

CMPT 276: **PHASE 4** **GROUP 16**

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OUR GAME: SHADOW'S ADVENTURE

Our game, Shadow Adventure, is a basic 2D game where the character's main objective is to eventually find his shadow by completing various levels implemented in our game. Every time you start a new game, the character is spawned with 3 lives and 0 score. There are 4 levels in our game, where each level has a maze-like structure with both collectable items and enemies scattered all over the map. The primary goal of each level is to collect all keys, which is one of our collectable items, in order to unlock the door while dodging the enemies at the same time. The main character can navigate using WASD keys throughout the map. For enemies, we have implemented both static and moving enemies. Static enemies such as FIRE, remain stationary throughout each level, and running over FIRE results in losing a life. Moving enemies, such as enemy robots, are constantly running on the map, trying to hunt Shadow down. Failure in dodging moving enemies also results in losing a life. As far as collectible items are concerned, we have implemented keys, coins, shields and swords in our game. The primary collectable items include keys and coins, where the main character has to collect all the keys in order to unlock the door for the next level, while collecting bonus rewards such as coins increases the overall score. Secondary collectable items include Shield and Sword, and are introduced in level 3 and 4. Collecting Shield gives you a one-time armor which prevents taking damage from both static and moving enemies, and is displayed in the HUD. Crossing over a single enemy with Shield results in the cracking of Shield and prevents the character from losing a life. Cracking of the Shield is also displayed in the HUD. Sword is our last collectable item introduced in level 4. Collecting the Sword allows you to kill moving enemies only once. Sword is displayed on the HUD as you collect it, and disappears once you kill a single enemy. In order to ace the game, the player must complete all the levels by collecting as many coins as possible in order to win the game with the highest score possible.

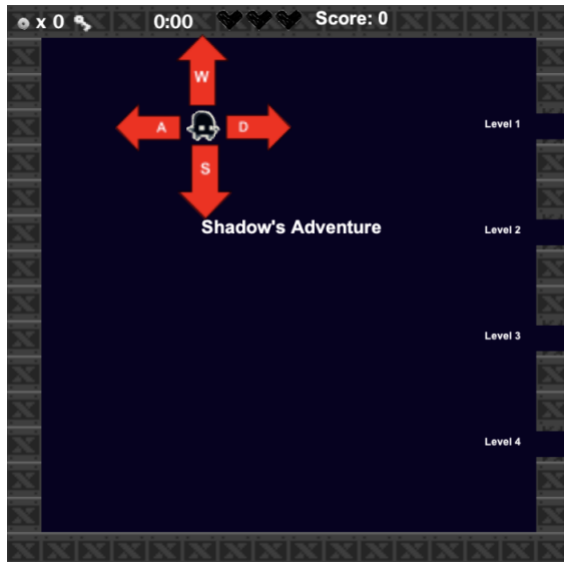
ORIGINAL PLAN AND CHANGES:

The original plan started by first looking at what we had created in the planning and design phase. We then began designing assets and looking at various tutorials for methods of implementing a game in java before deciding on how to implement our game. As a team we watched the tutorials and the next day began to write the code. We started by implementing a bare frame of our game which we slowly made additions to until we had added the various features we had planned too. We stuck to the original plan to integrate all kinds of enemies and rewards in the game. Thematically things haven't changed much since the initial planning stage as we had a pretty strong idea of what we wanted to do and set out and did it. One thing which was different from how we had initially planned it out was how we did level selection and the overall menus within the game. We found it a lot better for the player to be able to move around in them and be able to select levels much more naturally instead of being taken out of the game. The most important lessons that we learned were how to properly code a large multi class program which wasn't just some toy example. In doing so we had to learn and practice many proper techniques and programming skills such as using git, and working more efficiently within a team using modern coding practices.

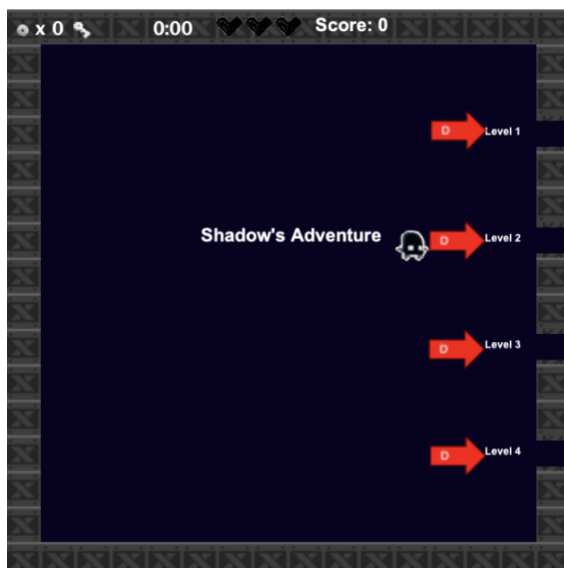
TUTORIAL:

We have provided a tutorial for the game demonstrating the functionality and features of the game.

- When you load into the game you can move your character by using the W, A, S, and D keys.



- You can choose a level of increasing difficulty by walking through one of the 4 labeled doors on the right hand side of the screen. Note: if you enter doors "Level 1-3" you will have to play through all of the levels after that unless you die.



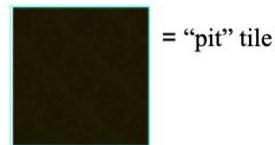
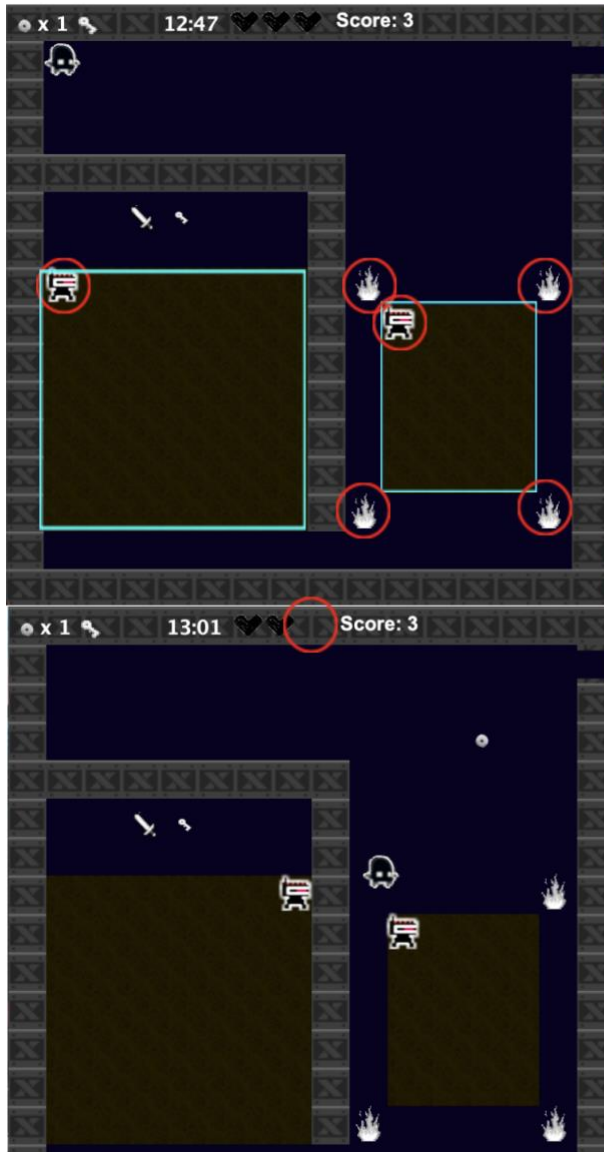
- The minimum goal of each level is to reach the door which is placed at the top right corner of each level. In order to open each door you must collect a key which is located somewhere in the level.



- Once you collect the key you will notice a key will appear in the top left of your heads up display. This is an indicator for you to know if you can escape via a door or not. You will also notice collecting a key increases your score in the HUD by 2.



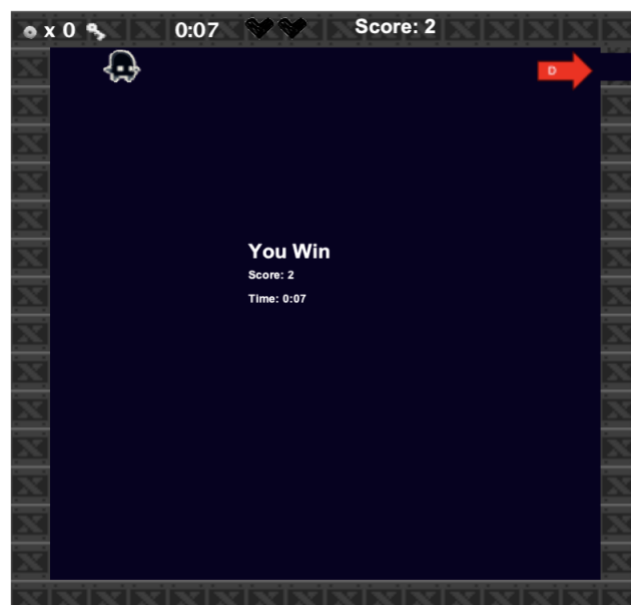
- On any level you will encounter at least 1 type of enemy. You will want to avoid both stationary fire and moving enemies. Once you run into a fire enemy you will notice you lose a heart in the top of the HUD and the fire disappears. Once the fire disappears it will not damage you. The moving enemies are bound to only move inside “pit” tiles however they do follow you. If you collide with a moving enemy you will lose a heart in the HUD but the enemy will not disappear like fire. It will keep on doing damage until you get away from it.



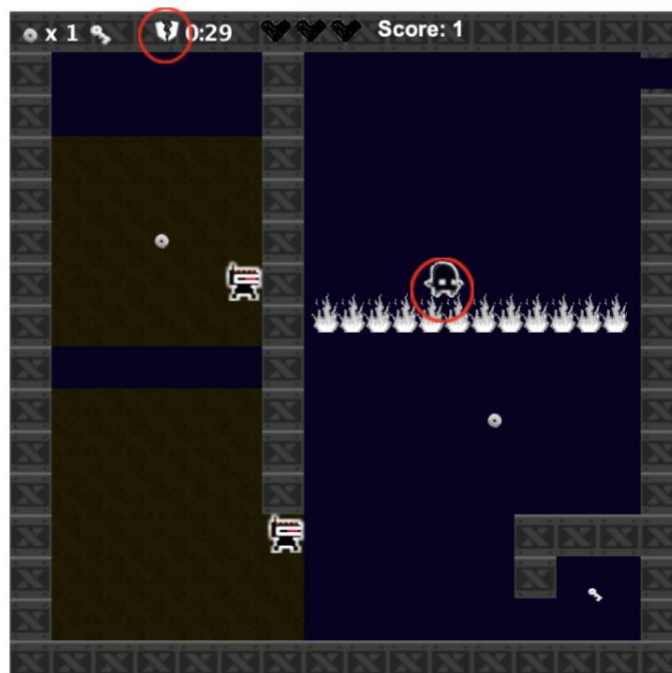
- Once you have lost all 3 of your lives you will be transported to a “lose screen” which displays your score, coins collected, and your current time. In order to leave this screen simply walk through the door in the top left corner of the screen. You will then be transported back to the level select screen.



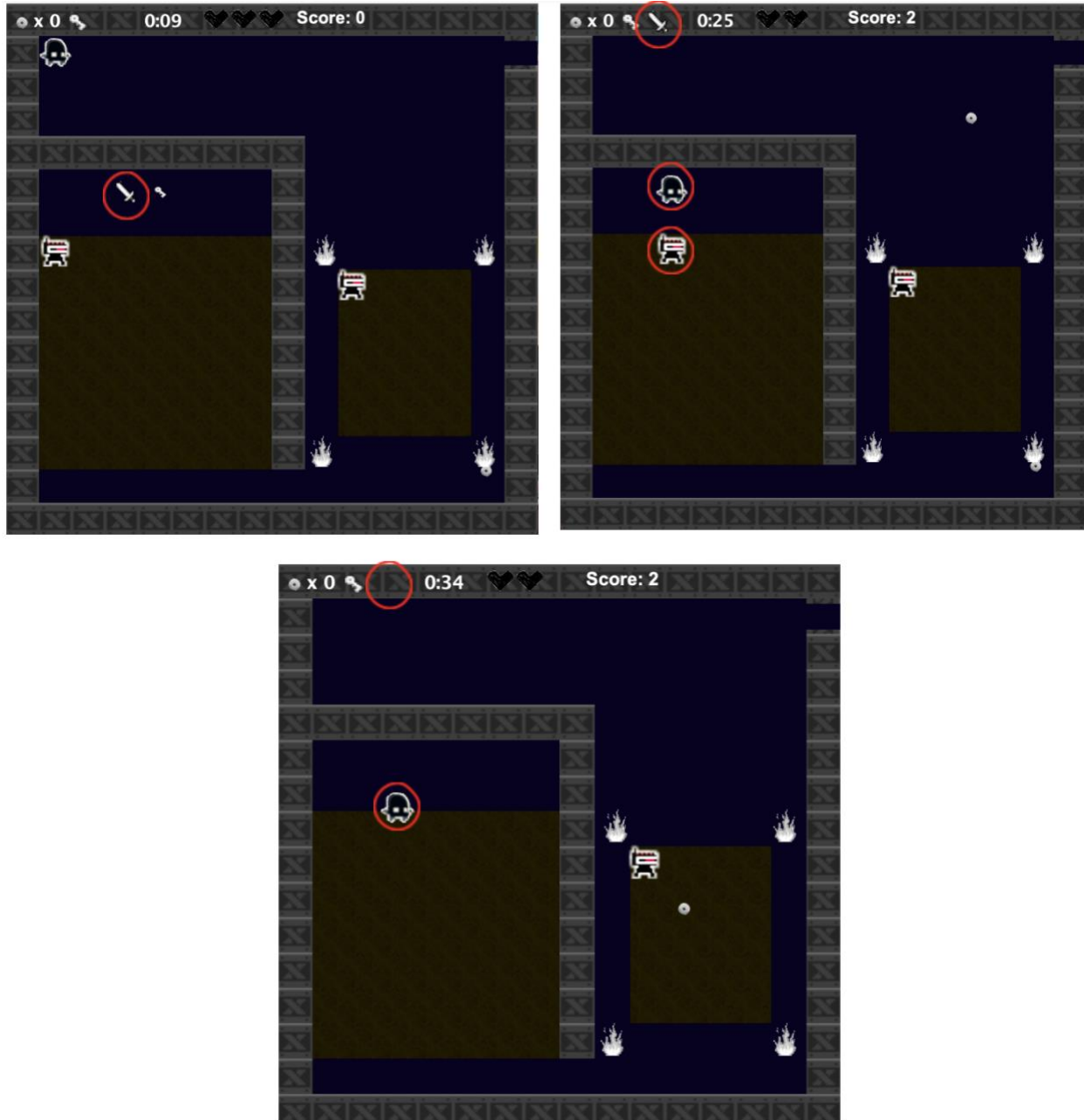
- Once you have walked through the door of the final 4th level you will be transported to a “win screen” which displays your score, coins collected, current lives, and your current time. In order to leave this screen simply walk through the door in the top left corner of the screen. You will then be transported back to the level select screen.



- On level 2 you can collect a special item called a “shield.” The shield allows you to walk through enemies and fire without taking any damage. The shield can only withstand 2 hits from enemies and will crack upon the first hit. Once you collect the shield you will see it appear in your HUD as well as change once it takes damage. Upon taking damage with the shield you will have 2 seconds before you or the shield can take damage again.



- On level 3 you can collect a special item called a “sword.” The sword allows you to kill a single moving enemy but not destroy fire. The shield has 1 life, therefore once you kill one enemy the sword goes away. You will notice once you collect the sword it will appear in your HUD and disappear once you kill a single enemy.



- On every level coins appear and disappear at random. If a player collects a coin before it disappears the coin's amount tracker in the HUD increases by 1. Each collected coin also increases the score which is also displayed in the top HUD by 1.



- The heads up display also displays the player's score and current time of the run. The timer starts when the player leaves the level select screen and ends when the player reaches the win or lose screen. The player's score increases by 1 when the player collects a coin and increases by 2 when the player collects a key.

