

A Game Developed in Unity

Designed by

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**Concept Paper (Overview)**

**Genre, Target Audience, Description, Features, Cost and Time to Develop, End Goals.**

**Genre:**

The game is a  Top Down action Arcade elements with RPG Elements, and slight Horror undertone.

**Target Audience:**

The games target audience will be for intended for teenagers due to the mild violence.

**Description:**

The Arcade mode of the game takes place inside a mansion, the player is tasked with using weapons against the undead horde and survive as long as they can. The game will be viewed from a Top Down giving the player a full view of what is around him and items he is able to pick up. The game will have a Health bar that will decrease when the player takes damage, and a score counter that will increment the longer that game goes on. The game will also save the players High Score.

**Cost and Time to develop:**

I am hoping for the game to have voice acting and will require the cost of a microphone.

**End goals:**

The purpose of making the game is to get experience of creating and releasing a game within a time frame, this is not being created at a financial project.

**Gameplay Mechanics**

**How will it play?**

The game is a  Top Down action Arcade game , The player will be able to move around the map and collect weapons, the goal is to survive against the undead as long as possible to beat the high score. The player will use the arrow keys to move and the space bar to use the weapon. The player will also have the option to quit the game to the “Main Menu” using the escape key.

**Targeted Platforms**

The game will be exported as a executable to be run on PCs.

Since the game will be developed in Unity, it should be relatively easy to export the game to various other platforms such as UWP, Android and IOS.

**Project Scope**

The game is made independently by myself as a Third Year Software Development final year project, and is to be completed by 24th of April 2017.

**Licencing**

All the Unity Assets used in the game will be made by me from scratch. I also plan on using Free Open Source music for my Title Screen and while the game is running.

**Software**

The game will use the Unity Engine 5.6 Community Edition, this is free to use software developed by Unity Technologies, I will also be using a external free programme called Tiled, which allows me to use the sprites I created in photoshop, and turn them into Objects for my game.

**Total Cost**

The game should not be costing myself any money, as it is a college project not intended for commercial use.

**Development Software**

**Unity Community Edition 5.6**

**Unity** is a cross platform game engine developed by Unity Technologies, it is used to develop games for PC, Consoles, Mobile Devices and Websites.

Unity was designed with the idea of portability in mind, making ease of use to developed with API such as Direct3D and Vulcan.

5 major versions of Unity have been released with Unity 5 being the latest. In 2010 Nintendo started supplying Developers with free Unity Profession Edition Licences with the Software Development Kits (SDKs) in the Nintendo family(Nintendo Wii and 3DS).

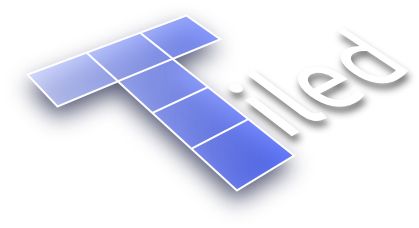
Unity itself was written in C and C++, but the development platform allows us to write code in C#, UnityScript, and Boo.

The ease of use with Unity is well documented, While the Logic of the game being developed is still needed to be coded in C# scripts, which then can be attached to GameObjects, Unity allows us to have access to the Unity Store, which supplies the Developer with assets (Paid and Free) and Scripts we can plug into our games. Although this is great for developers to use to expand on their games, the system has since been abused.

In 2015 Unity Technologies drew criticism for the high volume of quickly produced video games in the PC store front Steam, these games had been using ONLY Unity Assets and monetised on the store.

The CEO of Unity said while Unity is a success in making game development easier for developers, this is a unfortunate side affect.

*“If I had my way, I'd like to see 50 million people using Unity – although I don't think we're going to get there any time soon. I'd like to see high school and college kids using it, people outside the core industry. I think it's sad that most people are consumers of technology and not creators. The world's a better place when people know how to create, not just consume, and that's what we're trying to promote”. – John Riccitiello*

**Tiled**

[**Tiled**](http://www.mapeditor.org/) is a flexible 2D level editor with an [XML based map format](http://doc.mapeditor.org/reference/tmx-map-format/) that is supported by [many game development frameworks](http://doc.mapeditor.org/reference/support-for-tmx-maps/).

**Tiled** was created by Thorbjorn Lindijer in 2008,

It is free to use software which allows me as a developer to use 16 X 16 Pixel sprites I created in photoshop and use them in making levels for my game. The Software allows you to add collision boxes to any tiles you created and save the tileset as a prefeb for you to use again and again in all your games, It also comes with a programme called **Tiled2Unity** which exports all the tiles as objects for you to use in Unity.

**Influences**

**Resident Evil (1996)**

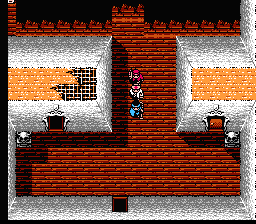
**Resident Evil**, known in Japan as **Bio Hazard**, is a survival horror video game developed and released by Capcom originally for the PlayStation in 1996, and is the first game in the *Resident Evil* series. It is Capcom's best-selling debut game, with sales of over 8.5 million copies worldwide. The game follows Chris Redfield and Jill Valentine, members of an elite task force known as S.T.A.R.S., as they investigate the outskirts of Raccoon City following the disappearance of their team members. They soon become trapped in a mansion infested with zombies and other monsters. The player, having selected to play as Chris or Jill at the start of the game, must explore the mansion to uncover its secrets.

This game was a very big part of my childhood and Influence me to become a developer and pursue a career that will allow me to expressive myself creatively.

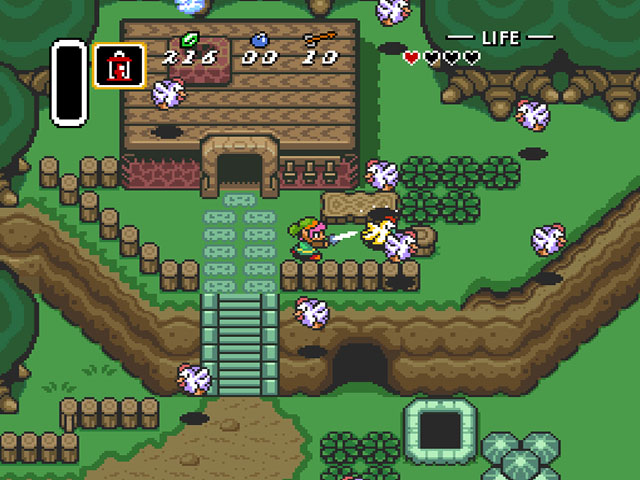
The game takes the most Inspiration from **Resident Evil,** from the setting of the mansion, to the enemies to even the color palette, I want to make a game that matches the tones of REDS and GREENS, and takes place in a isolated location.

The Idea of zombies as enemies interests me as they are slow moving and are easy to dodge, also Zombies are weak enemies, and can be despatched in 1 or 2 hits.

This game is often considered as the originator of the term “survival horror” but the term was also used in the Capcom’s “Japan Only” 1998 **Sweet Home,** that was released on the Famicom (The name for the Japanese Nintendo Entertainment System).

This game was the predecessor to Resident Evil, and featured a lot of the same elements, but was in a 2D sprite format, so this game would be the best basis for coming up with the art style for my game.

**The Legend Of Zelda (1992)**

**The Legend of Zelda: A Link to the Past**is an action-adventure video game developed and published by Nintendo for the Super Nintendo Entertainment System . It is the third installment in **The Legend of Zelda** series and was released in 1991 in Japan and 1992 in North America and Europe.

The plot of A Link to the Past focuses on Link as he travels on a journey to save Hyrule, defeat Ganon and rescue maidens related to the Sages. *A Link to the Past* uses a 3/4 top-down perspective similar to that of the original *The Legend of Zelda*, dropping the side scrolling elements of Zelda II: The Adventure of Link. The Legend of Zelda: Link to The Past introduced elements to the series that are still commonplace today, such as the concept of an alternate or parallel world, the Master Sword and other new weapons and items.

Another one of my favourite games of all time.

One of the things that always stuck out to me with this game was the gameplay being so smooth, how Link (The player controlled character) animated was something I wanted to replicate, I always belived that if the character didn’t animate to match the action that was being done it, it led to a poor gameplay experience, also while the game was 2D you were still able to move in 8 directions as apposed to being locked to Vertical and Horizontal movement that earlier games were locked to.

The swordplay in the game is very responsive and something I would like to replicate.

**Assets**

**2D Sprites Needed**

* **Player Character – Walking, Attacking, Idle**
* **Enemies – Walking, Resurrecting**
* **Map Texture – Floor, Walls, Doors, Enviormental**

**Unity Assets**

* **Animation – Walking, Attacking, Idle**
* **Audio – Attacking, Music**
* **C# Scripts – MainMenuCtrl, PlayerCtrl, EnemyCtrl, GameManager**
* **Map – Imported from Tiled, Created in PhotoShop**
* **Tiled to Unity – Files need to use Tiled**
* **Scene – Main Menu, Arcade Mode**

**Conclusion – 23th April 2017**

**Recommendation for Future Development**

While I am happy with how my game came out, there is something is would’ve done different and some things that had to be cut due to time constraints.

At first I was hoping to create a **Story Mode**, this would see the player going though different environments, trying to survive against the undead, I quickly realised that it was more importation to programme the different systems in the game, so my focused on the **Arcade Mode** aspect of the project, In this project I was required to try something I never did before, and I think I had Unrealistic expectations for what I could’ve done in the timeframe, if I was to do this project again, I would probley focus less on how the game looks and animates, until I have established Core GamePlay Mechanics

**Known Bugs**

While the enemies are just clones of the Player character, that was intentional to save time, one thing I wasn’t happy with was the enemy spawner, I have it set to spawn randomly within a radius of the spawners origin, but it makes no allowances if there is a wall there or not, most of the time, the boxcollider for the enemy will push them out of the wall, but sometime not, so that would need to be fixed.

Also as the Enemys spawn it is possible for them to spawn on the player and damage them, to combat this I would need to activate the OnCollider() Function to damage the player a set time after the enemy spawn.