ASSESSMENT TASK 1: CRITERIA SHEET

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

[_____/20 marks] Assignment is done in a group with 2-4 students.

Every team member gets the same mark for this assessment item

Write group members here:

Student Name-1, Project role(s), specific **_individual_** contributions to this assessment item:

Student Name-2:

Jimena Yu Qing Muchsel

Roles:

- Designer Lead
- 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
- Rigging
- Creation of Materials
- Baking of Navmesh

Contribution:

- 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

Firnaz Luztian Adiansyah

Roles:

- Fullstack (participate in both front end and back end development of the project)
- Responsible for maintaining project documentation for audit, repositories, and presentation
- Responsible for creating Burndown Chart
- Responsible for creating the client acceptance form and getting client's signature
- Responsible for managing sprint for each week
- Responsible for testing and getting client's feedback
- Responsible for scripting and bugs fixing

Contribution:

- 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
  - 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 furniture 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

Mianmian Zhang

Roles:

- Texturing of 3D Models and Assets
- Editing of assets
- UI Designer
- Responsible for Level Design
- Storydesign
- Video editing

Contribution:

- Game introduction
- Object animation
- Editing game levels

Siri Gravelsaeter Berge

Roles:

- Responsible for Level Design
- Editing of assets
- UI for Tutorial
- Story writer
- Voice over actor
- Video Editor
- Audio mixer

Contribution:

- Adding voice over for characters in the intro of the game
- Editing 3D models/assets used for gameplay
- Adding UI for tutorial for how the game is set up, showing which controls to use to perform different tasks in the game such as picking up an object, blow out the candle etc.
- Contributing to plot of story for the gameplay
- Editing game levels
- Created the end credits and mixed the audio for it.
- Asset management, making sure the assets are placed correctly in the level.
- Finding and implementing textures to walls and floors in the game.

[_____/40 marks] Report and demonstrate the _ACTUALLY_ delivered FINAL-release (see your user stories in iterations-1&2). Any deviations from the beta-release-iteration-2 must be documented and briefly explained. Screen-shots (or illustrations) of running beta-release with comments or explanations. **If starting a new project: Justified design, prototype stories (implemented).** Write here: Minimum **TWO** pages, maximum **TEN** pages.

FINAL RELEASE

User Story Title	Description	Priority	Days
Iteration 1	Week 5, 6, 7, 8	Total PEDs	23
New ghost creation	Creating a new ghost 3D model in Maya	High	5
Remodeling the mansion (level design)	Redesigning the mansion in order to give better horror atmosphere	High	7
Adding walls and floors	Placing floors and walls	High	3
Adding furniture	Downloading free assets and decorating empty rooms with downloaded furniture	Medium	2
Applying Textures	Giving walls and floors a texture	Medium	2
Voice over	Adding story on the start of the game briefly explaining the story with subtitles	Low	3
Loading screen	Adding loading screen with control information before game starts	Low	2
Pick up objects	Player can pick up an object by clicking the left mouse	High	2
Ghost interaction if thrown by objects	Ghost will be running back to his spawn point or just stop for a duration of time when thrown objects with the tag "pickable"	High	2
Random spawn player/enemies	Player/ghost can be spawn randomly using predefined multiple spawn points	Medium	2
Breathing sounds when ghost is getting closer	Ghost will be heard when it's getting closer to the player	Medium	2
Iteration 2	Week 9, 10	Total PEDs	11
Remodeling the mansion (level design)	Redesigning the mansion in order to give better horror atmosphere	High	7

Adding walls and floors	Placing floors and walls	High	3
Adding furniture	Downloading free assets and decorating empty rooms with downloaded furniture	Medium	2
Applying Textures	Giving walls and floors a texture	Medium	2
Buff Ghost when all candles have been blown	Ghost will be in angry mode and his movement speed will be faster	Low	2
Game trailer	Creating a game trailer	Low	1
Release in DVD	Final release will be burnt in a DVD to be submitted to the client	Low	1
FINAL release ICT2		Total PEDs	34

Total days: 34 days

Justification of deviation

User story	Description
Remodeling the mansion (level design)	Redesigning the mansion in order to give better horror atmosphere
Adding walls and floors	Placing floors and walls
Adding furniture	Downloading free assets and decorating empty rooms with downloaded furniture
Applying Textures	Giving walls and floors a texture

The following user stories above took longer to complete, thus, they were pushed back to the next iteration. Furthermore, it was mainly caused by an issue from unity collaborate that was always giving each member project conflicts every time a member was trying to push his/her changes.
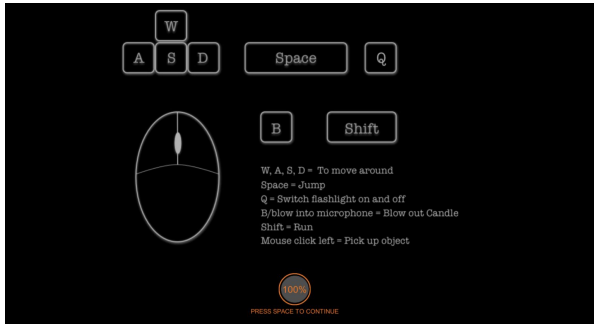
Screenshots of Actually delivered FINAL-release

Voice over

Ghost

Loading screen and main menu

Baby room and library

Bedroom

Chandelier and pic frames

Bedroom and hallway

Manekin room and master bedroom

Library and living room

Glowing Crosses

[_____/20 marks] Client signed acceptance of the FINAL-release, and the proposed FINAL-release. Any changes from iteration-2 are approved by the client. Write here: Minimum **TWO** pages, maximum **TEN** pages.

ICT 2 Client Scope Agreement: Final

Project Title: In Darkness - A survival horror game
Project Description:

A 3D survival horror game called "In Darkness" for PC Platform.

"In Darkness" is a game created for Roberto Dillon, Adsumsoft. It is a survival horror game, where players start in the mansion and their goal is to escape the mansion without dying. They have to blow out all the candles in the game in order to stop the exorcism. The player need a microphone and blow into it to blow out the candles. However, a ghost will roam around in the room, trying to light up the candles again. Some rooms are locked, so players will need to find the keys to unlock the doors. If the player runs into the ghost, the player will die instantly. Therefore, the players have to keep an eye on the ghost but also try to finish their initial goal of blowing all the candles out in the mansion.
The game should be ready enough to be submitted for the Tokyo Game Show "Sense of Wonder Night". The group target or audience is players from 18 - 40 year old who owns a personal computer with a Windows operating system.

Scope Included:
Final Release ICT 2

Changes were marked in Red

FINAL RELEASE

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Justification of deviation

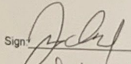| User story	Description
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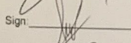
Client Acceptance Test

User story	Completed	Demonstrated	Client accepted	Comment
New ghost creation	✓	✓	✓	
Remodeling the mansion (level design)	✓	✓	✓	
Adding walls and floors	✓	✓	✓	
Adding furniture	✓	✓	✓	
Applying Textures	✓	✓	✓	
Voice over	✓	✓	✓	
Loading screen	✓	✓	✓	
Pick up objects on hold	✓	✓	✓	
Able to throw object with mass <= 3; thrust and velocity handler	✓	✓	✓	crosses only but ok
Ghost interaction if thrown by objects script	✓	✓	✓	small bug with spawn point
Random spawn player/enemies/objects script	✓	✓	✓	more spawn points for ghost.
Breathing sounds when ghost is getting closer	✓	✓	✓	
Game mechanic, losing and winning condition script fix	✓	✓	✓	
Buff Ghost when all candles have been blown script	✓	✓	✓	
Game trailer	✓	✓	✓	
Release project to thumb drive	✓	✓	✓	

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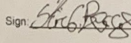Name : Jimena Yu Qing Muchsel
Role : Game Designer, Level Designer   Sign:

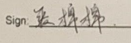Name : Firnaz Luztian Adiansyah
Role : Full-stack Developer   Sign:

Name : Siri Gravelsaeter Berge
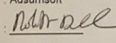Role : Audio designer, Background sets   Sign:

Name : Mianmian Zhang
Role : UI/UX developer   Sign:
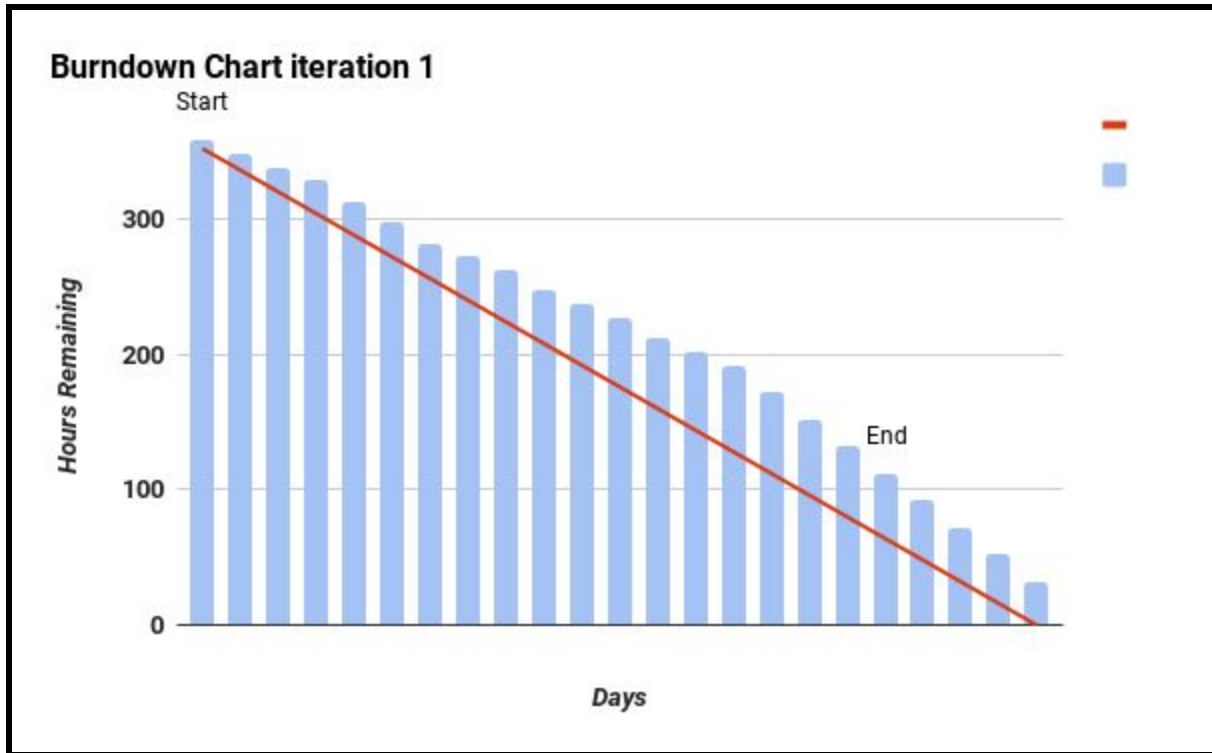
Client name : Asst. Prof. Roberto Dillon
Company   : Adsumsoft
Sign
Position   :
Date   : 23 / 09 / 2019

[____/5 marks] Provide the burn-down and velocity charts/values for iteration-3, and how they are used to plan the final-release.
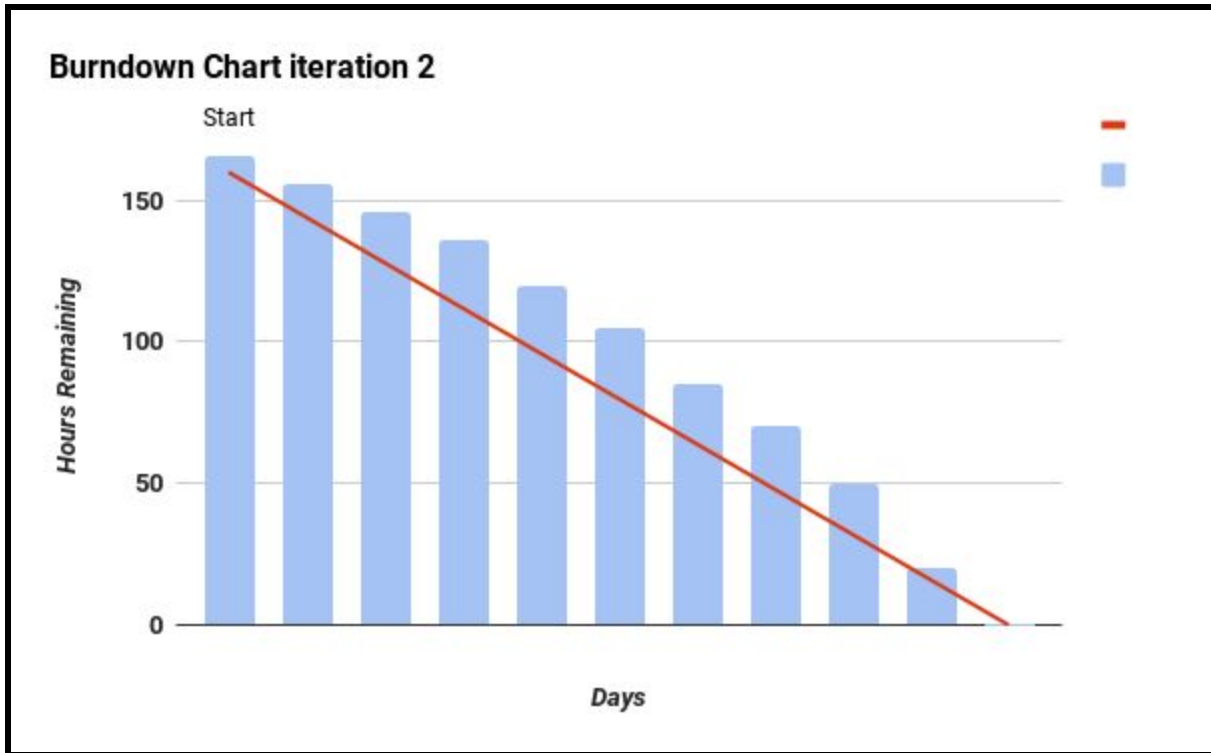

JUSTIFICATION:

Remodeling the mansion (level design)

- Adding walls and floors
- Adding furniture
- Applying Textures

The following user stories above took longer to complete, thus, they were pushed back to the next iteration. Furthermore, it was mainly caused by an issue from unity collaborate that was always giving each member project conflicts every time a member was trying to push his/her changes.
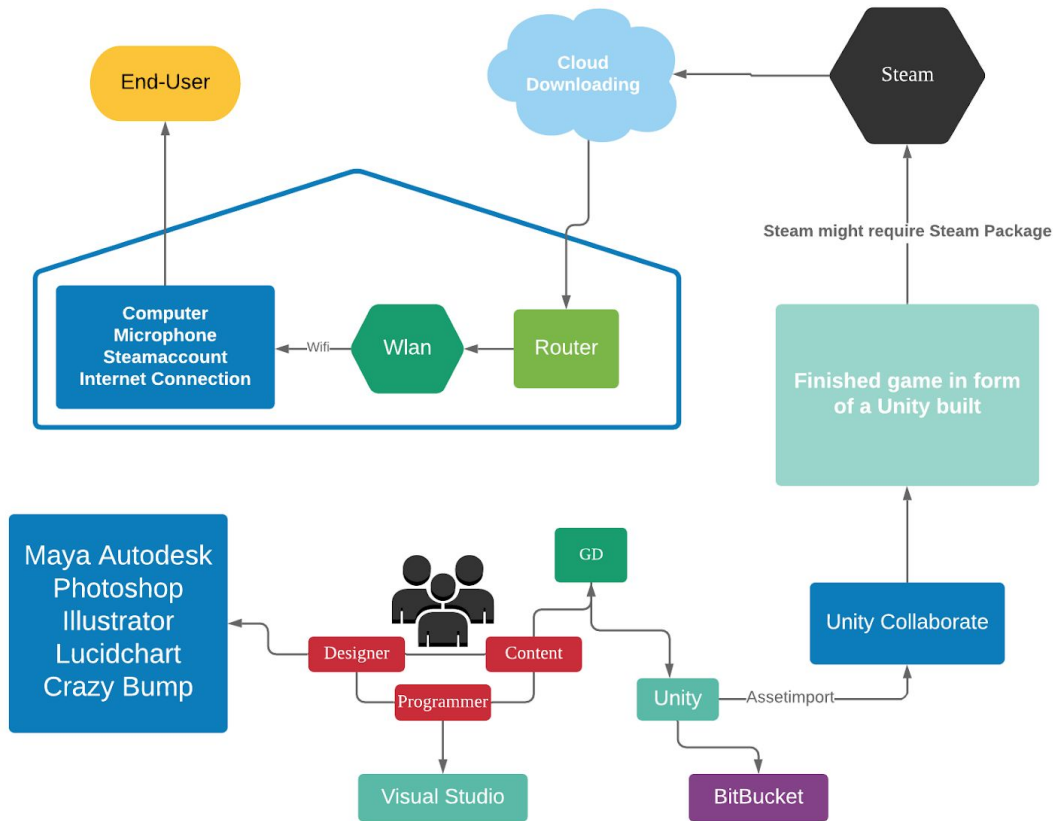
Burndown Chart iteration 2

Start

Hours Remaining
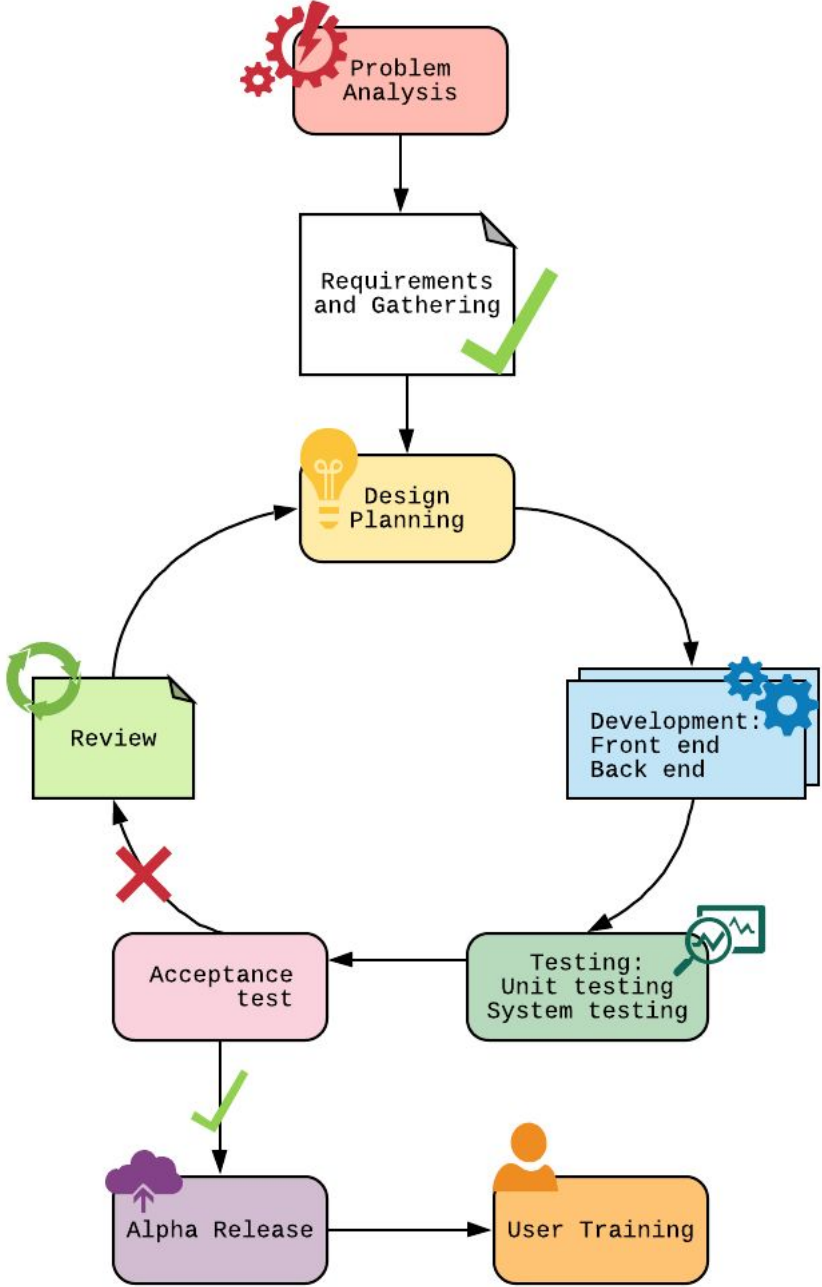
150

100

50

0

Days

JUSTIFICATION:

In this iteration we were trying to complete every incomplete user stories from the previous iteration. However, the collaboration conflict issues still persisted that slowed down teams project progression. In the end, the team worked over time to complete the remaining user stories. By the end of the final release, most of the user stories have been successfully implemented in the project. The project then will be demonstrated to the client in order to get the release acceptance.

[_____/20 marks] Demonstrate the Project development and release ICT infrastructure.
This must include development environments, programming languages, source code repositories (Configuration Management), project collaboration tools, and development tools. Write here: minimum **TWO** pages, maximum **TEN** pages.

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 documentation 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	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

	system testing is done after the merge between the two has been completed	output for every unique case. 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 handled correctly
Acceptance test	The team demonstrates the finished applications for that iteration to the client for 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 requirement 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 at 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 logics 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

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 functions 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.
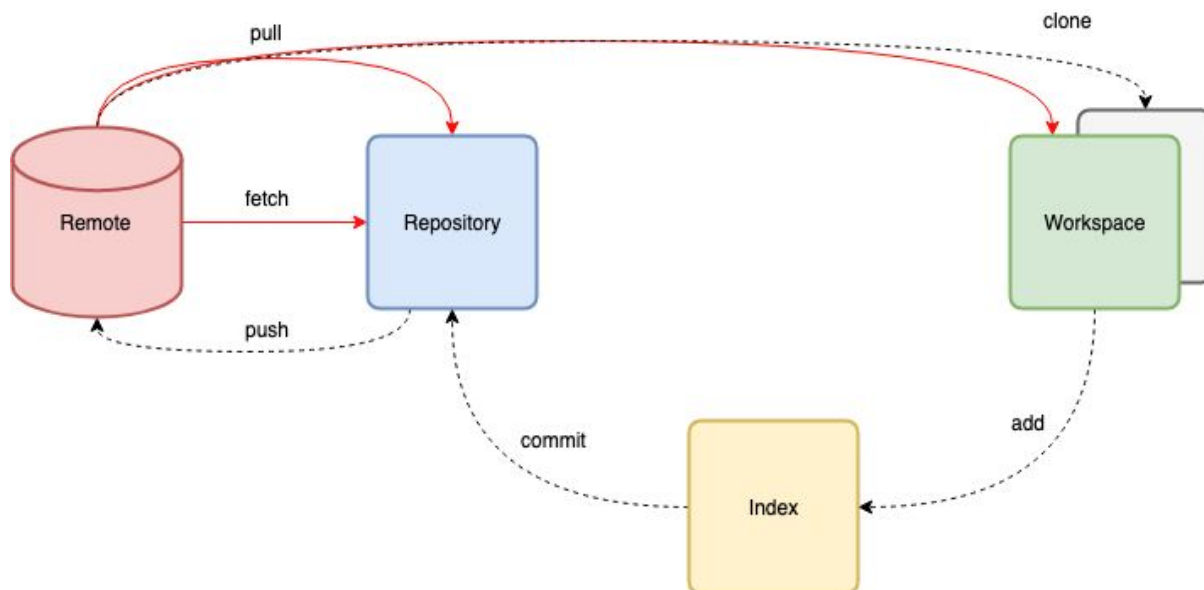
Unity Collaborate instead of Bitbucket

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.

[___/10 marks] Document any changes from release-2. How to set-up your development/release environment for a new team member.

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

[___/10 marks] Prototypes are demonstrated to justify the proposed FINAL-release.

Prototypes are demonstrated to the client

In the client acceptance test, the user stories are categorized as complete or incomplete. All the completed user stories will be demonstrated to the client. The client will be judging and deciding whether the demonstrated user stories are acceptable for the release. The client will be giving direct feedback on what to improve or need to be corrected.

User story	Completed	Demonstrated	Client accepted	Comment
New ghost creation	Y	Y	Y	
Remodeling the mansion (level design)	Y	Y	Y	
Adding walls and floors	Y	Y	Y	
Adding furniture	Y	Y	Y	
Applying Textures	Y	Y	Y	
Voice over	Y	Y	Y	
Loading screen	Y	Y	Y	
Pick up objects	Y	Y	Y	Only crosses can be picked up

Able to throw object with mass <= 3; thrust and velocity handler	Y	Y	Y	
Ghost interaction if thrown by objects script	Y	Y	Y	Small bug with spawn point
Random spawn player/enemies/objects	Y	Y	Y	Add more spawn points for ghost
Breathing sounds when ghost is getting closer	Y	Y	Y	
Buff Ghost when all candles have been blown	Y	Y	Y	
Game trailer	Y	Y	Y	
Release in thumb drive	Y	Y	Y	

Game menu

Ghost

Game Intro

...WE WILL BE FOREVER DOOMED."
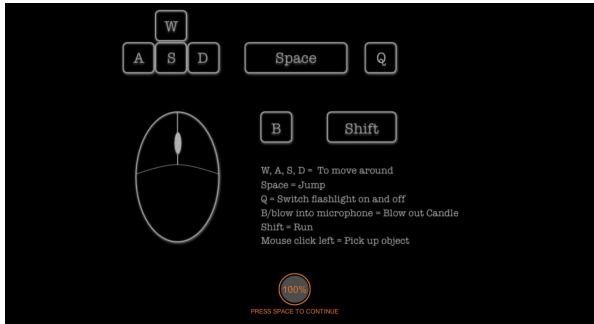

Hello, anyone there?

Loading screen and main menu

Baby room and library

Bedroom

Chandelier and pic frames

Bedroom and hallway

Manekin room and master bedroom

Library and living room