ReadMe - Tower of Tears

by Team U+1F914 (Bryan Kim, Chunlok Lo, Leonie Reif, Sarah Li, Stephanie Baione)

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How to Play

- Objective: The goal of our game is to become the new "tower master" by climbing to the top of the game's tower and defeating the boss.
- Control:
    - WASD or arrow keys to move
    - Space to jump
    - Mouse: adjust the camera angle

Gameplay Features

Main Levels:

1. Light up wall torches. The player must use their torch to light wall torches to disable nearby traps.
2. 3D platforming. The player must jump on tower pieces to climb up the tower.

3. Puzzle-solving. The tower pieces are moveable and must be rotated around the tower into the proper position for the player to progress. To rotate tower pieces, the player must push rotation levers, which match the color of the tower piece it controls.
4. Reach level checkpoints. Street lamps denote checkpoints in our game. The player will respawn at these locations if they fall off.
5. Health system. The player begins the game with 5 lives, represented by hearts. Every time they get hit by an enemy, fall off the tower, or get hurt by a trap, the player will lose one life. The player dies when all lives are lost. The player can gain lives by collecting hearts found throughout the game.

Boss Level Features:

1. Boss AI. Defeat the boss by lighting all the wall torches in the correct order (enforced by puzzles).
2. Avoid enemy attacks. The boss has a short and long-range attack. The player must avoid these attacks in order to preserve health.
3. Puzzle-solving. In order to defeat the boss, the player must light all four wall torches. They must use the tower pieces and levers present in the game to reach every torch.

Fulfilled Technology Requirements

- Game Menus - includes start, game over, and in-game menus, which enable the player to pause, restart or quit the game. There are also messages displayed to the user indicating current objectives.
- HUD - displays how many lives (represented by hearts) the character has, which communicates successes and failures to the player.
- Main character - implements simulated Newtonian physics rigidbody. When the player runs out of health, it is destroyed. The length of jump is impacted by how long the space bar is pressed. Player carries a torch in his hand. Input controller allows player to move in all directions.
- Environment - cohesive fog mountain theme. Unified color palette using wooden and stone textures and colorful puzzle pieces. The boss level is set in a coliseum, which confines the player to the playable space.
- Interactive elements - various rotation puzzles, where player must figure out how to use axes (poles connected to tower) to rotate platforms in order to accomplish a goal. Rotating platforms that carry the player along with them. Checkpoints indicate where the player is respawned when they fall off. Torches are light sources using particle effects. Wall torches are an example of proximity-based events: when the player walks near a wall torch, it lights up.
- Boss character - AI element. Uses movement with prediction. Controlled by a state machine with states of behavior including idle, short range attack, and long range attack.

- Effects / Audio - background music, sound effects include stone sliding when platforms are moved, footsteps and jumping, picking up heart, lighting wall torch, deactivating a trap, getting hurt, boss' long range attack. Snow effect on bonus level.

Deficiencies/Known Bugs

● Player animation can get stuck in jumping frame on the ground. Press jump repeatedly should resolve the issue

External Resources Used

Unity Asset Store FREE STUFF

● 4 Snow Materials [High Quality] [Materials Collection]
  ○ https://assetstore.unity.com/packages/2d/textures-materials/4-snow-materials-high-quality-materials-collection-69201
● Christmas Gifts
  ○ https://assetstore.unity.com/packages/3d/props/interior/christmas-gifts-52190
● Christmas Piano Music
  ○ https://assetstore.unity.com/packages/audio/music/orchestral/christmas-piano-music-76026
● FREE Christmas Assets / Low Poly
  ○ https://assetstore.unity.com/packages/3d/props/free-christmas-assets-low-poly-13102
● Cinemachine
  ○ https://assetstore.unity.com/packages/essentials/cinemachine-79898
● Cope! Free Skybox Pack
  ○ https://assetstore.unity.com/packages/2d/textures-materials/sky/cope-free-skybox-pack-22252
● Dungeon Traps
  ○ https://assetstore.unity.com/packages/3d/environments/dungeons/dungeon-traps-50655
● Fantasy Defensive Structures
  ○ https://assetstore.unity.com/packages/3d/environments/fantasy/fantasy-defensive-structures-3307
● Free Medieval weapons
  ○ https://assetstore.unity.com/packages/3d/props/weapons/free-medieval-weapons-72541
● PBR Ground Materials #1 [Dirt & Grass]
  ○ https://assetstore.unity.com/packages/2d/textures-materials/floors/pbr-ground-materials-1-dirt-grass-85402
● High Quality Brick & Walls

- ○ https://assetstore.unity.com/packages/2d/textures-materials/brick/high-quality-bricks-walls-49581
- SD Martial Arts Girl Xia-Chan
  - ○ https://assetstore.unity.com/packages/3d/characters/sd-martial-arts-girl-xia-chan-102300
- Park Props Pack
  - ○ https://assetstore.unity.com/packages/3d/props/exterior/park-props-pack-49221
- Simple Torch
  - ○ https://assetstore.unity.com/packages/3d/props/interior/simple-torch-7275
- Decrepit Dungeon LITE
  - ○ https://assetstore.unity.com/packages/3d/environments/dungeons/decrepit-dungeon-lite-33936

Also sound effects from freesound.org

Member Responsibilities:

Chunlok Lo
- Tower rotation
- Level design
- Pressure plates
- Sound effects - rock sliding, footsteps
- New player character movement, animation, and control
- Camera movement
- Putting game together
- Ground spike traps

Sarah Li
- AI boss (prediction, melee attack)
- Torch mechanics
- Boss level camera work
- Light particle effect for torches
- Background music
- Initial footstep sound effects
- Menus

Leonie Reif
- Lamps
- Traps
- Level design
- Bonus snow level design
- Christmas assets
- Menus

- Materials

Stephanie Baione
- Health
- Respawning
- Cut scenes
- Texturing
- Significant part of playtesting
- Sound effects
- Background music

Bryan Kim
- Initial player (movements, torch attached to hand)
- Spear
- AI boss (range attack)
- Camera work

What scene(s) to open in Unity

Scenes/Official/AlphaDemoMenu.unity