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[Company address]

Advanced HTML5 Game

Game Design Document

Version 1.0

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# Advanced HTML5 Game

## Game Overview

### Team Personnel

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| Justin Morritt |
| Levi Squires |
| Tim Greason |

### Team goals

* Gather plenty of 2D assets, Structure sprite images as well as sprite coordinate systems.
* Gather Sound Effects, Game Music, Embed this within JavaScript at appropriate locations.
* Set up a Base HTML structure for hosting the Game/Canvas in.
* Set up a Script Loading/ DOM structure for dealing with scripts as well as HTML elements through the JavaScript.
* Build a Simple yet Elegant User Interface, This user interface will host all game statistics that are congruent with the real-time environment.
* The Heads up Display or "UI" will be an overlaying Structure using HTML/CSS. This will dynamically update as the events in the Canvas unfold.
* Set up a Canvas Environment that is linked with the custom DOM module. The Canvas will host all the characters/map and game activity.
* Create a Map and Link it into the Collision Module , This will make walls solid and lay out the foundation of where we want our characters to be able to walk. Around this time begin to link in small sprite animations to the main map (sliding doors, sprinklers, animations...etc.)
* Generate Spawn coding, this will spawn in items in random locations in the map, as well as inmates will spawn in different cells every time.
* Work on the collision, as well as implement a fighting and respect mechanic between inmates. This mechanic also carries over to the guards.
* Create an inventory for our player, as well as implement the health bars and Respect Bars above characters heads.
* Implement a crafting system, as well as a timing system that will be linked into the "UI" this will make the game tick.
* At this point the player should be able to move around the map. The NPC's Artificial intelligence will be programmed.
* The NPC’s “AI" will vary from inmate to guard, inmates will walk around freely and attend the lunch room at noon, they will also return to their cells at night.
* Link all Path finding Algorithms to web workers, this will increase performance dramatically with the expensive CPU processing needed.
* Guards "AI" will be programmed to have them patrolling hallways and in areas where items may spawn. This creates a situation where the player must
* Stealthily gather items for crafting. The Guards, if looking in a player’s general direction will catch them if they are acquiring materials. They will
* Strip search you and send you to your cell and you will spend the rest of the day in there. The next day will appear and a player may have lost some precious progress.
* Secret Areas will be implemented, these may only be accessed after certain items are crafted or certain events are completed.
* Scores will be implemented, these will be tallied up after a player dies or escapes! The combinations of point modifiers will be extensive.
* Point Modifiers taken into consideration: Days Survived, Fights Won, Items Crafted, Mini Objectives Complete, Total Respect Gain From inmates.

### TEAM WISHLIST

* Create Save/Continue Files for players that can’t finish a whole run and want access at a later time.
* Mouse friend that follows you, increasing base health because of an overall Morale boost and better outlook towards life.
* Different difficulty levels

## Plot And Setting Information

### Setting

The entire game will take place within a prison complex. Areas include the cell block, cafeteria, yard, library, gym and secret areas. Gameplay will take place during the day so all the settings will be will light using lights or sunlight. Hidden/forbidden areas will have a darker tone since the player will be using stealth through these sections. Since the game takes place in a prison many of the colors used will be bland greys, black or whites since this reflects many real life prisons.

### Plot

Upon starting the game the player will be given background on the crime they have committed and the sentence they have received (crime will be randomly chosen among a list of several different crimes available). After this introduction the player will start their sentence and continue to play until they reach a win or lose condition.

## Core Game play

### Change management process steps

Our team will be using “Git” for our version control, all of our changes will be documented as they are committed. A message will be attached to every commit stating exactly what was added, or modified. This will be time stamped and can easily be viewed from the Git Website. All changes to code are documented and highlighted on the website so we can view at ease what has been changed.

### Change management process flow

### How to Play

The player will be waking up to a new world of order. Life has thrown them a curve ball and they ended up in prison. The player will receive their randomly generated jail sentence and a breakdown of the crimes they have committed. The crimes a player has commit will shape the world around them. These crimes will affect how long it will take for you to be released on good behavior, as well as affect the respect rating of other inmates towards you. Randomly generated jail sentences will most likely be different every time a player goes for a run of Prison Escape. You as the main character, want to escape from jail as fast as possible (Getting out on good behavior is also an option).

### HOw To Lose

A player will lose the game in many different fashions all stemming down to death. Whether you get in a fight with another inmate due to lack of respect or get caught by a guard and beaten down. If a player can’t survive the fight they will die and lose the entire game. This game is a somewhat rogue game where a player tries to go as long as they can to beat the game. Each new game is completely random so the possibilities are endless of how ones time in prison is spent. One thing is for sure, a player will try to stealthily complete objectives to get out of prison quicker. Armor and weapons can be a great asset to staying alive, but don't get caught with them. Players caught with weapons and armor while completing an objective will have their sentence extended, thus making it a harder "Run" to complete.

## EnviroMental Elements

### Environments

### Prison: cells, cafeteria, yard, library, gym, supply room, hallways between areas.

### Schedule (5-8 minutes per day)

### Early morning (access to cell block)

### Lunch (access to cafeteria only)

### Free time (access to yard, library, gym and cell block)

### Night (sent back to cell and day cycle resets)

### Characters

### Main Character

### Guards

### Randomly generated name

### Other prisoners

### Randomly generated name

### Prison Informant (tells you good info)

### Weapons

* Makeshift Shivs
* Loaded Sock
* Extension Cord

### Crafting

## Examples of craft able items:

## Makeshift key - these will be made from combining hairpins with spoons or forks.

## Shiv - Different Shivs will be created from different combinations of Crafting, the "Toothbrush Shiv", Razor Blade Shiv" for a few examples.

## Thick shirt (shirt with a book to protect from attacks) - extra shirts will be given to players after completing mini objectives , usually an inmate that respects you will give you an extra shirt as a form of protection. This will lower the damage taken from stabs.

## Loaded Sock - When a player finds a dirty sock and combines it with a rock they will have the most primitive weapon, the "Loaded Sock"

## Materials

## Dirty Sock - This will be found at random, will be very obvious, it’s one of the first weapons a player can create to protect themselves.

## Hairpin - These will be needed to craft makeshift keys, they will be very tiny to see but the reward is great when a player can access secret areas.

## Toothbrush - these will be given to a player at the beginning of the game. The player when combining a toothbrush with a razor blade will make a "shiv".

## Razor Blade - found from a dirty razor, used in combination with forks and spoons to make a "shiv"

## Broken glass - this will be collected after a player finds a light bulb that he can stealthily break.

## Rock - Rocks will be spawned in random locations, you still need to be careful when picking them up.

## Spoon - Spoon's will be stolen from the cafeteria, these will be very hard to steal.

## Knife - Knives will be extremely hard to steal from the cafeteria, a person must be very stealthy.

## Fork - Forks will be stolen from the cafeteria also, these can be crafted into a variety of items. (Same as spoon)

## File - Files will be found in random secret rooms, these are rare and will lower your sentence when found.

## Interface Usage

### Mouse

### A player may play our game entirely using just a mouse. The only button necessary would be to click. This is just an option for extreme casual players. A person may just click on the ground where they want their character to walk and the character will walk there. This entire mechanic can be used to navigate the entire map as well as to trigger events. A player may click on objects in the world to perform actions needed to complete specific tasks. The entire fight aspect will be utilized by clicking on the person you are in a fight with or clicking on the ground away from the fight to avoid an incoming hit.

### Keyboard

### Depending on how a player wants to play they could use the keyboard to interact with the world. The Arrow keys as well as the WSAD keys will be set for walking the space bar will be used for interaction with the world. Space will (punch, stab, open doors, pick-up items, etc…).

### Mobile Touch screen

The controls for the mobile version of this game will be very similar to the mouse controls. A player will click on the screen of their phone/tablet, the character will follow where they click on the ground. The character will also complete actions with a simple click of the finger on the screen. This leaves the game still simple enough for the player to focus on goals, timing, and all the important factors in escaping prison.

## Menus and General Game Usage

### Main Menu

* Start Game - this will prompt the user with a name input. The player will enter their name and the journey will begin.
* Continue Game(wish-list)
* High Scores
* About Game
* Exit Game

### In Game Menu

* Resume Game
* Settings
* Exit

### Options Menu

* Sound Options - turn sound effects on or off, turn music on or off.
* Difficulty (wish-list) - this may be implemented after all of our goals are completed. Easy, Medium, Hard will be our options. These options will increase or decrease your base health in the game. Will also make items spawn more rarely.