Tree Climber

Game Design Document

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Game Design

## Summary

Player controls an animal climbing a tree, ever alluding the grasp of a predator creeping up behind it, trying to return to its colony/safety.

## Gameplay

The goal is to make it to the top of the tree (or other branching climbing structure). Player uses WASD or arrow keys to control the escapee. The levels are downscrolling, and the layout is that of a vertical view of the tree. Players try to climb up the tree and avoid being caught by the predator behind it (or falling?) while venturing off to branches from time to time to pick up power ups, health, and other incentives.

## Mindset

The pace is increasingly fast, and there is feeling of desperation throughout. Combating the predator is impossible/futile. (emphasis on helplessness?)

Technical

## Screens

1. Title Screen

a. Start Game, How to Play, Credits, Exit

1. Level/Difficulty Select?
   1. Level modifications
      1. Map items
      2. Modifiers (difficulty, speed, etc.)
2. Game
   1. Meters
      1. Health
      2. Stamina/Hunger
      3. Points
   2. Assessment / Next Level
      1. Item pickup count
      2. Elapsed time
      3. leaderboards
3. End Credits

*(example)*

## Controls

1. Direction
   1. WASD or arrow keys
2. Action
   1. Jump?
   2. Activate item?

## Mechanics

Are there any interesting mechanics? If so, how are you going to accomplish them? Physics, algorithms, etc.

Overall the game will play like falldown, or any other scroller where you dodge fast incoming obstacles. However you won’t be dodging, just forging your own path while being time constricted. Since incentives require the player to go on branches often, make the branch play difficult, and its own challenge. Make them twisty and turny, so the player must maneuver the path very quickly in order to get back to the main channel of the tree in time.

Level Design

*(Note : These sections can safely be skipped if they’re not relevant, or you’d rather go about it another way. For most games, at least one of them should be useful. But I’ll understand if you don’t want to use them. It’ll only hurt my feelings a little bit.)*

## Themes

1. Forest
   1. Mood
      1. Full of life
      2. Colorful
      3. Movement everywhere
   2. Objects
      1. *Ambient*
         1. butterflies
         2. birds
         3. worms and other insects
      2. *Interactive*
         1. jumps
         2. holes
         3. obstacles (bumps in terrain?)

This will be the main theme to start out, along the way we can branch out to different environments like:

* Castle walls
* Skyscrapers
* Mountains
* Streams

## Game Flow

1. Player starts in forest
2. Pond to the left, must move right
3. To the right is a hill, player jumps to traverse it (“jump” taught)
4. Player encounters castle - door’s shut and locked
5. There’s a window within jump height, and a rock on the ground
6. Player picks up rock and throws at glass (“throw” taught)
7. … etc.

*(example)*

Development

## Abstract Classes / Components

1. BasePhysics
   1. BasePlayer
   2. BaseEnemy
   3. BaseObject
2. BaseObstacle
3. BaseInteractable

*(example)*

## Derived Classes / Component Compositions

1. BasePlayer
   1. PlayerMain
   2. PlayerUnlockable
2. BaseEnemy
   1. EnemyWolf
   2. EnemyGoblin
   3. EnemyGuard (may drop key)
   4. EnemyGiantRat
   5. EnemyPrisoner
3. BaseObject
   1. ObjectRock (pick-up-able, throwable)
   2. ObjectChest (pick-up-able, throwable, spits gold coins with key)
   3. ObjectGoldCoin (cha-ching!)
   4. ObjectKey (pick-up-able, throwable)
4. BaseObstacle
   1. ObstacleWindow (destroyed with rock)
   2. ObstacleWall
   3. ObstacleGate (watches to see if certain buttons are pressed)
5. BaseInteractable
   1. InteractableButton

*(example)*

Graphics

## Style Attributes

What kinds of colors will you be using? Do you have a limited palette to work with? A post-processed HSV map/image? Consistency is key for immersion.

What kind of graphic style are you going for? Cartoony? Pixel-y? Cute? How, specifically? Solid, thick outlines with flat hues? Non-black outlines with limited tints/shades? Emphasize smooth curvatures over sharp angles? Describe a set of general rules depicting your style here.

Well-designed feedback, both good (e.g. leveling up) and bad (e.g. being hit), are great for teaching the player how to play through trial and error, instead of scripting a lengthy tutorial. What kind of visual feedback are you going to use to let the player know they’re interacting with something? That they \*can\* interact with something?

## Graphics Needed

1. Characters
   1. Human-like
      1. Goblin (idle, walking, throwing)
      2. Guard (idle, walking, stabbing)
      3. Prisoner (walking, running)
   2. Other
      1. Wolf (idle, walking, running)
      2. Giant Rat (idle, scurrying)
2. Blocks
   1. Dirt
   2. Dirt/Grass
   3. Stone Block
   4. Stone Bricks
   5. Tiled Floor
   6. Weathered Stone Block
   7. Weathered Stone Bricks
3. Ambient
   1. Tall Grass
   2. Rodent (idle, scurrying)
   3. Torch
   4. Armored Suit
   5. Chains (matching Weathered Stone Bricks)
   6. Blood stains (matching Weathered Stone Bricks)
4. Other
   1. Chest
   2. Door (matching Stone Bricks)
   3. Gate
   4. Button (matching Weathered Stone Bricks)

*(example)*

*(Note : If you’re soloing you might not need to define this part, as you can just use the Derived Classes + Themes section as a reference. It’s up to you.)*

Sounds/Music

## Style Attributes

Again, consistency is key. Define that consistency here. What kind of instruments do you want to use in your music? Any particular tempo, key? Influences, genre? Mood?

Stylistically, what kind of sound effects are you looking for? Do you want to exaggerate actions with lengthy, cartoony sounds (e.g. mario’s jump), or use just enough to let the player know something happened (e.g. mega man’s landing)? Going for realism? You can use the music style as a bit of a reference too.  
   
 Remember, auditory feedback should stand out from the music and other sound effects so the player hears it well. Volume, panning, and frequency/pitch are all important aspects to consider in both music *and* sounds - so plan accordingly!

## Sounds Needed

1. Effects
   1. Soft Footsteps (dirt floor)
   2. Sharper Footsteps (stone floor)
   3. Soft Landing (low vertical velocity)
   4. Hard Landing (high vertical velocity)
   5. Glass Breaking
   6. Chest Opening
   7. Door Opening
2. Feedback
   1. Relieved “Ahhhh!” (health)
   2. Shocked “Ooomph!” (attacked)
   3. Happy chime (extra life)
   4. Sad chime (died)

*(example)*

## Music Needed

1. Slow-paced, nerve-racking “forest” track
2. Exciting “castle” track
3. Creepy, slow “dungeon” track
4. Happy ending credits track
5. Rick Astley’s hit #1 single “Never Gonna Give You Up”

*(example)*

*(Note : Again, if you’re soloing you might be able to / want to skip this section. It’s up to you.)*

Schedule

*(what is a schedule, i don’t even. list is good enough, right? if not add some dates i guess)*

1. develop base classes
   1. base entity
      1. base player
      2. base enemy
      3. base block
   2. base app state
      1. game world
      2. menu world
2. develop player and basic block classes
   1. physics / collisions
3. find some smooth controls/physics
4. develop other derived classes
   1. blocks
      1. moving
      2. falling
      3. breaking
      4. cloud
   2. enemies
      1. soldier
      2. rat
      3. etc.
5. design levels
   1. introduce motion/jumping
   2. introduce throwing
   3. mind the pacing, let the player play between lessons
6. design sounds
7. design music

*(example)*