

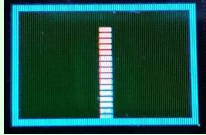

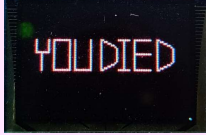





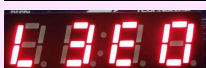


Feature	Feature Marks For	Input Devices	Feature Description	Images / Photos
Real-time audio volume indicator	Wei Li	PmodMIC3, SW15, SW14, S13, 7 segment display, LEDs	<p>SW15 is 0: Show 'H','M' or 'L' on anode 3 based on the number of LEDs lit up on the basys3. SW15 is 1: Turns off this function</p> <p>SW14 is 0: mic_in shown on 16 LEDs. SW14 is 1: peak intensity shown on 16 LEDs.</p> <p>Anodes 1 and 0 shows a number between 0 and 15. SW13 is 0: refresh rate is 10hz. SW13 is 1: refresh rate is 8hz.</p>	 
Graphical visualization and configuration	Tze Yeong	SW0, SW1, SW2, SW3, SW4, SW5	<p>SW0: Toggle border size SW1: Toggle colour theme</p> <p>SW2: Toggle volume bar on/off SW3: Shift volume bar right</p> <p>SW4: Shift volume bar left SW5: Toggle border on/off</p> <p>(If both SW3 and SW4 are on, volume bar stays in original position)</p>	
Pixel dungeon game	Team	PmodMIC3, SW10, all push buttons (PBs)	<p>Background (Introduction): <i>Dear _____,</i></p> <p><i>It has been five days since we sent five people to investigate the space beneath the cemetery. We fear that the worst has happened to them. We do not know what lurks in there. People who had been near the cemetery often complain of an unexplainable ominous aura. Please investigate.</i></p> <p><i>Regards,</i> <i>The Association</i></p> <p>-----</p> <p>SW10 is 1: Switch Oled screen to dungeon game. PBs: 5 rooms in the same orientation as the push buttons. Use PBs to move around.</p> <p>To win the game, player needs to win the games in the 4 rooms surrounding the center room. Once a game is completed, cannot replay without reset.</p> <p>If the player loses in any of the 4 games, player dies and "you died" screen appears. While you're dead or in the rooms, press PBC to reset (able to replay the 4 games). Once all 4 games completed, a portal will open in the center room. Press PBC to enter and win the game.</p> <p>-----</p> <p>Background (After completing the 4 games): <i>You returned to find a portal in the center room, obviously inviting you into the unknown. With no clue as to where the five are, your only choice is to enter...</i></p>	   
Pixel dungeon top room game	Team	mic_in, PBU, PBD, PBR	<p>Background: <i>While in the room to investigate, the floor suddenly lights up in red and hostile apparitions start appearing! You quickly placed down a line of protection. Fight them off to survive!</i></p> <p>-----</p> <p>PBU, PBD: To move the character up and down the 3 lanes. PBR: To attack enemies with an energy wave.</p> <p>Segment display: Anodes 3 and 2 show number of lives left. Anodes 1 and 0 show number of enemies defeated.</p> <p>Player character blinks red when hit. If lives is 0, "you died" screen appears. Up to 6 enemies appear 1 at a time, with increasing movement speed if the player successfully defeat each enemy. Lane at which enemy spawn is random and depends on a mic_in sample.</p>	   


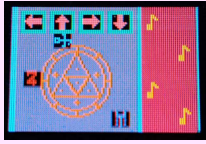




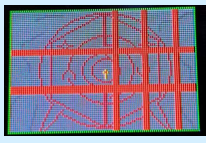

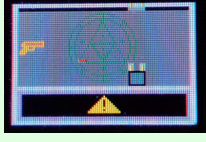
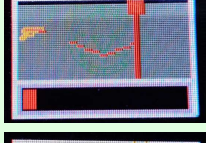
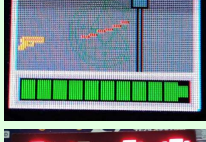
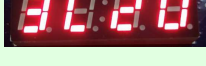
Pixel dungeon left room game	Team	mic_in, PBL, PBU, PBR, PBD	<p>Background: <i>Whatever lurks in here is not pleased with your intrusion. Upon entering the left room to investigate further, it cast a curse spell and runic letters started appearing! Survive by dancing it off to cleanse the curse's effects!</i> -----</p> <p>Throughout the game, symbols of different design float upwards in 4 different lanes towards 4 arrow boxes that correspond to the directions of the PBs. Symbols spawn in lanes randomly, which depends on a mic_in sample.</p> <p>PBL, PBU, PBR and PBD: Press the respective PBs while the symbols are on the respective arrow boxes to score a point. Not tapping the buttons before the symbols passes by, tapping too early, or tapping the wrong buttons will not give any points.</p> <p>Segment display: Anodes 0 and 1 show the total possible score. Anodes 2 and 3 show the current score of the player.</p> <p>Win-condition: Score 14 out of 20 to cleanse the curse spell. Scoring any lower will get the player killed by the curse spell.</p>	   
Pixel dungeon bottom room game	Wei Li	mic_in, all push buttons except PBC (PBs)	<p>Background: <i>After surviving the above two traps, you went to the bottom room in search of more clues. But it appears that whatever lurks in here has a surprise for you, and is not concealing its intentions. Survive its attack!</i> -----</p> <p>All PBs: Player is a yellow cross which will spawn in the center. Use PBs to move around and avoid the spawning lasers. Player hit box is the center, denoted with a red pixel.</p> <p>Lasers: Horizontal and vertical 3 pixel wide lines that first appear white then red. When red, able to reduce player lives. Between 3 and 6 lasers will spawn randomly depending on a mic_in sample each cycle.</p> <p>Border colour shows player health, as well as anodes 3 and 2. Anodes 1 and 0 shows the number of seconds. Survive until it becomes 20 seconds.</p>	  
Pixel dungeon right room game	Tze Yeong	mic_in	<p>Background: <i>This is the last room, yet none of the five is here. You hear a laugh in the distance and feel the darkness creeping from behind. Something tells you to keep the lights on, but what lurks in here has possessed a gun to foil your attempts! Charge up the room's light source, or you'll be consumed by the darkness!</i> -----</p> <p>The objective is to attach the wire to the charging port at the top to charge the battery at the bottom while avoiding bullets from a gun that moves up and down on the left. The rate of fire is random and depends on a mic_in sample.</p> <p>mic_in: While there is little to no sound, the wire is stationary at the bottom or moves downwards if it's any higher. Inputting sound that is loud enough will move the wire up and attach it to the charging port. Loudness must be maintained to keep the wire attached and the battery charging.</p> <p>Anodes 3 and 2 shows player health and anodes 1 and 0 show a timer of 30 seconds. When shot by a bullet, the wire blinks red and is invulnerable during this short time, and health drops by 1. Charging cannot happen during invulnerability. Player loses if health drops to 0 or timer reaches 0, causing the battery to fully discharge and a warning sign to appear before the "you died" screen appears. If the player charges the battery to full, the player wins and the battery blinks for a short while before returning to the dungeon.</p>	    

Image Reference: <https://pixel-poem.itch.io/dungeon-assetpuck>

Most images used in the dungeon game were referenced from this creator at the above website. We edited all images before implementing in our game, except a few completely self-designed images.

The code to generate the text file to load images was self-created using Python.