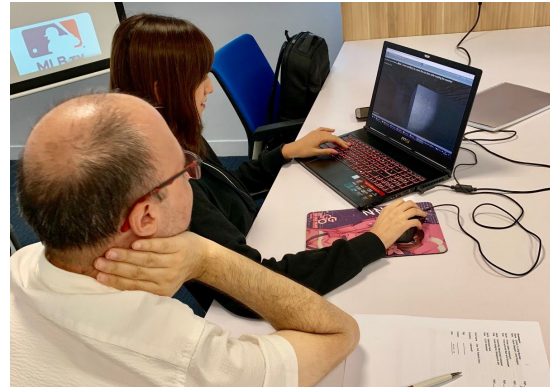
Environment set up

In order to start working on the project, all team members need to set up all the required tools and environments for the project into their own machine.

Step	Descriptions
1	Create and share Gmail account, Whatsapp messenger, Unity email, and BitBucket account for team collaboration and communication purposes.
2	Share a Google Drive folder with all the team members' Gmail accounts
3	Install Unity game engine and Visual Studio as the IDE ● Team leader will provide a level design Unity Guideline for other team members to read and follow
4	Create a Unity project and implement collaboration feature. Team leader will then invite others to collaborate to the project by adding their Unity account to the project
5	Every team member needs to clone the base project from the master repository into their own machines and create a branch for each member to work independently
6	Front end team will be required to install and work with Autodesk Maya, Adobe Photoshop and Unity Back end team will be required to work with Unity, Visual Studio using C# and Unity assets libraries
7	Each team member may independently work on a task, changes will be pushed by the end of the day/week/iteration and will be reviewed by the tech lead or project manager before merging with the master repo by clicking collab button in the top right

Prototypes are demonstrated to the client (PO)

The user stories are categorized as complete and incomplete. If the user story is completed, it will be demonstrated to the client in a face to face manner. The client will be allowed to observe and give a direct feedback on whether it can be accepted or not.
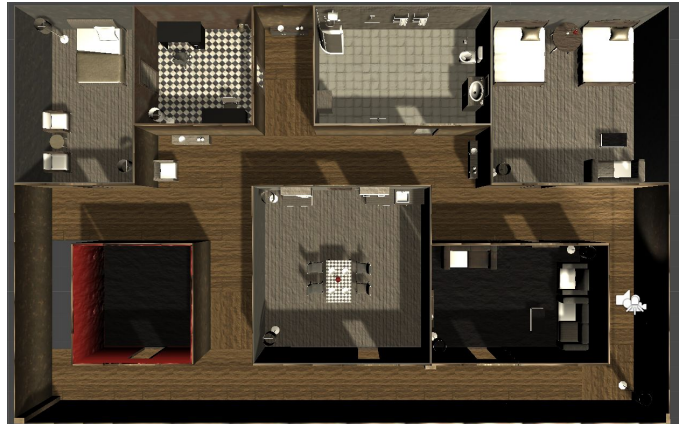

User story	Completed	Demonstrated	Client accepted
Player can move their character in first person	Yes	Yes	Yes
Mansion Layout Tileset	Yes	Yes	Yes
Ghost and Player Interaction Script	Yes	Yes	Yes
Flashlight Script: Player can use the flashlight	Yes	Yes	Yes
Player can interact with the objects surrounding him	Yes	Yes	Yes
Player can choose to continue or exit the game in the menu scene	Yes	Yes	Yes
Ghost boost script when specific conditions are met	Yes	Yes	Yes
Logo Design	Yes	Yes	Yes
Show Logo at start of the game	Yes	No	No
Player debuff when specific conditions are met	Yes	Yes	Yes
"Blow into Microphone" Script	Yes	Yes	Yes
Game Mechanic Scripts	Yes	Yes	Yes
Living Room Props	No	No	No
Bathroom Props	No	No	No
Bedroom Props	No	No	No
Kitchen Props	No	No	No
Library Props	No	No	No

Game menu

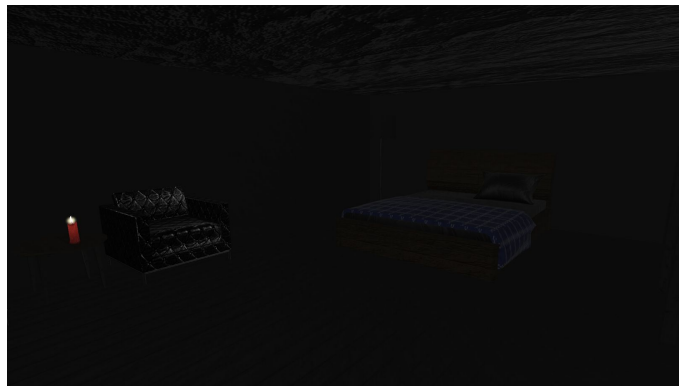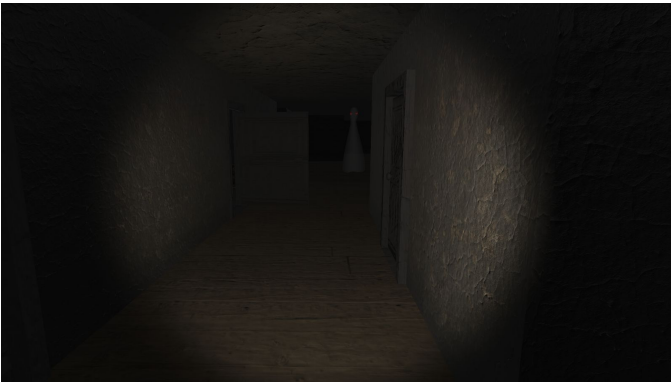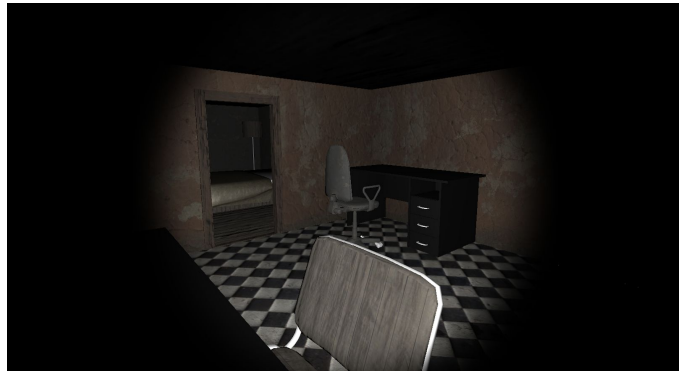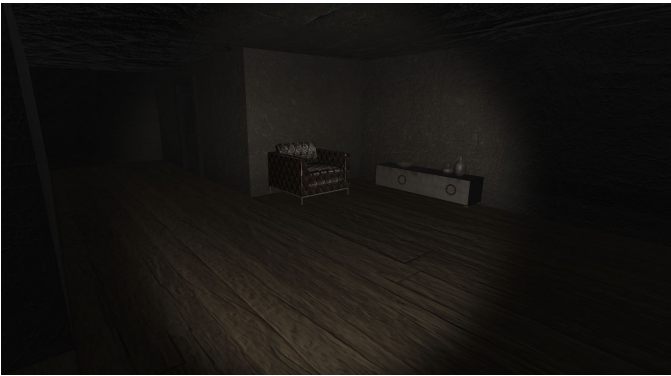## Mansion level 1 and 2

Dark rooms

Dark corridors

Ghost(left), kitchen design(right)

Furnitures material

Marking Rubric for Project Audit: This assessment rubric provides you with the characteristics of exemplary, competent, marginal and unacceptable work in relation to task criteria.

Criteria	Exemplary (DISTINCTION-level)	Competent (CREDIT-level)	Marginal (PASS-level)	Unacceptable (FAILED-level)
Individual Team Feedback form is submitted to LearnJCU electronically. Assignment is done in a group with 2-4 students.	**20** Group demonstrated **exemplary ability** to work collaboratively, e.g. all team members always attended the same workshop. Feedback is objective to other members and for self-improvement	**15** Group demonstrated **competent ability** to work collaboratively, e.g. all team members nearly always attended the same workshop. Feedback is fair to other members and for self-improvement	**10** Group demonstrated **marginal ability** to work collaboratively, e.g. all team members sometimes attended the same workshop. Feedback is not objective to other members and/or does not identify any area for self-improvement	**0** Group did not demonstrated ability to work collaboratively.
Report and demonstrate the ACTUALLY delivered alpha-release	**40** All delivered user stories are correct, correctly implemented, and tested. Technical information in the report is exemplarily. High quality presentation and formatting of the report. Delivered alpha-release is as per iteration-1 planning.	**30** Minor errors in: All delivered user stories are correct, correctly implemented, and tested. Technical information in the report is competent.	**20** More than half of delivered user stories are correct, correctly implemented, and tested. Technical information in the report is PASS-level.	**0** Not done, or done unacceptably.
Client signed acceptance of the alpha-release, and the proposed beta- and final-releases	**20** Clear evidence of client's acceptance and running of the alpha-release. Clear and meaningful feedback on the alpha-release. Signed plans for beta- and final releases. And all user stories are correct, and correctly estimated	**15** Some evidence of client's acceptance, and/or client is NOT running alpha-release. Signed plans for beta- and final releases. Or most user stories are correct, and correctly estimated	**10** Minimal evidence of client's acceptance, or client is NOT running alpha-release. Signed plans for beta- and final releases. Or more than half of user stories are correct, and correctly estimated	**0** Not done, or done unacceptably. No signed plans for beta- and final releases. Or less than half of user stories are correct, and correctly estimated
Demonstrate the Project development and release ICT infrastructure	**20** Description very clearly communicates exemplary ICT solutions.	**15** Description clearly communicates competent ICT solutions.	**10** Description communicates ICT solutions.	**0** Not done, or done unacceptably.

Reference BIT & MIT course and learning outcomes

BIT course & CP3046 subject learning outcomes	• SLO-1 Communicate technical information clearly through presentations, demonstrations and documentation; • SLO-2 Choose and apply the appropriate agile methodologies; • SLO-3 Evaluate and select appropriate tools and technologies to meet project requirements • SLO-4 Develop a general knowledge of industry standard project management approaches; • SLO-5 Critically reflect on progress to tailor self- learning goals to advance professional development. • BLO-K1 - Demonstrate essential knowledge for a career in technology related professions and practice; • BLO-K2 - Synthesise industry standard and underlying principles and concepts for decision making; • BLO-K3 - Critically analyse the core professional obligations, values and operations of organisations including sustainability; • BLO-S2 - Apply critical thinking to address IT related issues; • BLO-S5 - Demonstrate the ability to work collaboratively; • BLO-A1 - Apply technical skills, including numeracy, necessary for professional practice; • BLO-A3 - Identify and act upon, learning opportunities and self-improvements.
MIT course & CP5046 subject learning outcomes	• SLO-1 - Communicate technical information clearly through presentations, demonstrations and documentation; • SLO-2 - Choose and apply the appropriate agile methodologies; • SLO-3 - Evaluate and select appropriate tools and technologies to meet project requirements • SLO-4 - Develop a general knowledge of industry standard project management approaches; • SLO-5 - Critically reflect on progress to tailor self learning goals to advance professional development; • MLO-K1 - Critically analyse to select appropriate tools and technologies to meet project requirements; • MLO-K2 - Evaluate industry standard contexts for project management approaches; • MLO-S4 - Apply lateral and original thinking to conceptualise and evaluate a range of solutions to relevant problems; • MLO-S5 - Communicate technical information clearly through presentations, demonstrations and documentation; • MLO-A1 - Apply appropriate tools and technologies to meet project managements; • MLO-A3 - Critically reflect on progress to tailor self-learning goals to advance professional development.