Project Proposal

Project Description:

* Name: Escape Room Builder
* Description: The project allows the users to build an escape room by himself. It also allows users to save the design and play the game he designs.

Competitive Analysis:

I have seen a couple of escape room term project online. The similarity is that we all require puzzle solving, item finding and room escaping. We all need a way of holding certain objects while not the others. The difference is that my project allows the users to design their own escape room and play with it.

Structural Plan:

My project will end up with five modes (SplashScreenMode, DesignerMode, DesignRoomMode, PlayerMode and HelpMode). It will also include files such as the cmu\_112\_graphics, background music files and image files for better user experience, and text/data files that the pickle creates. It will also include objects including Rooms, Doors, Keys, Keypads, Containers, and Hints. I may add another object for Decorations.

Algorithmic Plan:

The trickiest part of the game is how to set the initial room and the next room, and keep our room design in DesignRoomMode in accordance with the ichnography the user will make in DesignMode. This can be solved by saving the relative location of rooms to each other in the app so that both modes have access to it, find the common side, assign a direction to that room like we did in text-adventure game so that we can detect whether making a door there is legal. I will also save the direction we are facing, so that every time we move to the next room we would be facing the same direction.

Timeline Plan:

Up until today: I am done with the SplashScreenMode and almost done with Design Mode (has minor problems that should be improved, but it is not a bug). I am starting the DesignRoomMode and the design of doors, containers, keys, etc.

TP1 – Friday: half-way done with DesignRoomMode: having no problem dropping items in the room, connecting to other rooms, and door-key connection.

23 Nov – 24 Nov: Finish up DesignRoomMode and start PlayerMode (since the PlayerMode will be largely connected to the design we made in DesignMode and DesignRoomMode, which I will use pickle to save data and locations on).

25 Nov – TP2: finish PlayerMode so that it is now playable and allows me to do a demo for MVP.

Thanksgiving Break: Fix bugs in the project. Finish keyPads (since it is not part of MVP) and a hint system. Also allow the user to import their own audio and images for hints and background music. Try to make 360 view available and do socket to send files to others and wrap everything up.

2 Dec – 4 Dec: Start to have classmates try my game, get feedbacks, make minor changes according to that, and make YouTube Videos being ready for the demonstration and submission.

Version Control Plan:

A screenshot of a cell phone

Description automatically generated I consistently upload folders to TP with the date specified.

Module List:

* PyGame
* Pickle

TP2 Update:

* I did not make large changes to the project except some minor changes with keyPressed, mousePressed and mouseDragged. Since mousePressed and mouseDragged are sometimes confused, I used keyPressed for some of the function that I claimed to use mouse on the storyboard; I also added some more images for better user experience, but no major change is made.

TP 3 Update:

* Now it uses pickle to save data for games.
* The user now can name their own file so that they can choose whichever design they want to continue to design / play.
* The user now can select their own file when they click on “Continue” or “Play” to choose their own file to play.
* The user now can set if they want to continue on one project or they want to continue on this project. By standing in the final room and type in “yes” after “Save and Exit,” they can now only play the game, while if they type in “no,” they cannot play the game. It is to prevent situations in which they click on the wrong button and start a game they are not done with.
* The project will automatically scan through files. If there is no file with “.dat” suffix, file selection window will not pop up and user will be notified.
* If the user type in nothing for save and exit, the file will disappear in view of user while can be found by the computer. So “.dat” file will be removed automatically for user experience.
* Different way to connect rooms (by setting up relative room by pressing keyboard and moving next room by pressing directional keys).
* Added the Keypads.
* Added the help mode.