Lightless

- **Description:**

    In this side-scroller, you play as a fire blob wandering around FEUP's B hallway late at night. Darkness pursues you, as you try to make your escape and defeat the unknown Evil Boss at the end of the hallway.

    The only thing that lights your path is your inner light, representative of your health, which the surrounding darkness slowing consumes. For you to survive, you need to catch little fire droplets along the way, which grants you a small amount of light back.

    However, the darkness is not your only concern. Several types of enemies will try to stop you from reaching your goal. These enemies are either:

    - **Zombies:** these little zombie toasts act almighty when they appear and try to put you down by throwing slimy projectiles at you. But once you deal some damage to them, they will regret messing with you and will start running away.
    - **Fireflies:** they act like homing missiles targeting you, rapidly moving towards your location and exploding once near you. Despite their agility, they don't have a lot of health, making them super squishy to your attacks.
    - **Red Light:** even though they do not look menacing, these little lights deal substantial damage to you, if overlooked. Just don't get into the bright red area beneath the lightbulb. To destroy them, 3 hits from your light bullet or only 1 hit from your grenade should do the job.
    - **Mysterious Boss:** unknown abilities.

    But don't despair just yet, you're not defenceless against them! You have 2 basic abilities at your disposal:

    - **Light Bullet:** this small projectile is your main source of damage within the game, not being affected by gravity and dealing damage to enemies it collides with.
    - **Light Grenade:** contrary to Light Bullet this projectile is affected by gravity, making an arch trajectory as you throw it. It has a bigger cooldown due to the fact that it explodes on collision, dealing considerably more damage in an area of effect.

On top of your own abilities, as you progress, random power-ups will appear for you to use as leverage against incoming enemies:

- **Shield power-up:** grants you a shield that deflects enemy projectiles. Once deflected, the projectiles will damage enemies they collide with. You cannot shoot while you have your shield activated.
- **Burn power-up:** burns enemies inside an area around your character. This power-up has a fixed duration steadily decreasing and doesn't need to be activated.

On this journey, you will have to dodge enemy attacks and destroy obstacles in your way, while managing to maintain your light level above zero. You'll have to overcome multiple enemy waves, with the main goal of defeating the Final Boss.

● Installation:

To play the game, just run the "*Lightless.exe*" executable inside the "*DJCO-PP-G3-Lightless-game.zip*".

● Playing instructions:

- **Navigating the menu:** mouse to control the cursor, left-click to select.
- **Pause Menu:** ESC key to enter/exit menu while playing.
- **Player movement:** WASD keys.
- **Crosshair movement:** mouse movement.
- **Basic abilities:**
  - **Light Bullet:** left mouse button click/hold down
  - **Light Grenade:** right mouse button click.
- **Power-up abilities:**
  - **Shield power-up:** hold Space bar down to activate, decreasing the remaining power-up time.
  - **Burn power-up:** has a fixed duration, not requiring any activation.
- **Play the game:** press the "PLAY" button and have fun!

There is an "Instructions" page inside the game, which provides a quick and basic rundown of all the existing mechanics.

- **Key highlights of the development process:**
  - **Game balance:** one of the main challenges we faced was balancing the game. Through trial and error, we had to decide on several values for each character, like health, move speed and abilities' damage, cooldown and max range. After that phase, we started balancing the waves of enemies, choosing the type of enemies and power-ups to spawn on each wave, the number of enemies per wave, as well as the spawn rate (so they wouldn't overrun the player). In the end, we believe to have reached an equilibrium between difficulty and challenge, providing the player with an enjoyable and fun experience.
  - **Reusable code:** during the development, we strived to make the code as modular as possible, in order to facilitate the expansion of the game. Using the current code, we can easily add new enemies, obstacles and power-ups with minimal effort (other than assets). The waves are also completely customizable, enabling us to create new waves with any kind of combination of game elements.

- **Resources used:**
  Background: made by us
  Player / Boss character: https://pedrofmra.itch.io/blue-flame-character
  Firefly: https://www.pinterest.pt/pin/241927811213252798/
  Zombie: https://lhteam.itch.io/zombie-toast
  Red lightbulb: https://www.pinterest.pt/pin/345158758924124234/
  Fire droplet: https://www.pinterest.it/pin/501166264768816389/
  Burn effect indicator: https://kvsr.itch.io/pixel-art-effectfx010
  Light bullet / Shield power-up: https://codemanu.itch.io/pixelart-effect-pack
  Light grenade: https://kvsr.itch.io/pixelarteffectfx017
  Menus' font: https://www.dafont.com/8-bit-pusab.font
  All sound effects: https://freesound.org/
  Main music: https://prosearch.tribeofnoise.com/artists/show/25047/2458
  Death music: https://mountainhusky.itch.io/in-the-clouds-ost (6th track)
  Sprite editor: Aseprite
  Game Engine: Unity 2019.3.3f1 with URP package

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