**Capstone** **Project Proposal**

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# **Main Idea**

(The What, the Why, the How)

An adventure kind of game where you go from the earth’s core to space. It involves chemistry (mostly) and biology.

Each level will include finding objects, assembling them, an inventory, and interactivity with other characters. It will be possible to save the game.

The game will require knowledge of the level (mainly alchemy), which will be brought by external applications (API).

Landscapes, characters, riddles, grouped functions will be in separate files to maintain coherence.

# **Taught** **Concepts** **used**

* Shapes
* User interactions (MousePress, MouseWheel, KeyPressed, etc)
* Loops
* Nested loops
* State, Global, Local Variables
* Map, Lerp
* Random, Perlin
* Images and sound
* Transformations (Translate, rotate, scale, push/pop)
* Objects and Classes
* Recursion
* 3D Canvas

# **New** **Concepts** **implemented**

* External libraries
* Saving program state
* Accessing connected data

# **Features**

| **Required** |  | **Preferred** |
| --- | --- | --- |
| A storyline |  | 13 sets |
| Dialogue boxes for storyline |  | Hints |
| Instructions menu that explains all the keys |  | Character Customization |
| 3 clickable sets |  | Better graphics |
| Character Selection |  | More visual effects during the battles |
| An inventory |  | Options for fullscreen and turning sound off |
| A progress map |  | Difficulty settings |
| Music + Sound effects |  | Different endings |
| Chemistry/Biology lessons pulled using API |  | Playing a set again |
| Simple battles |  |  |
| Saved progress |  |  |

# **Timeline**

## [**Linear timeline in Figma**](https://www.figma.com/design/vCD1gZC22zAMDHW6uJBpl0/Untitled?node-id=0-1&t=zdzwthEHr5g5qD75-1)

## **November**

| **Sun** | **Mon** | **Tue** | **Wed** | **Thu** | **Fri** | **Sat** |
| --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  | 1 | 2 |
| 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 17 | 18 | 19 | 20 | 21 | 22 | 23 |
| 24 | 25 | 26 | 27 | 28 | 29 | 30 |

## **December**

| **Sun** | **Mon** | **Tue** | **Wed** | **Thu** | **Fri** | **Sat** |
| --- | --- | --- | --- | --- | --- | --- |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| 29 | 30 | 31 |  |  |  |  |

## **January**

| **Sun** | **Mon** | **Tue** | **Wed** | **Thu** | **Fri** | **Sat** |
| --- | --- | --- | --- | --- | --- | --- |
|  |  |  | 1 | 2 | 3 | 4 |
| 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| 19 | 20 | 21 | 22 | 23 | 24 | 25 |
| 26 | 27 | 28 | 29 | 30 | 31 |  |