



- Game Map
  - set up so there are multiple paths to choose but you will learn things in the order that they need to be learned in.
    - Mini-games will be played in order to complete each section in a level.
      - Rewards system for each lesson completed
        - Coins to unlock customizations/pets
        - Potentially other perks/functionality
    - Lessons will also be included in the path along with mini games
  - The player will be able to:
    - Select an unlocked level by clicking on its tile
      - This brings them to a minigame focused on the particular topic
    - View future levels and their topics
    - View what is required to unlock the boss levels
    - Go back and replay previous lessons
  - There will also be buttons to open:
    - Options
    - Character Customization
    - Save the game
  - Organized by concept
    - Variables
    - If / Conditional statements
    - Loop
    - Functions
    - What libraries used for (later grades)
    - Stack/Queue
    - Recursion
  - Key-fragments or other checkpoint feature
  - Boss fight after each level
    - Unlocked after having appropriate number of key-fragments/checkpoints
  - Pause screen can be accessed from here
- Mini-games
  - Mini-games will happen a few times per level
    - Asteroids
    - Whack a mole definitions or bits of code
    - Puzzle slide
    - Sorting Minigame (strings, ints etc)
  - The minigame itself will vary depending on the topic at hand
  - Presented with a disguised lesson in the form of a game to play
  - The player will be able to
    - Interact with some assets in manners such as:
      - Sorting (click and drag)
      - Choosing an option (left vs right via 'a' and 'd' or 'up' and 'down')
      - Walk and interact (via 'wasd' and left clicking)
  - Once the minigame has been finished:
    - An autosave will occur
    - Won
      - The lesson will be marked as completed on the map and the path will update.
    - Failed
      - The lesson can be redone in order to move on
      - Can potentially offer supplemental material to aid in understanding
- Start Game Screen
  - Player can choose to:

- begin the game via the start button (this will bring them to the character select screen)
  - Change their sound settings via the options button
- Boss Screen
  - Unlockable once corresponding pieces have been collected via winning levels
  - Will show what topics are relevant
  - Once the boss level is cleared, a new section of the map will unlock
- Pause Screen
  - Edit options
  - Save game
  - Exit game
- Character selection
  - The player will be able to:
    - Pick a player model
    - Change color scheme
    - Add/remove any accessories they have unlocked
    - Name their character
  - Once done, this will bring the player to the map screen
- Options Screen
  - Master volume (controls both the music and sounds volume)
  - Sounds volume (in game noises)
  - Music volume
  - Option to go back to start game screen





