Biddy Biddy Bom Bom Turtle

By: Jordan Adriano

1. Title Page

1.1- Game Name

This 3D game is called "Biddy Biddy Bom Bom Turtle" solely created by Jordan Adriano within the Unity editor.

2. Game Overview

2.1- Game Concept

Biddy Biddy Bom Bom Turtle is a cute free roaming game created in Unity that was inspired by "Untitled Goose Game" developed by House House and composed by Dan Golding. Within this 3rd person game, the player will be able to speak to 4 non-person players to obtain 4 simple tasks. The player will have to explore the map, find the objects, and return them all to win the game.

2.2- Genre

The Genre of Biddy Bidd Bom Bom Turtle is an independent indie adventure game. This is a, small, developed game without financial or technical support that players explore a map to complete tasks.

2.3- Target Audience

The target audience is mostly that love to explore large maps. Kids or adults of all ages are welcomed as this game has simple mechanics that can be enjoyed by anyone.

2.4- Game Flow Summery

The player will move throughout the game and map using simple ragdoll mechanics. The player's model may be able to walk, but the player will use the W, A ,S , and D keys to push the turtle around causing it to rotate on its axes replicating a ragdoll effect. In addition, the player can jump using the spacebar to jump into collectables.

2.5- **Look and Feel**

The game uses a simple low poly style throughout the game to create a cute adventurous ambiance. Although the game does not use any demanding rendering, there does seem to be choppy framework. This game is not yet optimized for higher frame rate due to time and resource constraints.

3. Gameplay and Mechanics

3.1- **Gameplay**

The game will progress by the player collecting various objects for each non-person player. Objects will be scattered across the map, and some might be hidden in various parts. Each mission will have the player collecting a specific item to meet the non-person player's criteria. Each task must be met to win the game. Some objects might be challenging to the player due to the location or height. Furthermore, the player must solely figure out that they must talk to non-person player's to be given tasks. This can prove to be crucial if the player never decides to talk to a single non-person player. Finally, the order of tasks is non existing to reenforce the ambiance of an adventure.

3.2- **Mechanics**

The mechanics of the game are very simple. The player will be tasked to explore and reach out to non-person players to receive tasks and ultimately complete each task. The player is free to take their time as no task is urgent or tasked. Although the tasks are not sequence dependent, it is important that the player does end up completing all the tasks.

Player model mechanics take advantage of the W,A,S, and D keys on the keyboard to move the player around. In respects to the standard player orientation, the keys will point towards the direction they wish the model to move towards. This action can be achieved by a player movement C# script created and applied to within Unity. Once connected, the turtle model is attached and speed and jump force can be hard programmed within the Unity Editor.

The player's turtle model is limited to the physics of gravity and pivot points. The turtle model is equipped with a rigidbody that optimized the players box colliders to link them with gravity. In addition, the rigidbody and mixed array of colliders will also ensure that the player does not fall through the map and stop applying the negative 9.81 y force towards the play. Its also important to note that gravity uses the mass and acceleration in respects to delta time to create a more realistic fall. The turtle's mass and

drag force can be adjusted in the unity editor. Most objects throughout the map are also following simple physical mechanics and can be pushed by the player depending on the drag and mass ratio.

The player is free to roam around and interact with a majority of items on the map. Vegetables, chairs, food, boxes, and even cars can be moved by the player moving into them. The player is free to cause complete chaos as they move or fling objects around. This mechanic can create a better sense of freedom throughout the game.

A general user interface was created for the player to keep track of their items collected throughout their adventure. Found on the top left corner of the players point of view. A pane with text was created to always be displayed on the players camera. Acorns, tools, rare balls, and keys can be quantitatively inspected within the simple HUD. Furthermore, this same method was implemented to create the intro and outro screen of the game but takes advantage of buttons as a way of navigation. The start screen has a start and quit button that calls a C# script to navigate the games scenes. If the player clicks the play button, the script will increment the scene management by one. This would ultimately load the next portion of the game to play. In contrast, the ending screen only has a finish button that will call a quit function to close the game and thank the player for playing.

4. Story, Setting, and Character

4.1- **Story and Narrative**

Biddy Biddy Bom Bom Turtle is an adventure game where the player follows a turtle to make new friends in search for a carrot to eat. Surprisingly, this turtle has never seen a carrot and drives to search far and wide for the carrots only told in stories. In the midst of the turtles adventure, they will make friends with 4 animals. His new friends will consist of a squirrel who lost his acorns, a bird who wants to see a rare soccer ball, a hawk who need wrenches, and a fellow turtle who needs a blue key. The turtle will set off to help his few friends exploring the multi leveled map. The entire map consists of a park, parking lot, road, magical forest, town, highway, funeral home, quarry, and a water treatment facility. He will explore these places to help his friends as they promised to reward him a few carrots for his help.

4.2- **General Look and Feel of World**

The world will be, consistently, cute as the player traves from section to section. The park will have a warm invitation as the player spawns in. The first road will help direct the player to explore the

map and interact with anything within the vicinity. It isn't until the player reaches the highway that they are presented with a splitting path. Although the player will eventually explore both, this will create the ambiance of adventure and drive the player to not be afraid to explore the map entirely.

5. Areas of the map

A complete visual of each level can be found within *section 10*.

Playground– this section is the spawn point of the player and consists of a fun park to for the player to experiment the basics. There are soccer balls, NPCs, slides, benches, and even hills to interact with. In addition, a mixture of dirt, sand, grass, and flowers complete the ambiance of a fun park. The park connects to the mystical forest and town using the parking lot and road. This section is important because it contains a key, two acorns, and introduces the player to the main game.

Mystical Forest– this section consists of different color trees to obtain the attention of the player. This forest can be entered by straying off the path of the road. The forest has a clear path of dirt and flowers that can be easily understood by the player. This path will lead into the forest and will introduce the player to the first NPC squirrel to hunt acorns. This section will have a quest and a single acorn to collect.

Town- The small town can be entered from the first road and is large to explore. This section has a hotdog stand, tables, chairs, and boxes to interact with. There is a stone path that will guide the player around the town. Along the path is more props consisting of lights, bus stops, trash, and fire hydrants. In the center of the town is a church park. This will be the location of another NPC that will ask the player to locate rare soccer balls. The player can find quest items scattered across the town.

Highway- the highway will be directly met once the player exits the town. The highway will start with a bridge and lead to a car crash that will also hide quest items. The player will have free range to play with the cars and explore the crash scene. After the player has moved past the crash, they will follow the highway to a split in ways. The player will have to choose to either head to the left to the quarry or right to the funeral home. The player will not be limited as they can explore the other once done. Furthermore,

The player also has the option to jump off the highway bridge and take a shortcut to the quarry or water treatment facility.

Funeral Home- The funeral home is a gloomy place filled with plaques and tombstones. This area only leads to the still of a mountain further emphasizing the gloomy ambiance. Tombstones will have either pots or candles on top to complete the scene. A couple of quest items can be found hiding behind tombstones. This area does not lead anywhere else and will force the player to head back to the highway.

Quarry- The Quarry is a wide area consisting of a mechanic shop. This whole area can be found under the bridge. Full of mud, houses, and cars, the quarry hosts a quest for a mechanic animal looking for some tools. The player is free to push the cars and cause complete chaos for fun. The quarry only leads to the water treatment facility found south of the mechanic shop.

Water Treatment Facility- the water treatment facility is a small area found under the bridge. This place can be entered by either walking south of the quarry or jumping off the bridge. This facility has a parking lot of cars and hides trash under the bridge. This area is supposed to be off limits to unauthorized personnel. The player is free to push the cars and find hidden quest items. This area does not lead anywhere else and will force the player to head back to the quarry.

6. Interface

6.1- **Visual System**

The player will have a HUD that can be found in the tope left corner of the player's point of view or camera. This simple HUD will display the quantity of quest items that was obtained throughout the adventure. A C# file is used to constantly update the item amount and text of the HUD that is displayed to the player. These details are only displayed while playing the game and will not be found before or after the game.

6.2- **Control System**

The player takes complete control of the turtle model using simple ragdoll mechanics. They will use the W,A,S, and D keys found on the keyboard to interact with the player model. The players model is

equipped with a rigidbody and a mixture of colliders to be moved with the players input. Each key will apply a set force to the players respected axis to move around the map. In addition, the player can also jump around by using the spacebar.

7. Artificial Intelligence

7.1- **Friendly Characters**

The entirety of the game consists of 4 NPCs. The first NPC can be found within the mythical forest. A friendly squirrel will ask the player to help retrieve 10 acorns. The next bird NPC will be located in the town in the church park. They will ask the player to show them 2 rare soccer balls that are hard to find. Next, A hawk NPC can be found in the quarry. This helpless NPC will ask the player to collect 5 wrenches, so they can continue to fix cars. Finally, a turtle NPC can be found in the funeral home looking for a single blue key. All the NPC's quest must be done to win the game.

8. Technical

8.1- **Development hardware and software**

This mild Indie game will target PC's as its main method of delivery. Considering the developer's machine does not have spec heavy hardware; it is safe to assume that a simple graphics card and good ram is required outside of the standard components. The required software to run this game is Unity. Either a Unity deployer or Unity editor is required to run this game.

9. Game Art and Key Assets

Throughout Biddy Biddy Bom Bom Turtle, A huge amount of assets form the Unity asset store were used to create a cute low poly adventure game. Each asset was free due to not having a budget for the game. All assets are under fair use. Although the assets were preset, I mostly edited and created altered versions of all the assets imported. The entirety of the map was hand crafted and nothing was preset. This large map took approximately 40+ development hours to create.

10. Blueprints and Conceptual Art

Turtle Player Model -
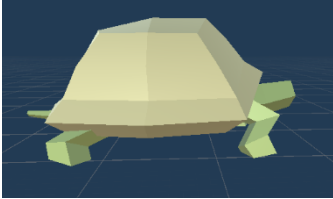
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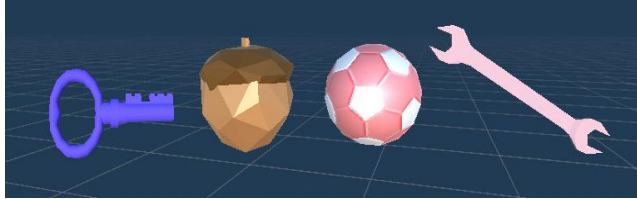
Playground -
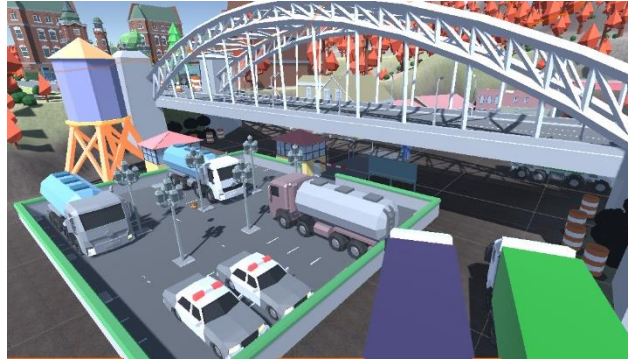
Forrest -

Town -

Highway -

Funeral Home -

Quarry -

Water Treatment Facility -

Map Layout -