**SpiderBro Game Bible**

*Documentation Manual v0.1*

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**Outline**

*Goal: Without being killed: prevent enemy insects from entering the human’s mouth, until the timer reaches 0.*

*Context: You are a pet spider who loves and cares for his/her human master.*

*Location: Currently an empty room, but should be bedroom and many other locations for future levels*

**Unity Version**

*5.2.1*

We will be using version 5.2.1f1 (44735ea161b3)

<https://unity3d.com/unity/whats-new/unity-5.2.1>

Please do not use a later version/update your unity version past 5.2.1, without first approving it with the rest of the team. We usually do not need the bug fixes/new features from newer updates to Unity and updating can end up breaking the build and set us back a lot. If there’s a good reason to update, we can discuss that and approve it if deemed necessary - otherwise just stick to 5.2.1

**Player Object**

The Player Object is responsible for allowing the player to interact with the game. It represents the player’s avatar as a spider. It has a couple of key features:

* The Cameras - Has both the first person and third person cameras attached to it
* The player model (a spider in this case)
* Hitboxes represent how the player can attack and be a
* Sounds from various movements (footsteps, attack sounds, etc.)
* Player stats such hp, xp, etc.

The Player Object is available as a prefab, but should be added to the scene to function.

**Enemy Objects**

The enemy object represents the threat to the player who is the spider and the spider’s master. The goals of the enemy object:

* Move straight into the spider’s master mouth.
* If they see the spider, attack the spider.

The enemy objects are represented by different kinds of insects. These insects have different attributes but the same goals.

* The cockroach, is the normal enemy unit, fast and easy to kill.
* The worm/centipede/beetle, is the heavy enemy unit, slow but difficult to kill.
* The moth, is medium speed, and easy to kill but will fly (if time permitting)

Depending on the enemy type, they will have the same behavior and will eventually use the same script to handle their pathfinding and movement.

**AI Design**

Milestone 2: The enemy AI simply locate the coordinates for the target and move towards the location. If they touch with the mouth target, then the enemy object will be destroyed and the mouth will lose health points. The game master object keeps track of the game timer and the handles the win/lose logic. The spawner ai will randomly select a range of coordinates and instantiate more enemies when the enemy numbers are running low. When the game, the game master object will remove all spawners and enemies from the map.

Milestone 3: The AI will be similar to milestone 2, with some additions with the enemy attacking the player. Enemies will seek if player is nearby, if the player is not nearby the enemy will head towards the mouth target. For navigation for a more complex environment, there will be a pathfinding system that will find the nearest node and calculate the shortest path to the mouth using Dijkstra’s algorithm. The spawners will have an addition to their random range placement by checking the elevation to establish a seamless spawn by using a raytrace to determine its appropriate elevation range.

Milestone 4: Depending on the future feedback and the backlog, the ai will be the same as Milestone 3, having the enemy climb over obstacles and behaviors if there are different enemy types.

**Map Design**

*Milestone 2*: simple boxy version of the bedroom setting to test out player functionality and the majority of the basic game play mechanics.

*Milestone 3*: rough of bedroom setting with player functionality, enemy ai, and the mouth objective in place and any balance changes from the play testing.

The bedroom setting will more detailed than milestone with a larger room with a bed(bed frame, mattress, pillow), desk(drawers and computer?), dresser, cage and more simple clutter objects that will be obstructions for the player and enemy units. Simple materials used in the items in the room and lighting to give a simple representation of the room that will be polished for the final milestone.

*Milestone 4*: polished version of the bedroom setting with final player functionality, enemy ai, mouth objective. The final map will have more environmental aspects in lighting, sounds, assets, materials, and layout from the comments from the play testers from milestone 3 to enhance balancing.

**Version Control**

For the version Control for the development of the game, the team will be using github with git.

The address for the repository where spiderbro is being kept is the following:

Repository info

[*https://github.com/CS3540-SpiderBro/spiderbro.git*](https://github.com/CS3540-SpiderBro/spiderbro.git)

Where the branches from the team will be pushed into the develop branch.