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The idea of the project is to create a visually interactive cave environment that functions as a "memory palace"-(//--see-this-link-to-wikipedia.org//)-/-[..aka..]-method-of-loci-(//..with-‘LOCI’-being-Latin-for-"places"..//) .

In game design, there will be a startup/welcome screen which depicts a dark/‘cavernous’ room setting.

In the game’s playing phase, there is the ability to navigate (//via user interface arrows on the screen for going 'left', 'right', and 'forward'//) through various square shaped rooms that each have featured a particular artifact-/-‘memorable’-object, whose purpose is to establish a memory-recall-capacity-/-conceptual-association with a given word term phrase. // In other words : … [except for the "entry-level [dark-walled]-cavern-space room", …] [w]hen a **player** first enters a room, he/she is required to *once give out* a **reply·'answer'** that matches with an earlier defined ·textual-phrase, determined prior to the game's starting ..., as seen in connection to an artifact-/-or-structural-object located at the room's center. If it is right, the game either 'continues ON .. !!' or 'is finished'. If, contrastingly, it is wrong…, the game ends. The goal is to get through every room but one,.. the final room .., which is 'to be' tried right before the game's end.

Right answers initiate short thematic music to be played, along with some visual-animation-‘effect’ being issued up in display. Upon game completion, there will then be a success screen, with the option to play again.

An example of a choice listing for a given term to be remembered :

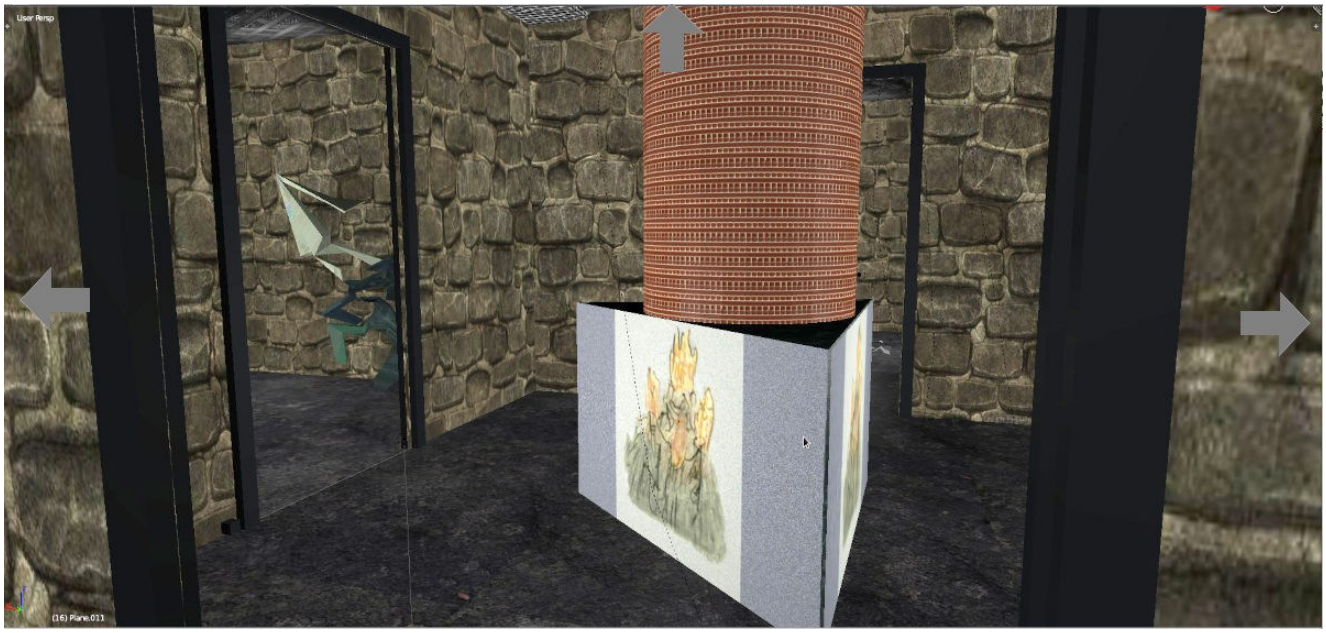
Answer A : “Shredded Paper”
Answer B : “Ointment”
Answer C : “Drink Coaster”
Answer D : “Debris”

[The answer above would be choice ‘D’, “Debris”, for instance!]

Regarding some other sound elements overall, there is the option to have some background music, of a synthesized midi score, play continuously throughout the program’s existence.

With an Arduino board implemented in things running for the game, a correct answer will trigger a green and yellow LED strobe lighting effect being put forth in fan-fare. The Arduino device can also make use of a button/switch_[hardware-component] to go about having an answer choice submitted for evaluation.

Here is a screen shot of a newly entered room (‘room #5’) that subjects the user to a response testing of the correct word-term-/-phrase that is associated with the object_representation found in the room here.



Documentation .. video demonstration .. youtube links :

LSU (Baton R) Final-Project_/..MemoryExploringEnvironment../_Using-JavaScript-Libraries-and-Arduino.

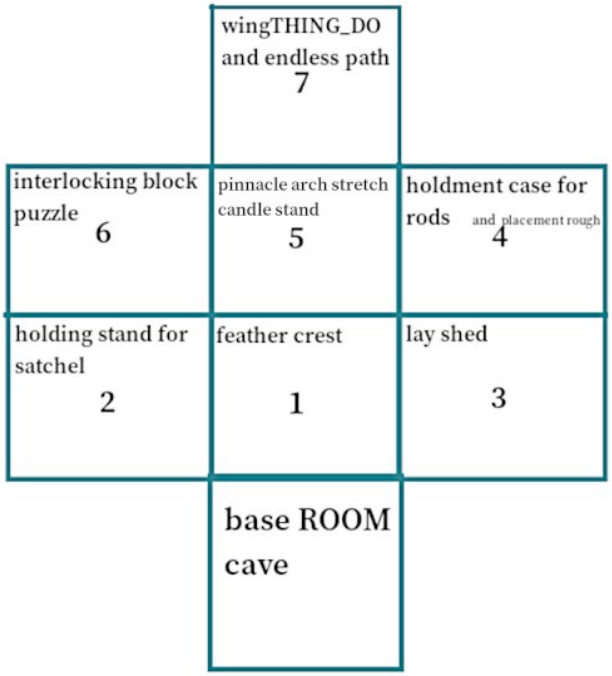
LSU (Baton R) Final-Project_/MemoryExploringEnvironment/_using_JavaScript-Libraries (no_Arduino).

Github Repository LINKS :

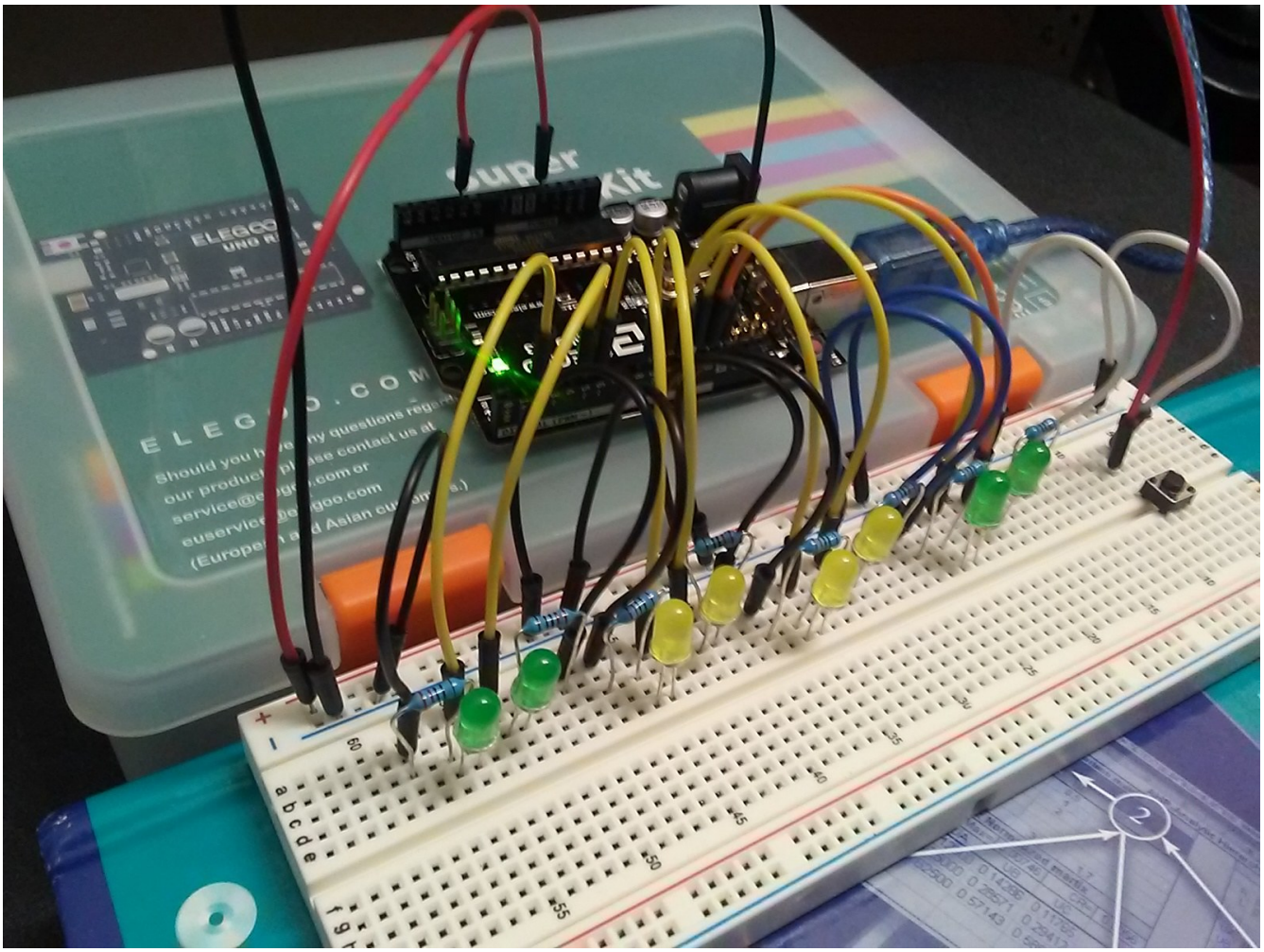
https://github.com/chebert2/CAVE_THEMED_FINAL_PROJECT__-with-ARDUINO---PHYSICAL-Device-COMPUTER-INTEGRATION-__ColinHebert__CSC

https://github.com/chebert2/CAVE_THEMED_FINAL_PROJECT__-No_ARDUINO---Physical_COMPUTING_Feature_INTEGRATION-__ColinHebert__CSC_2

The map of the environment so far designed is shown below here.



Arduino Circuit Bread-board PHOTOGRAPH :



Future development ideas for this PROJECT :

Depending on user interest,.. there may be additional game-design content_customization/s made to the various elements getting featured. For example, we could change the selection of central-room_·_‘art-objects’ .. and their corresponding ‘textual-/-word-phrase_memorization_elements’ .. being supplied in each room.” .