Our team of 4

- **Jennifer**
- **Michael**
- **Emily**
- **Amanda**

What the game is

- **Farming puzzle RPG**
  - **Similar to Monument Valley, Harvest Moon, and Stardew Valley**
- **Two primary gameplay states**
  - **Farm**
  - **Puzzle**
- **Farm**
  - **3D unbound movement**
  - **Plant crops**
  - **Interact with merchants**
  - **Gain income for usage/progress in puzzle**
  - **Livestock for consistent income [No failure possible in farm state, more of an intermediate]**
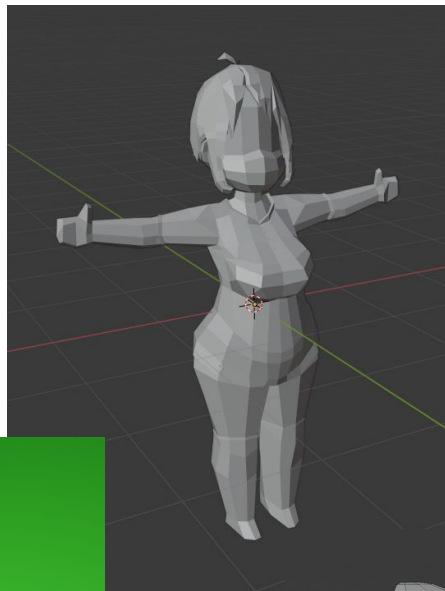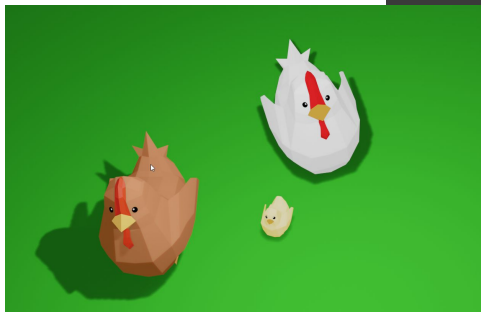 - **Crop timer**

What the game is
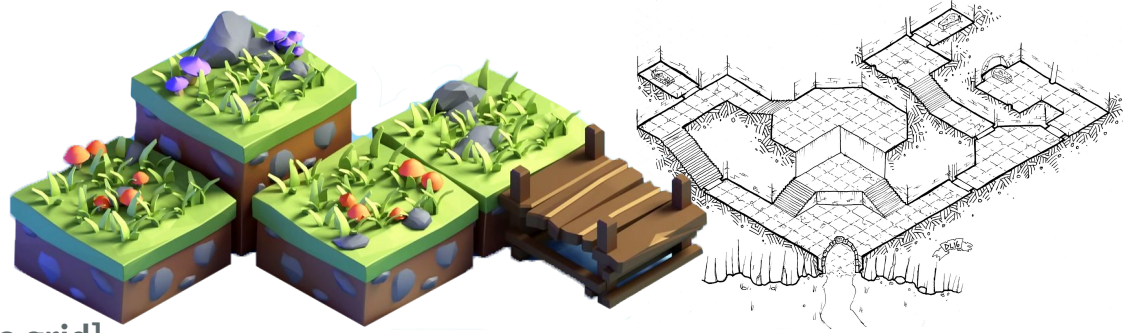
- **Puzzle**
  - **Isometric bound movement [to grid]**
  - **Utilizes farming themed skills to solve puzzles [water, jump, planting, etc. TBD]**
  - **Avoid/fight enemies**
  - **Utilizes slingshot with seeds for ammo [encourages decision on using your income to remove enemies]**
  - **3 well designed and intricate puzzle levels [Depending on how large the levels are and how difficult/time consuming to design, this may change]**
  - **Puzzle wraps around a three dimensional column/cylinder [When you walk around the corner of the puzzle the camera swings to the corner you went around to reveal more of the level]**
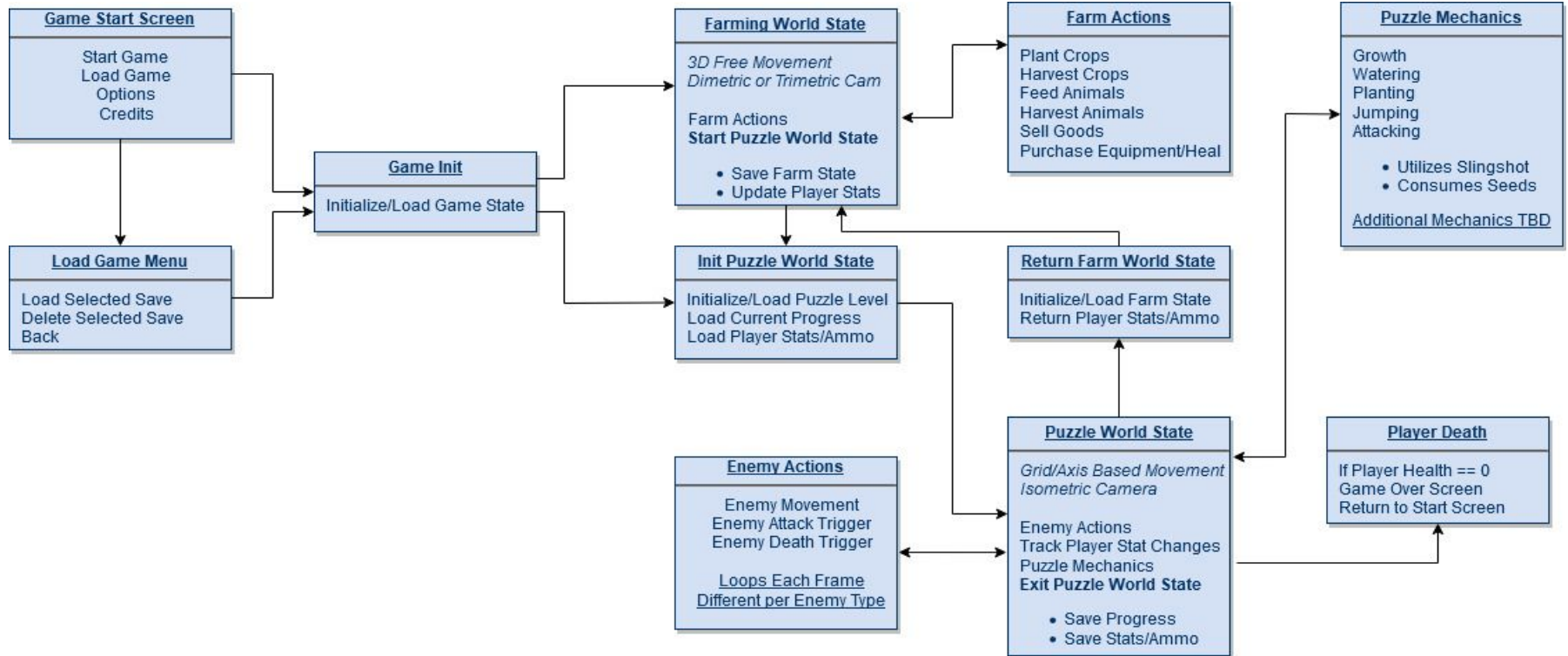
Platform and why we decided to make the game

- Unreal
- Blender
- PC - Windows, MAC, linux
- XBOX / PS4 controller

- Farming games are fun and relaxing, but lack progression
- We wanted to take an existing genre, and add puzzles and levels
- We still want to preserve the calming pace, but have more goals the player can achieve
- I really like cute things.

Art and Audio

- **Jennifer is making the models in Blender**
- **Background will be found online**
  - **Tile materials will use Bastion textures**
- **Music will be found online**
  - **Calming**
  - **Relaxing music**
  - **Link**
  - **Link**
- **Sound effects**
  - **Will attempt to find royalty free**
  - **Otherwise, will be lovingly pilfered from Youtube**

Development Plan

Game Start Screen

Start Game
Load Game
Options
Credits

Load Game Menu

Load Selected Save
Delete Selected Save
Back

Game Init

Initialize/Load Game State

Farming World State

3D Free Movement
Dimetric or Trimetric Cam

Farm Actions
Start Puzzle World State

- Save Farm State
- Update Player Stats

Farm Actions

Plant Crops
Harvest Crops
Feed Animals
Harvest Animals
Sell Goods
Purchase Equipment/Heal

Puzzle Mechanics

Growth
Watering
Planting
Jumping
Attacking

- Utilizes Slingshot
- Consumes Seeds

Additional Mechanics TBD

Init Puzzle World State

Initialize/Load Puzzle Level
Load Current Progress
Load Player Stats/Ammo

Return Farm World State

Initialize/Load Farm State
Return Player Stats/Ammo

Enemy Actions

Enemy Movement
Enemy Attack Trigger
Enemy Death Trigger

Loops Each Frame
Different per Enemy Type

Puzzle World State

Grid/Axis Based Movement
Isometric Camera

Enemy Actions
Track Player Stat Changes
Puzzle Mechanics
Exit Puzzle World State

- Save Progress
- Save Stats/Ammo

Player Death

If Player Health == 0
Game Over Screen
Return to Start Screen

Scheduling and Work Structure

Plan on using Agile development approach - Priority based task list that is sorted and distributed based on estimated time to complete.

This allows us the flexibility to modify the workload and jobs of individual team members to better suit their individual interests, without forcing them to be locked into one role.

- Sprint 1 Ends - 9/25 [Proposal Date]
- Sprint 2 Ends - 10/9 [First Playable]
- Sprint 3 Ends - 11/18 [Play Testing]
- Sprint 4 Ends - 12/11 [Final Game Day]

General Breakdown of Roles

These are the current general roles of the members, however we will use Agile to further divide the more specific roles in the future.

- **Jennifer - Art and Design**
  - **3D Modeling in Blender**
  - **Level design/Enemy design**
  - **Animations**
  - **Importing assets to Unreal**
- **Michael - Gameplay**
  - **Lighting Design**
  - **Enemy AI**
  - **Progression System**
  - **Physics/Collision System**

- **Emily - Gameplay**
  - **Health system**
  - **Weather system**
  - **Save system**
  - **Crop System**
- **Amanda - Gameplay**
  - **Livestock AI**
  - **NPC AI**
  - **Menu System**
  - **Inventory System**

Scheduling and Work Structure (cntd.)

- Sprint 1 - Finish initial proposal, Design document, and Unreal tutorials. Obtain the art assets and placeholders.
- Sprint 2 [First Playable] - Create the Farm world state, plant/harvest cycle of one crop, Create the first puzzle floor [Map design minimum], successfully transition from Start -> one world state to the other while keeping relevant stats, have movement implemented. Saving and Loading implemented.
- Sprint 3 Ends - 11/18 [Play Testing] - Implement the Puzzle mechanics, Have the enemy ai running in the puzzle states, implement the weather system, implement livestock, implement merchant system, have at least 3 puzzles completed.
- Sprint 4 Ends - 12/11 [Final Game Day] - Additional polish and stretch goals

Possible Stretch Goals

- **Multiple types of crops**
- **Additional puzzle stages**
- **Procedurally generated puzzle stages**
- **More diverse weather conditions**
- **Weather effects enemy ai patterns**
- **Endless mode**
- **Custom artwork for tileset**

Game Mechanics

- **Interactive**
  - **Main character**
- **Player movement**
  - **3rd person/camera shifting**
  - **Uses controller**
- **AI Movement**
  - **Enemies**
  - **Livestock**
- **State Machine**
  - **State of the crop**
  - **State of the world**
  - **Victory state/loss state, etc**
  - **Game State [Farm or Puzzle]**
  - **Enemy - Aggro vs Defensive vs Passive**
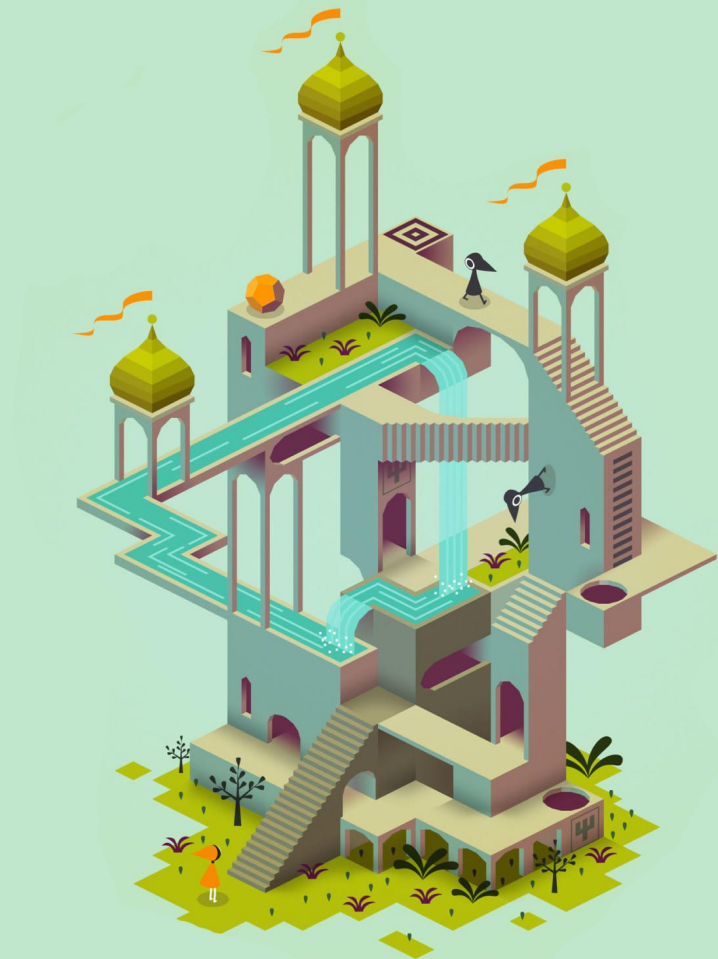
Game Mechanics (continued)

- **Randomness**
  - **Weather**
  - **Livestock movement/animations**
- **Collision**
  - **Slingshot ammo colliding with enemy**
  - **Actors not falling off/through world**
  - **Wall detection**
  - **Livestock detects player colliding into them**
- **Decision Making**
  - **Enemy**
  - **Livestock**