



*You'll be hungry for more.*

**Design Document for:**

**M.I.L.K.**

**( Milk. I Like [K]it )**

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Written by WOW Games

Version 2.10

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# Table of Contents

<b>MILK</b>	<b>0</b>
<b>DESIGN HISTORY</b>	<b>3</b>
VERSION 1.00	3
VERSION 2.00	3-4
VERSION 2.10	4
<b>GAME OVERVIEW</b>	<b>5</b>
PHILOSOPHY	5
WOW	5
No PC Left Behind	5
Keep It Simple (and Fun) Stupid	5
COMMON QUESTIONS	5
What is the game?	5-6
Why create this game?	6
Where does the game take place?	6
What do I control?	6
How many characters do I control?	6
What is the main focus?	6
What's different?	7
<b>FEATURE SET</b>	<b>8</b>
GENERAL FEATURES	8
GAME PLAY	8
<b>THE GAME WORLD</b>	<b>8</b>
OVERVIEW	8
No Loading Screens or Invisible Walls	8
Interactable Environment	9
<b>THE PHYSICAL WORLD</b>	<b>9</b>
Overview	9
Key Locations	9
Travel	10
Scale	10
Weather / Time / Day and Night	10
<b>SINGLE-PLAYER GAME</b>	<b>10</b>
OVERVIEW	10
Story	10-11
Player Choices	11
Followers	11-12
Combat	12
HOURS OF GAME-PLAY	12
VICTORY CONDITIONS	12
<b>GAME CHARACTERS</b>	<b>12</b>
OVERVIEW	12-13
CREATING A CHARACTER	13
Useful and Useless Followers	13

<b>ENEMIES</b>	<b>13</b>
<b>WEAPONS</b>	<b>13</b>
OVERVIEW	13-14
How To Acquire Them	14
Abilities	14
<b>RENDERING SYSTEM</b>	<b>14</b>
Overview	14
Map Rendering	14
Character Rendering	15
<b>GAME ENGINE</b>	<b>15</b>
Overview	15
Scripting	15
Maps	15
Camera	15
<b>USER INTERFACE</b>	<b>16</b>
OVERVIEW	16
Dialogue	16
Combat UI	16
<b>MUSICAL SCORES AND SOUND EFFECTS</b>	<b>17</b>
OVERVIEW	17
<b>EXTRA MISCELLANEOUS STUFF</b>	<b>17</b>
Features In Development	17
<i>Procedurally Generated Enemies</i>	17
<i>Inventory and Objects</i>	17
<b>STORY APPENDIX</b>	<b>18</b>
C.A.T.T.T.L.E	18
Milkmen	18
<b>ASSETS</b>	<b>18</b>
Libraries	18
Tile Maps	18
Character Sprites	18
Music	19
Website Template	19

# Design History

We are trying to design a playable game by only implementing the first few maps due to time constraint. Our goal (if time permits) is to:

- plan all maps and the storyline
- code basic controls over the character and movement
- implement interaction between characters and enemies
- create maps appropriate with character size
- make *M.I.L.K.* compatible on every operating system of the *WOW Games* development team

**NOTE:** This design document is a living and breathing document that we, at *WOW Games*, are maintaining as we develop our game, *M.I.L.K.* Throughout this document, there will be numerous changes and updates that directly reflect the various changes and updates made to the game. Any previous design decisions will be kept in this document and will be crossed out as opposed to being simply erased. This is not only for us to look back on and reflect upon, but also for our followers to view and get a better idea of our design decisions. Crossed-out segments in our design document will most likely be followed up with highlighted text, which shows what our team decided to change. Most of the highlighted text will be between version 1.00 and version 2.00 of this design document because that was when we decided to make major design changes. Throughout this document, the words “player” and “kid” will be used interchangeably when used in certain sections in order to preserve the flow and style of writing, but one can think of them as referring to the same thing.

## Version 1.00

This is our very first crack at our game. Since we are in the early stages of the game, anything created or written in this version is subject to change as we continue developing.

1. Filled in sections: Game Overview and Feature Set
2. Started to work out story of the game. We came up with a basic story so far, but we will flesh it out later because we would rather focus on first getting a basic version of the game up and running, along with designing all of the mechanics of the game.
3. Decided on a design where there essentially isn't a main character, but the player starts off playing as one character. Once that character dies, you become another character that was previously a “follower”.
4. Decided to make our game a parody and that the main objective is to retrieve milk for cereal.

## Version 2.00

A major design change was made as we continued to create our game. We decided to change our previous design, where the player could be any character he or she wanted. We liked the idea of not having a single “main character,” but found out it would be hard to connect the audience to the characters and to have a story that flows smoothly. In addition, our new design allows us to create a combat mechanic that we

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think is really fun and intuitive. As a result of finalizing the overall design of how our game will work, this version includes many sections that were not filled in for version 1.00 of the design document.

Included in the changes are the following:

1. New design where the player plays as a boy named "Kid" and must go get milk for his mom. The kid will gain followers as he gets further in the game, and the followers will be his weapons in combat. In addition, if the player loses all of his followers in combat, then the game is over and the player must start all over again.
2. Decided on a turn-based combat system where the player calls on a follower to attack an enemy. The enemy will attack the last follower who attacked it.
3. Developed story in much more detail.
4. Got core game up and running along with deciding on the direction of the game, which allowed us to fill in most of the sections in this design document that was empty in the previous version.
5. Crossed out and updated previous designs and ideas that are no longer viable.

## **Version 2.10**

In this version, we are adding some more beef to the design document. The players can miss some details of the story, so we want to provide some extra background details to players who desire to know more about the game world and the recent events that have occurred inside the game. Due to some rearranging of some sections, we also had to do some cleaning up.

Included in the changes are:

1. Added some more background details of the story in the "Story Appendix" section.
2. Mentioned some features that are in development and possibly will be included in later versions of the game in the "Extra Miscellaneous Stuff" section.
3. Fixed some alignment issues and page indexes for the table of contents.
4. To the best of our abilities, we checked for any grammatical errors or spelling mistakes.

# Game Overview

## Philosophy

### WOW

Here at *WOW Games* we want the user to experience every single sense of the word "WOW", whether it's "WOW, that's pretty funny" or "WOW, I can't believe that just happened!" or even "WOW, that is so incredibly dumb!" (in a satirical sense, of course). WOW is an incredible word that captures a wide array of astonishment and we wish to do the same with our games.

### No PC Left Behind

Our game runs on PC, which means it is compatible with Windows, Mac, AND Linux. Compatibility on Linux is really important to us because, despite it being an amazing operating system, its compatibility with video games is lacking. Linux usually gets the short end of the stick. As a result, we require *M.I.L.K.* to run on every PC, especially Linux, so that everybody owning a PC is able to experience our game.

### Keep It Simple (and Fun) Stupid

Every game development team has their own definition of the word "fun." We at *WOW Games* believe that a fun game should not be overbearing and should not require the player to be constantly focused on learning and mastering the mechanics. A fun game should be simple and easy to play, but not excessively simple to the point that our game becomes one dimensional, repetitive, and dull. We want the player to focus less on how the game should be played and focus more on the plot, scenery, characters, and interactive environment.

## Common Questions

### What is the game?

*M.I.L.K.* is a single-player Role-Playing Game that lets the player explore a magical world and experience a relaxing kind of environment, away from the stressful "have to be number one" typical RPG mindset. It consists of a main character who is a kid that must travel long and far for the extremely rare resource of milk. Along the way, he meets characters that will later on become his followers. The followers will serve as his back-up in fights and can heal the main character or attack the enemy, while the kid himself has a wide range of attacks soldiers. The kid will call on them for attacks, which will be specific (and surprising) based on the type of enemy that they are facing. Unlike other RPGs where the player only has the same moveset for every battle, followers in *M.I.L.K.* will have different attacks for nearly every single fight. Once a character, even the main character, follower dies, that character is lost for the duration of the game and the player must then become another character among the followers the player has acquired throughout the game. If there are no more characters for the player to become then the game ends followers, then the game ends. *M.I.L.K.* is a game where the user can relax while casually flowing through the game, only to be surprised and unexpectedly die

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either be relieved to finally lose a follower that has been dragging the whole team down, or to be devastated to lose a follower that has been crucial to the player's success.

Ultimately, this game is meant to be comedic, and a parody of traditional RPGs. This game appeals to anyone who wants an old-school game that makes fun of the newest trends and games.

### **Why create this game?**

*WOW Games* has created this game for the pure enjoyment, laughter, and sometimes frustration of the player. We want to see the wide range of reactions that gamers have when playing *M.I.L.K.* Every member of this team has experienced an incredible video game that other game developers worked hard on to amaze their players. Now it's our turn to do the same and hopefully make other people feel the way that we do when we play a great video game.

### **Where does the game take place?**

*M.I.L.K.* takes place in an alternate universe where milk has become an extremely rare commodity since the mad cow disease killed almost all of the cow population. ~~There are only a select few golden cows left who can produce milk.~~ The remaining cows have fled to the isolated mountains and only produce milk whenever they see fit. Also, it is normal to see orcs, goblins, and skeletons in this world, as they all get along with humans.

### **What do I control?**

Players will be able to control the main character. ~~and all of the followers that they have acquired. The player can simply play as the main character or switch to any of the followers they wish to throughout the game.~~ In combat, the player will play as the main character they are currently controlling while all of the other characters will be supporting the player and as the main character, the player will select among a list of followers to use as "attacks" as his soldiers.

### **How many characters do I control?**

The player will be able to control 1 main character and up to 15 followers, which adds up to a total of 16 characters. We have decided to change our design decision and allow the player to just control the main character when exploring the world; however, when it comes to combat, the player can select among the followers to use as a soldier for each turn.

### **What is the main focus?**

*M.I.L.K.* focuses on a boy who must go to the grocery store and pick up some precious milk and bring it back to his mother. The main objective is as simple as that, but whether something happens to the kid on the way to store, or whether that kid has to battle various enemies that stand in his way, is something that the players must find out by playing the game.

### **What's different from other RPGs?**

Many turn-based role-playing games consist of repetitive combat and the same set of skills and attacks that a character can perform for every single game battle, but for *M.I.L.K.*, we wanted to change that. Since our combat system is not just simply one character battling an enemy, but a character that calls upon his followers to fight for him, every battle involves different attacks based on the follower and enemy type. In addition, *M.I.L.K.* does not use the traditional "lives system" that other RPGs use. For *M.I.L.K.*, we decided to make each follower count as a life. Once a follower dies in combat, not only does that character remain dead for the rest of the game, but the player essentially loses life. The player must carry on with one less follower, which will make future battles more difficult.



# Feature Set

## General Features

- No loading screens or invisible walls
- Single-player
- 32-bit color
- Turn-based combat
- Top-down perspective
- 2.5D graphics

## Gameplay

- Interesting storyline where the player has many choices between the followers he chooses to acquire ~~and which character the player chooses to play as.~~
- Unique fighting system in which the player learns which followers are good in certain situations and which followers are not.
- Meaningful consequences where, if a follower dies, there is no way to re-acquire that follower.
- Memorable character interactions where you can choose how you want to respond, leading to different outcomes.

# The Game World

## Overview

With *M.I.L.K.*, we want to include features that would make the game world as least intrusive to players as possible, while also making sure players will still be able to experience something other than their run-of-the-mill RPGs. We want the player to feel like they are in the game. Without having loading screens, players will be able to continue their experience without being disrupted and losing the flow of the experience. In order to not make the environment not feel static and stale, there are many secret places that contain optional followers and bosses which players may have missed if they didn't explore and interact with the area enough.

## No Loading Screens or Invisible Walls

Let's face it: no one likes loading screens and invisible walls that randomly block a player from entering an area and, quite frankly, they're disgusting. However, we know that they must be utilized for games of an enormous size. Fortunately, *M.I.L.K.*, can avoid these unnecessary barriers and allow the players to seamlessly explore the world as they see fit.

## Interactable Environment

The environment not only consists of a background and collidable borders, but also tiles and objects that can be interacted with. These various interactions include possible shortcuts, destroyable obstacles blocking paths, or even secret bosses and followers that would otherwise be unknown to the player if they did not do enough exploring.

# The Physical World

## Overview

The map of *M.I.L.K.* consists of two islands. Players will start on one island where the kid's home is. The players can travel all around this island; however, to progress further into the game, they must talk to a bum who will take the player to the second island where all of the key locations are. The world is captured as-is, so any weather conditions or time of day is set in the maps, as opposed to having a system that randomizes it, in order to create the atmosphere of an area that we want players to experience.

## Key Locations

- **The kid's home:** Where the game starts and ends.
- **Market:** Local farmers market on the kid's home island that sells anything that one could ever want, except for milk.
- **Coffee Shop:** Normal-looking coffee shop with regulars such as the "Boring Barista", "Not-a-Morning Person", and, of course, the "Vexing Vegan."
- **Mall:** Fancy-looking mall where all the rich elites shop at. Also, a breeding ground for useless followers such as the "Spoiled Brat" and "Entitled Jerk," so think carefully when you are choosing followers in the mall. The "Taxi Driver" follower also resides in this location, so not all followers found here are useless.
- **Forest:** Dark area with a bunch of trees that form a maze. Try not to get lost and beware of ghosts.
- **Volcano:** Extremely hot and dangerous area where the "Mad Scientist" lives.
- **Slums:** A place where no kid should wander around alone, but lucky for the kid, he has followers. Legend has it that a once prestigious doctor that lost her license lives here.
- **Mountains:** High mountains that are devoid of life, other than the fire-breathing dragon **mad cow with dragon wings** that is about to kill you. Defeat this final boss in order to retrieve some milk and return home.

## Travel

As with most RPGs, the main mode of transportation in our game is by walking. Fast travel will be possible with a taxi driver follower, but that is not a character that is accessible to the player at the beginning of the game as fast travel will require the player to have explored an area before they can fast travel to it.

## Scale

While the scale of *M.I.L.K.* cannot compete with the scale of a AAA game such as Skyrim or GTA, that doesn't mean that it is miniscule in any way. Areas in the map are able to contain multiple enemies, including bosses, along with room to spare for players who just want to explore and get a feel of the unique atmosphere of an area. The scale of *M.I.L.K.* is big enough so that players can appreciate the world without feeling like it is just a bunch of tile maps slapped together in a hurry, while also being manageable enough to offer features such as no loading screens.

## Weather / Time / Day and Night

Currently we have decided not to implement any kind of weather mechanics into our game. In addition, *M.I.L.K.* does not have a time system that would determine if it's day or night. Instead we designed areas with set weather conditions and time of day. For example, the marketplace is designed to be sunny and bright, while other areas such as the forest is a bit dark and maybe even a little bit foggy, but there are no systems in place to randomize the weather and time of day for various areas in the game.

# Single-Player Game

## Overview

*M.I.L.K.* is a single-player RPG in which the player must travel in search for some milk in a world where most of the cows have been killed off by the mad cow disease. Players will play as a kid who needs to travel around an island unknown to him in search for milk. Along the way, players will have to battle enemies that get in their way. By defeating enemies in turn-based combat, players will be able to continue their quest searching for milk and any followers that may want to join the player.

## Story

The story of *M.I.L.K.*, as implied by the name of the game, is about milk. Milk has become a rare resource due to a mad cow disease that has plagued the world. The disease was caused by the overcrowding of cows in factories that produced milk, and as a direct result of this cow crisis, the cows have all formed a resistance group called C.A.T.T.L.E. (Coalition of Angry Terrifying Troubled Territorial Livestock Enforcers), which protests the inhumane treatment of their species. The cows have agreed to provide milk for humans, but at a significantly slower rate than that of factories. This was to ensure the wellbeing of the cow being milked. In response, a number of humans

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decided to form a group of their own called the "Milkmen", which advocates human needs over cow needs. While most humans, orcs, goblins, and skeletons are not on either side, their daily lives are affected by the fighting between these two groups. The game starts with a boy being forced to get 3 drops of milk for his mother's cereal before he can return to playing video games. This simple task turns into an adventure that the kid doesn't want to go on. However, he is drugged by the bum who stands in front of the grocery store and has no choice.

The bum, who is a secret recruiter for the Milkmen, kidnaps the boy and takes him to another island in order to make him a soldier for the Milkmen. The kid has no idea of this and just wants to get some milk so he can go home and return to his video games. As a result, the kid complies with the bum. As the kid travels around this island, he is challenged along the way by various foes that get in his way. In the forest area, there is a maze made of trees in which the kid gets lost in, but he encounters a lumberjack who is being bullied by ghosts. Once the kid saves the lumberjack, the lumberjack joins the boy on his adventure and helps him cut his way out of the maze. In the volcano area, the kid battles a mad scientist who wishes to transform the world into a giant volcano, which the kid couldn't care any less about, but the scientist stands in his way of getting milk so he defeats him. Once the kid gets to the slums area, the bum takes him to the hideout for the Milkmen. The group tries to force the kid to live with them and fight for their cause, but the kid just wants to play video games, so he refuses. This results in a battle between the kid and the Milkmen. Finally, the kid then travels to the mountain area because he heard rumors of an abundance of milk being located there.

In the final area, the boy finally comes to a mountain in which the C.A.T.T.T.L.E have settled on. Upon demanding milk from the group, the kid must battle the leader of the group, which turns out to be a fire-breathing cow with dragon wings. Once the cow is defeated, the C.A.T.T.T.L.E leader surrenders and gives the kid the requested milk and even flies the kid back to his home island. Thinking that he can finally get back to playing video games, the kid returns home with the milk to give to his mom, only to find out she needs some eggs now. Thus, this leads to our sequel to this game, which will be called "E.G.G.S."

**Note:** More details on C.A.T.T.T.L.E and the Milkmen can be found in the Story Appendix section.

## Player Choices

Players will be able to choose among a variety of ways when it comes to interactions with other characters and even among interactions with the environment. The choices that the players make when it comes to interacting with potential followers lead to different outcomes and, ultimately, to a different gameplay experience. This means that players must choose carefully or else they will not be able to access a certain follower for the rest of the game. The same goes for interacting with optional enemies and even bosses. The player isn't forced to clear one area in order to unlock the "next" one. If players don't plan carefully and only have followers that are useless or not enough followers, then they will have difficulty when they have to battle tough enemies.

## Followers

Players will be able to accumulate characters that follow them as they progress throughout the game. Followers are critical to the player because not only do the followers function as “weapons” for the player, but also as lives. Once a follower goes down, so does a single “life” of the player. Once a follower dies, they are gone for the duration of the game. This can be good or bad. If the player loses a useless follower, they might rejoice, but if they lose a useful follower, then the game can become significantly more difficult. However, they might also find out later that a follower was useless for one boss, but very strong against another boss. Similarly, they might find out that they kept a follower that was strong against one boss, but defenseless against another boss. When out of combat, followers will follow the player around in a snake-like line and in certain areas they may even interact with the environment.

## Combat

*M.I.L.K.* will feature a turn-based combat system where the kid commands his followers to attack the enemy for him. The enemies will then attack and inflict damage to the follower that just attacked. Not every battle will be the same as followers will have different attacks for different enemies. It is up to the player to test out their followers in order to see which one is good for a specific situation as opposed to just having a single follower attack every turn in every single battle. In most cases, the useful followers will be better in battle than the useless followers, but that isn't the case for all battles. Having some useless followers can be a good idea, but the player needs to identify these situations. All characters will have 100 health at the beginning of each battle and will die if their health reaches 0.

## Hours of Gameplay

We are aiming for around 3-4 hours of story-driven gameplay. In total, *M.I.L.K.* should provide up to 5-6 hours of fun for the player if they decide to look for every follower in the game and defeat enemies that would otherwise be optional. In addition, players would be able to replay the game after completing it if he/she decides that they want to complete the story with another set of followers. Each run-through will be a different experience in battles and even storylines.

## Victory Conditions

In order to complete the game, the player must defeat all of the boss enemies that get in the way. Like most games, our game ends when the player is able to defeat the final boss, which happens to be a fire-breathing mad cow with dragon wings, and retrieve the last bit of milk in the world for his mom's cereal. Once the game is over, the player is done with the game; there is no sandbox and no collectables. However, if the player wishes, he/she can restart the game and try out different choices in the game and look for other followers in order to see how the story differs.

# Game Characters

## Overview

In our world for *M.I.L.K.*, the characters are very diverse, and by diverse, we mean there are humans, goblins, orcs, skeletons, and even a fire-breathing mad cow with dragon wings. In this alternative universe, goblins, orcs, skeletons, and humans all get along and see each other as equals, so that doesn't necessarily mean that all goblins, orcs, and skeletons are enemies as they traditionally are in typical RPGs. The same goes for followers, as there are all types of followers that the player can recruit.

## Creating a Character

By creating a world in which there are multiple types creatures such as humans, goblins, orcs, and skeletons that all live together really well, we are able to have a little fun when creating our characters for the game. Each character that we create in *M.I.L.K.* is designed to look like the type of character they are. We can make them whatever creature that we would like them to be. We have characters such as barista orcs, weight-lifting skeletons, goblin taxi drivers, and even annoying human vegans.

## Useful and Useless Followers

There are two main characters that *M.I.L.K.* features: useful followers and useless followers. Useful followers are followers that are able to provide services for the player other than just being an efficient weapon in the battlefield. Useful followers can interact with the environment in order to benefit the player. On the other hand, useless followers behave the way that one would expect them to behave based on the fact that we called them useless. In almost all of the battles, the useless followers can lower the main character's self-esteem or even help the enemy by healing them, but in extremely rare conditions, they can be efficient in battle. The same goes for environmental interactions, as the useless followers will be obtrusive and even get the main character in trouble.

## Enemies

The kid is hell-bent on finding some milk so he can get back home and continue playing some video games even if that means taking care of anyone who gets in his way. Enemies range from angry vegans who want to stop the kid from getting milk, to milk-hoarding goblins who are too greedy to share. In *M.I.L.K.*, there are no specific creatures that are known to be the enemy. While orcs, goblins, and skeletons would normally be recognized as enemies in traditional RPGs, they can be either friend or foe in our game since there will be goblin and skeleton followers along with enemies from all species. The main character will need to defeat his enemies by relying on his followers in combat. In order for the kid to win in combat, the enemy needs to lose all of its health, which is not always an easy task to accomplish since some followers are weak to specific enemies and even aid the enemy in some cases.

# Weapons

## Overview

There are weapons in *M.I.L.K.*; however, we have decided to ditch the conventional system of having lootable weapons that can be equipped, and went with a system where the followers that the player has acquired so far, serve as the “weapons” that they can use in combat. Followers can be found throughout the entire map and there will be “useful” and “useless” followers. Useful followers will aid the player in other ways other than in combat such as allowing the player to access a shortcut or even being able to open locked doors. “Useless” followers are constantly annoying the player, forcing the player to fight enemies that the player may or may not want to fight, and occasionally helping the enemies when in combat. These followers/weapons serve multiple purposes because they also serve as lives for the player. Once all followers that the player currently has dies in combat, the game is over. In addition, certain followers will be able to provide services to the player outside of combat such as allowing fast travel.

## How To Acquire Them

Followers will be distributed throughout the map in such a way that makes sense in each area of the map. For instance, the sunbather follower can be found in the beach area, the lumberjack follower can be found in the forest area, etc. Followers will become an ally of the player if the player is able to complete a task or quest for them. These tasks may be as simple as rubbing sunscreen all over a sunbather or as annoying as having to search all over the map for a taxi driver's keys.

## Abilities

All followers will have an ability that is not only unique to them, but also unique for every single battle. In order for us to not make combat feel stale and repetitive, we have decided to make every battle different by having followers have different abilities for every single battle. The ability that the follower has for a specific battle will depend on the type of character the follower is as well as the type of character the enemy is. By having this mechanic in the game, we can introduce the idea of certain types of characters being effective or ineffective against certain enemies.

# Rendering System

## Overview

*M.I.L.K.* uses the SFML library to render textured 2D quads on the GPU. The engine handles creating tile maps, animating character sprites, and composing UI elements, but relegates to SFML the work of loading assets and submitting commands to the GPU.

## Map Rendering

Maps are 30x30 tile zones with multiple layers for a 2.5D effect. Each layer is stitched together from multiple tilesets, supporting both an easier workflow and more visually complex maps. Transparency is enabled in order to support objects that appear in front or behind each other, which includes the player and other characters.

## Character Rendering

Each character has a standard tilesheet which contains several frames for animations such as idling, walking, and attacking. These animations are composed to create more complicated attack sequences in *M.I.L.K.*

# Game Engine

## Overview

*M.I.L.K.*'s game engine is custom-built to match the functionality of traditional top-down 2D RPG engines. The engine has support for rendering tile maps, scripting characters, and all basic functionality found in most tile-based engines. The toolchain for development consists mostly of using Tiled Map Editor to develop maps and write scripts for characters.

## Scripting

With the inclusion of a scripting system using the language ChaiScript, the game engine is made easily extensible and easier to program with. Supported functions include playing character animations, character movement, map loading, and teleportation. The scripts support delayed execution so that an action, such as player animation, can execute the next action, like teleport, only after the first action has finished. With Tiled, each character can be given several scripts, which are then executed when certain conditions occur, e.g. the player interacts with the character. *M.I.L.K.* uses custom scripts for initiating the combat and follower system, and makes heavy use of scripting in the combat system for combat sequences and user input.

## Maps

Maps serve as both the visual and physical representation of *M.I.L.K.*'s world. The engine is responsible for loading maps from the XML-based format created by Tiled Map Editor. The maps have several visual layers, giving the sense that the player is in a 2.5D world. Additionally, the engine keeps track of all objects in the maps. Characters can be placed within Tiled or dynamically onto a map, after which the character essentially becomes part of *M.I.L.K.*'s world, which allows the characters to be interacted with, made a follower, or fought against in combat. The map also serves as the grid for collision



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detection so that tile-based collision can be specified in Tiled, and, thereafter, used in player movement or character pathfinding.

## Camera

*M.I.L.K.* will feature a top-down view. The camera will follow the player around and maintaining character as the center point of the camera. During combat, the view is still top-down, but now the camera is fixed upon the center of the battlefield.

# User Interface

## Overview

The design of the UI aims to be as simple and intuitive as possible. We do not want the UI to get in the way of the players' experience, allowing them to be able to just play our game without having to worry about how to access a certain menu or dealing with annoying UI objects that distract them from the game. For that reason, we have decided to be as minimal as possible when it comes to mechanics related to the UI. This allows the player to just have a view of the character and the world around them without a bunch of other things such as a mini-map and inventory slots cluttering the screen. Other than dialogue and combat, players will just have the game right in front of their face without any distractions.

## Dialogue

All dialogue in the game will be presented in a rectangular text box and the spacebar can be used to move on to the next bit of text. Players will also be prompted to choose how they wish to respond to other characters. Prompts will be displayed above the dialogue text box and the player can use the up and down arrow keys to navigate the menu, and the spacebar to select an option.

## Combat UI

The UI for combat is very similar to the UI for the dialogue. When the battle starts, players be presented with all of the characters involved in the fight, with a health bar over the players' and enemy's head. A list will prompt players to choose which follower they wish to attack the enemy with. Once a follower is chosen, the attack animations will start, which will then be followed with some dialogue, telling the players what attack the follower used. Then the enemy will attack back against the follower being used, and dialogue will again appear telling the players what attack the enemy used. Once the dialogue is complete, players will once again be prompted by a list of followers to choose. This cycle continues until either the enemy dies or the player runs out of followers.

# Music

## Overview

Our music was created using a procedural music generator. We generated each song using custom seeds to fit our music to the theme of the game. As each area of the game has a different look and feel, we wanted our music to reflect the changes.

# Extra Miscellaneous Stuff

## Features in Development

### Procedurally Generated Enemies

In order to provide a new experience every time a player re-enters an area, we want to be able to procedurally generate enemies. Enemies that are not bosses would be procedurally generated as opposed to being hard-coded. Therefore, every time you enter an area, there will be different monsters that fit the theme of the area. For example, if you enter the forest area for the first time, you may encounter a bear, but the second time around, you may encounter a wild hog or even a ghost as an enemy.

### Inventory and Objects

Initially, we had a different design for the game, but when we decided to change it, items and the inventory system became much less important than they previously were at the beginning. Due to this change, implementation of an inventory system was pushed back in order for us to work on more crucial features. We understand that in any RPG, items and loot are necessary, so we are actively working on it to include into the game on a later date. "Weapons", such as swords and guns, will not be in the game since the weapons for the players are essentially the followers. However, armor and power-up items are something we want to include in the game, which would allow players to make followers stronger, customize the group, or even unlock new attacks.

## Story Appendix

**C.A.T.T.T.L.E** (Coalition of Angry Terrifying Troubled Territorial Livestock Enforcers):

This group quickly formed after the widespread outbreak of the mad cow disease in 2016. The members include cows and cows' rights sympathizers who want cows to have the same rights as humans, orcs, goblins, and skeletons. All cows have decided to not to suffer any longer from being forced to produce milk at an absurd rate and, instead, produce milk for the rest of the species at a rate that will ensure the wellbeing of the cows. As a direct result, milk is now considered a luxury item as opposed to an everyday commodity.

**Milkmen:** A rebel group who are sick of the Cows' Rights Movement and want as much milk as they desire whenever they want. They are obsessed with going back to the old days and are willing to do anything in order to achieve their goals. They are known for their hateful acts against cows and supporters of the Cows' Rights movement. Kidnapping children and raising them to fight for their cause is a recruit tactic they have become notorious for.

## Assets

### Libraries

In place of a game engine such as Unity or Unreal, we instead utilized a library to render our game. We decided to go with Simple and Fast Multimedia Library.

**Website:** <http://sfml-dev.org/index.php>

For scripting, we used a scripting language called ChaiScript.

**Website:** <http://chaiscript.com/>

To load maps, we needed to parse the XML files, so we used pugixml.

**Website:** <http://pugixml.org/>

### Tile Maps

Several tilesets from different creators on the Open Game Art website were used in our game.

**Website:** <http://opengameart.org/>

### Character Sprites

All of our characters used in the game were generated using an open art character generator.

**Website:** <http://gaurav.munjal.us/Universal-LPC-Spritesheet-Character-Generator/>

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## **Music**

Music in the game was created with Abundant Music, a procedural music generator.

**Website:** <http://abundant-music.com>

## **Website Template**

Our marketing website at [wowgames.github.io](http://wowgames.github.io) is based on an open-source bootstrap theme for Jekyll called Solid.

**Website:** <https://github.com/st4ple/solid-jekyll>

We also borrowed a few images for some news posts and for the M.I.L.K. gamepage on the website.

### **Websites:**

<http://www.funny-joke-pictures.com/2013/11/wrong-lunar-landing-moon-conspiracy.html>

<https://pastormarkrobinson.com/2014/12/11/in-the-beginning/>

<http://www.clipartkid.com/race-finish-line-cliparts/>

<http://www.ckuk.org.uk/index.php/ck-learn/play/games/keyboard-games/>