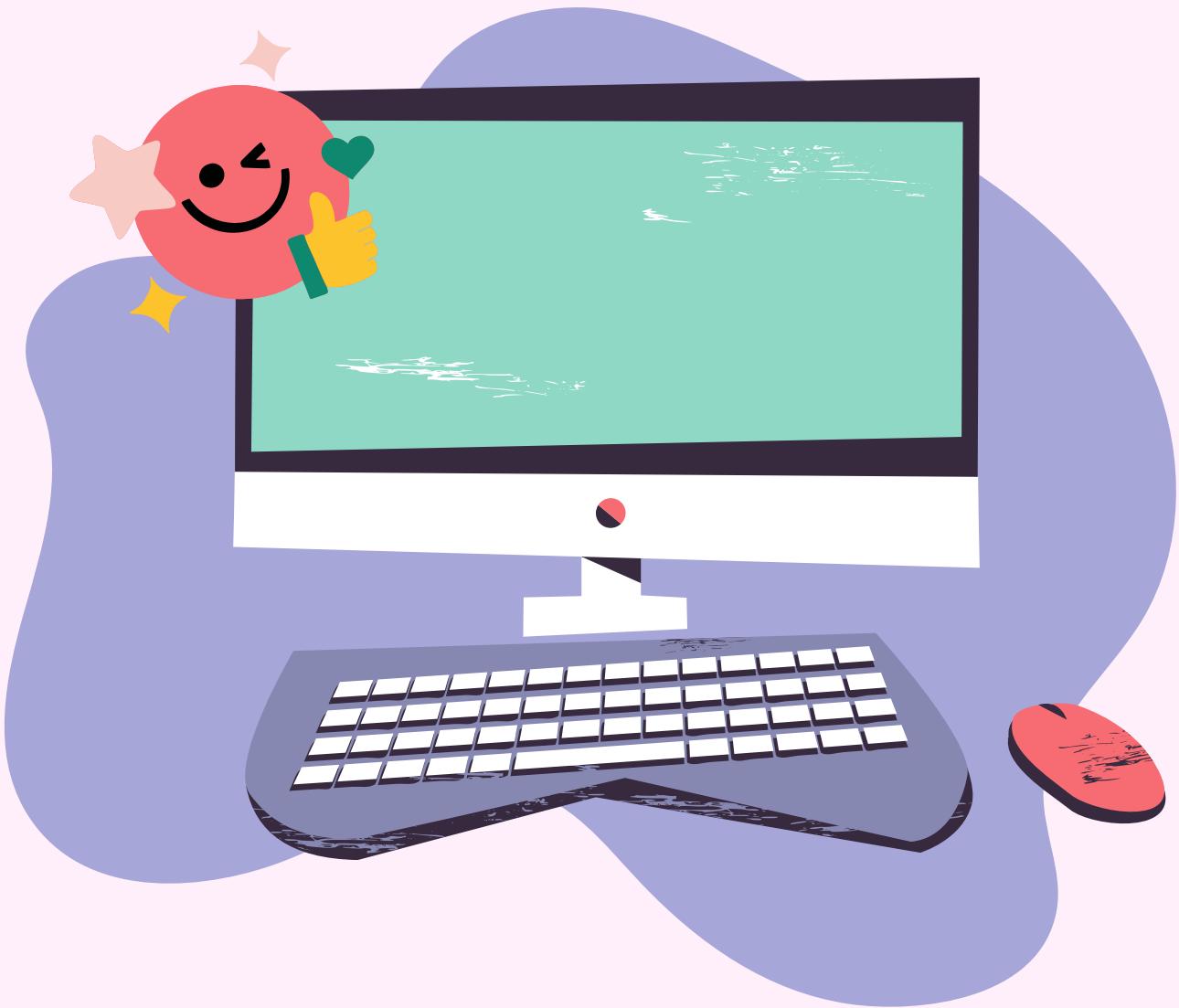




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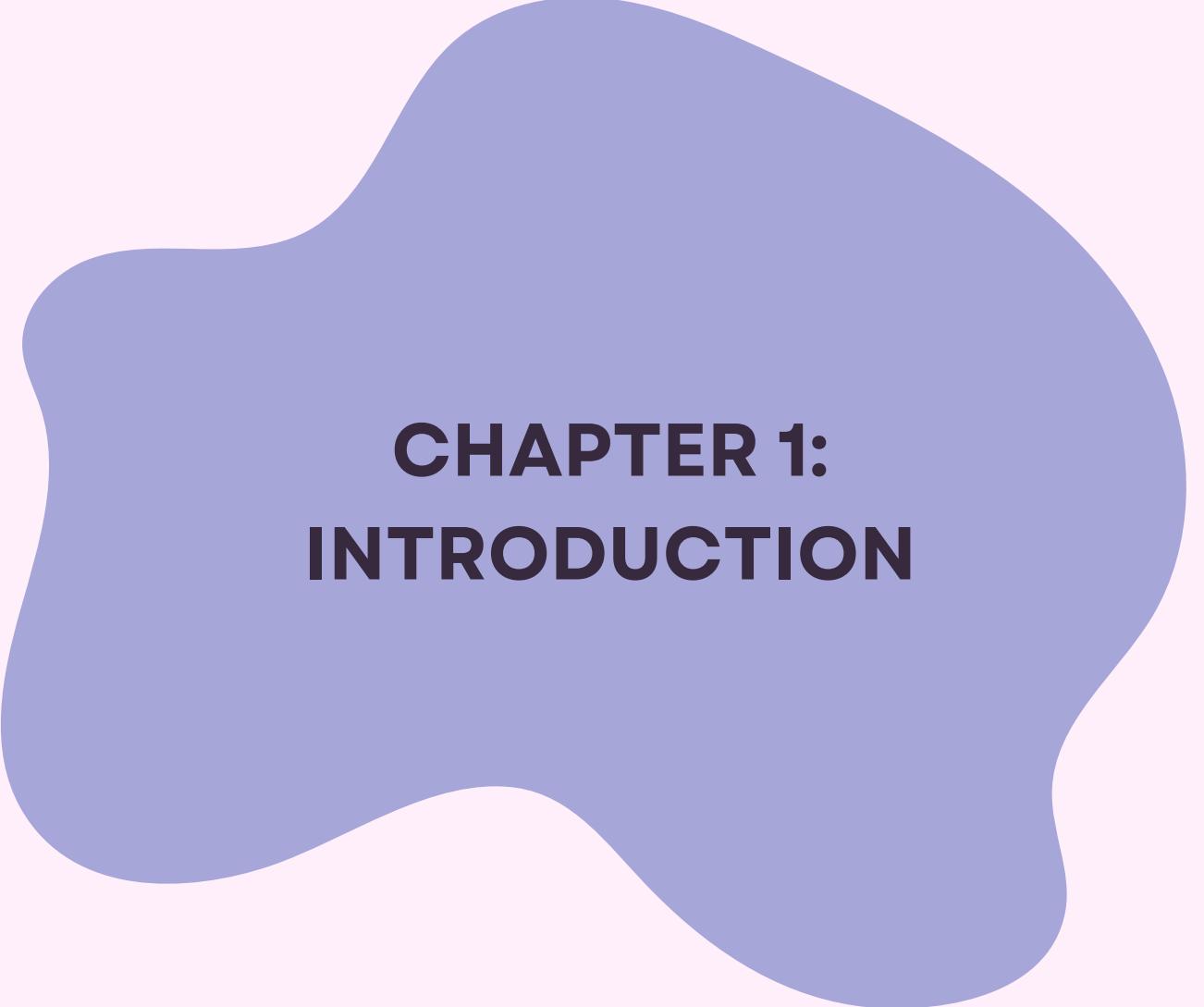


COMPUTER GRAPHIC'S PROPOSAL

RGB

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CHAPTER 1:

INTRODUCTION

GENERAL IDEA:

IIT'S AN ANIMATION FILM FOR CHILDREN THAT TELLS KEMO'S STORY IN 14 SECTIONS.

GOAL:

USING OPENGL TO CREATE AN ANIMATION STORY FOR CHILDREN, ALSO AN EDUCATION PROJECT.

CONTRIBUTIONS:

SIMPLE AND ENJOYABLE TO CHILDREN TO WATCH KEMO.

PROJECT DETAIL AND SCOPE:

OUR PROJECT START WITH THE STARTING SCENE WHERE YOU CHOOSE WHETHER YOU WANT TO START PLAYING THE STORY OR READ THE STORY BY CLICKING WITH YOUR MOUSE.

SECTION 1:

START WITH SHOWING KEMO WITH HIS FAMILY.

SECTION 2:

KEMO PLAYING IN THE CORN FIELDS.

SECTION 3:

KEMO GOING TO THE FOREST.

SECTION 4:

KEMO ROLLING A LARGE WALNUT

SECTION 5:

KEMO LOOKING FOR HIS HOME

**SECTION 6:
KEMO CRYING IN A HOLE HE DOESN'T KNOW**

**SECTION 7:
THE SUN RAISE**

**SECTION 8:
KEMO SLEEPING IN RABBIT'S HOME**

**SECTION 9:
RABIT'S FATHER HELPING KEMO**

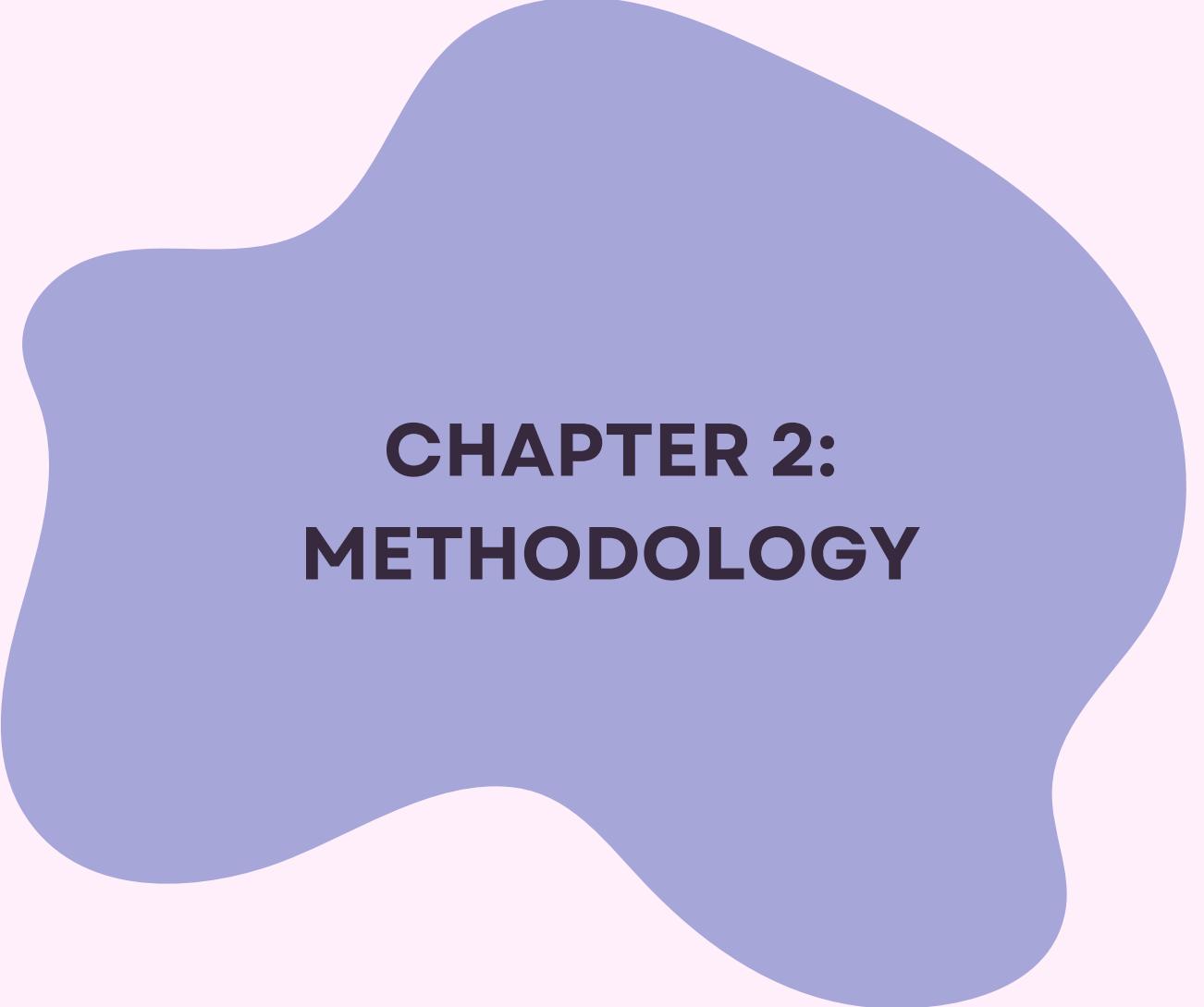
**SECTION 10:
RABITS FATHER WITH THE OWL**

**SECTION 11:
THE OWL TRYING TO HELP KEMO**

**SECTION 12:
THE OWL FINDING KEMO'S FAMLIY LOOKING FOR HIM**

**SECTION 13:
KEMO RETURNING TO HIS FAMILY**

**SECTION 14:
KEMO AND HIS MOTHER CONVIRSAION**



CHAPTER 2: METHODOLOGY

METHODOLOGY:

Some used Libraries:

```
#include <OpenGL/gl.h>
```

```
#include <GLUT/glut.h> //handle the window-managing  
operations  
#else
```

```
#include <GL/glew.h>  
#include <GL/freeglut.h> //handle the window-managing  
operations  
#endif
```

```
#include <iostream> //Provides basic input and output  
functionality in C++.
```

```
#include <chrono> //ffers tools for measuring time durations  
and performing time-related operations.
```

```
#include <random> //Facilitates the generation of pseudo-  
random numbers for tasks requiring randomization.
```

The main methods used in drawing:

```
glBegin(GL_POLYGON)
```

```
glBegin(GL_QUADS)
```

```
glBegin(GL_TRIANGLES)
```

```
glBegin(GL_LINES)
```

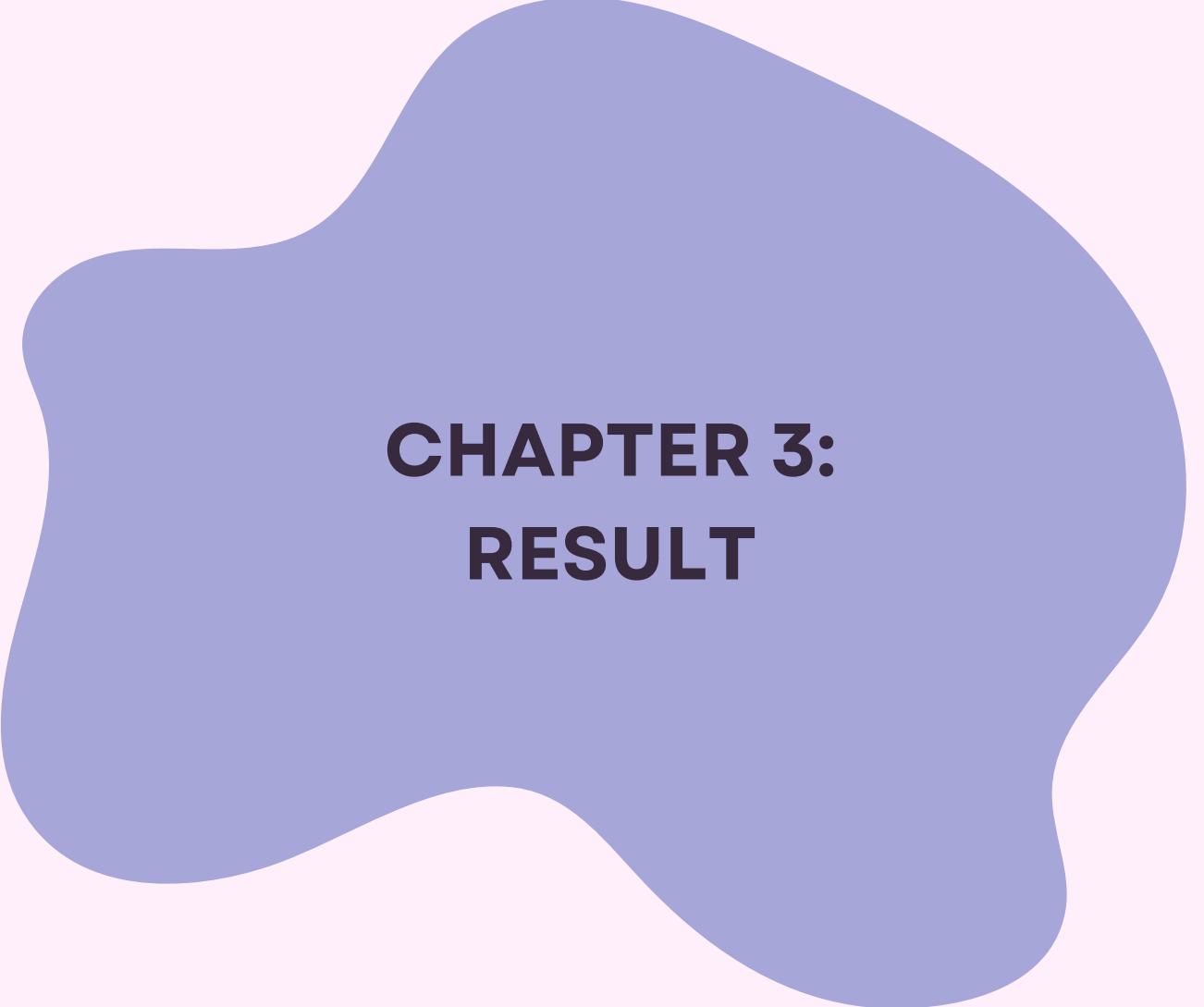
```
glBegin(GL_LINE_LOOP)
```

```
glBegin(GL_LINE_STRIP)
```

```
drawFilledCircle(GLfloat x, GLfloat y, GLfloat radius,GLfloat  
twicePi)
```

```
drawHollowCircle(GLfloat x, GLfloat y, GLfloat radius,GLfloat  
twicePi)
```

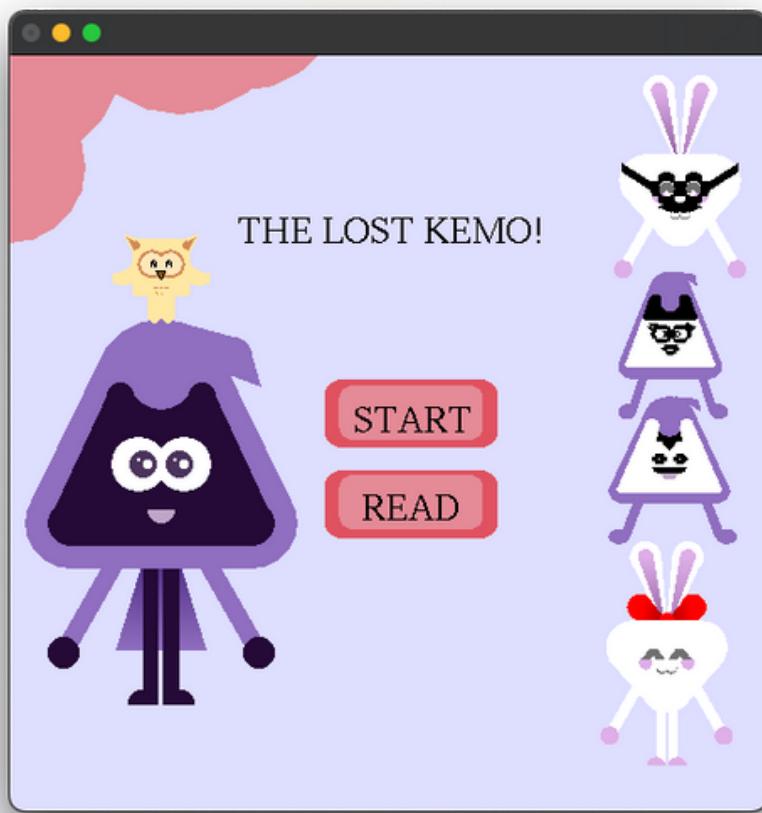
the drawFilledCircle and drawHollowCircle methods were modified by adding one parameter which is twicePi to determine to draw half circle or a whole one



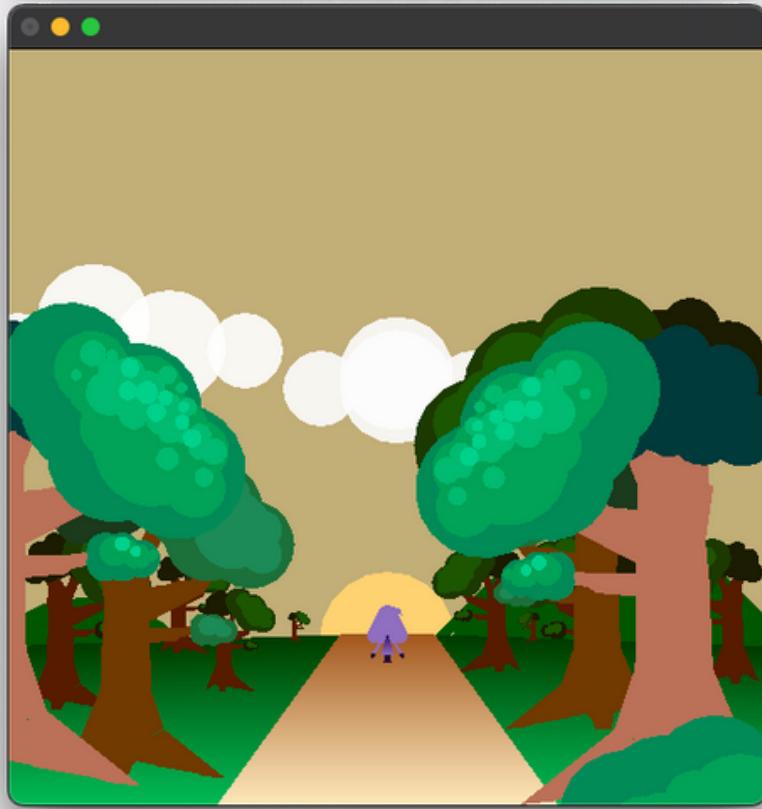
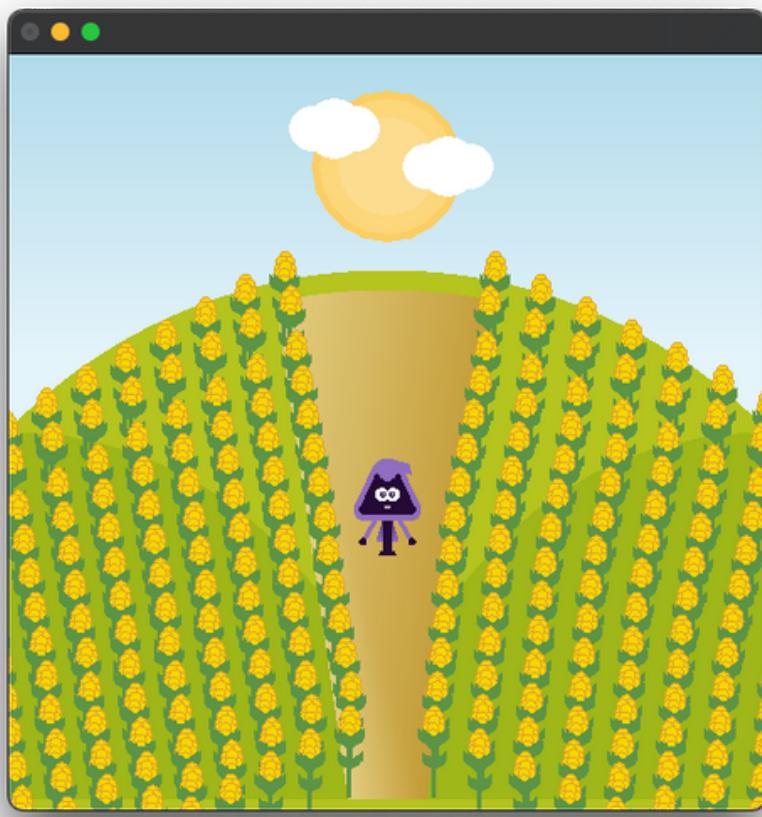
CHAPTER 3:

RESULT

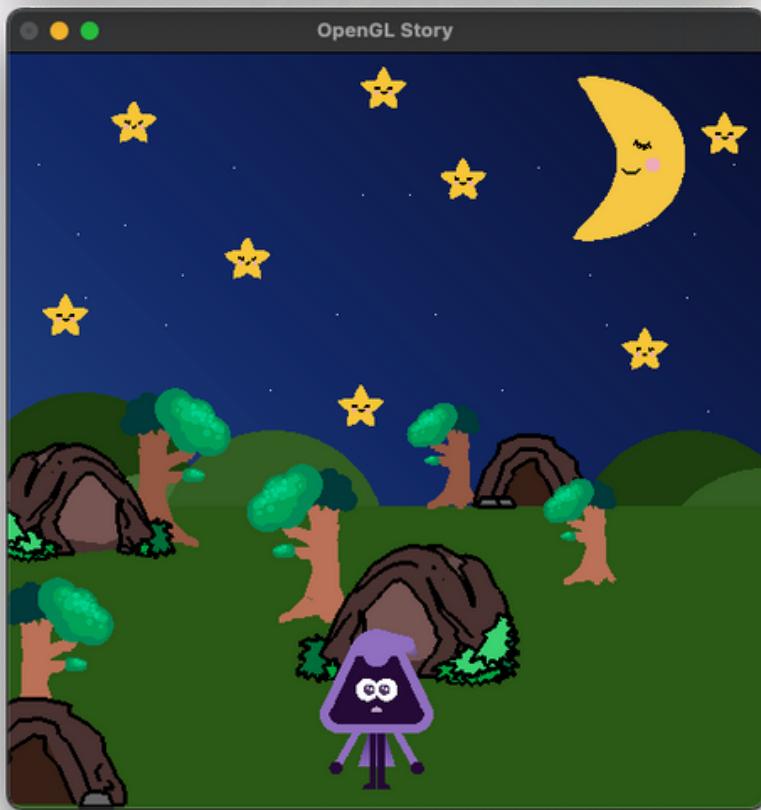
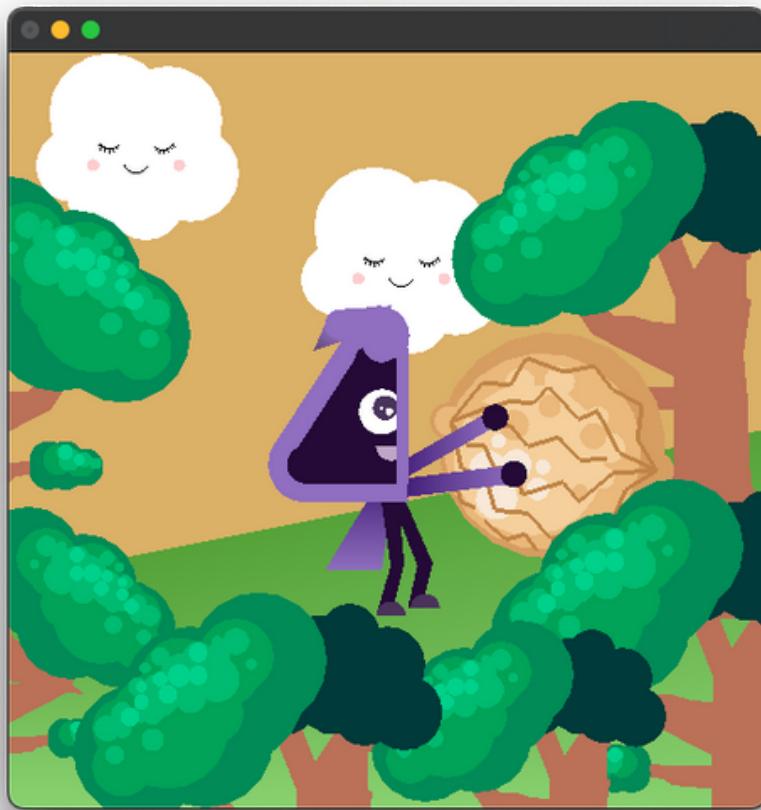
SCREENSHOTS:



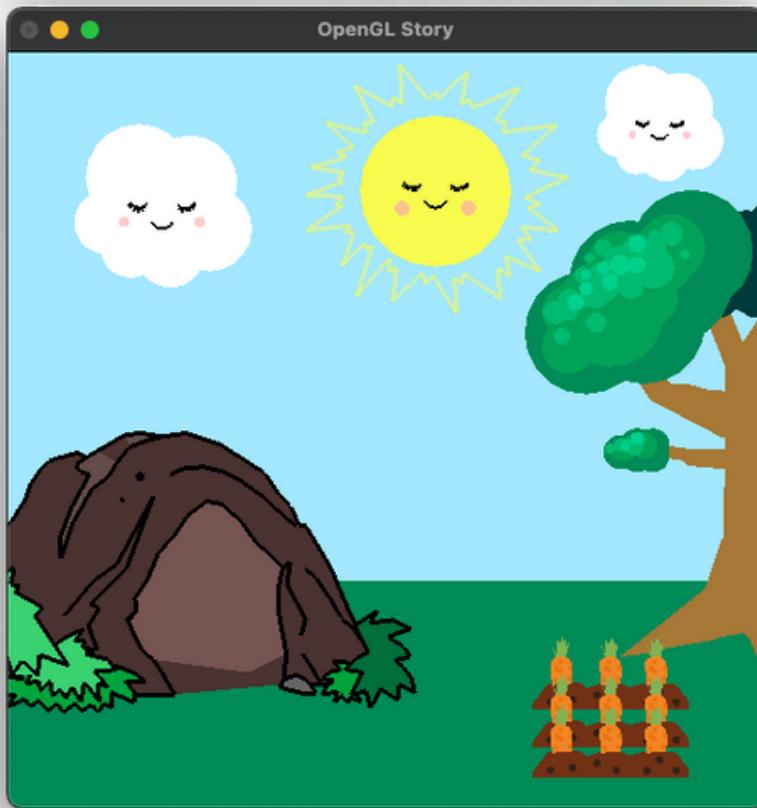
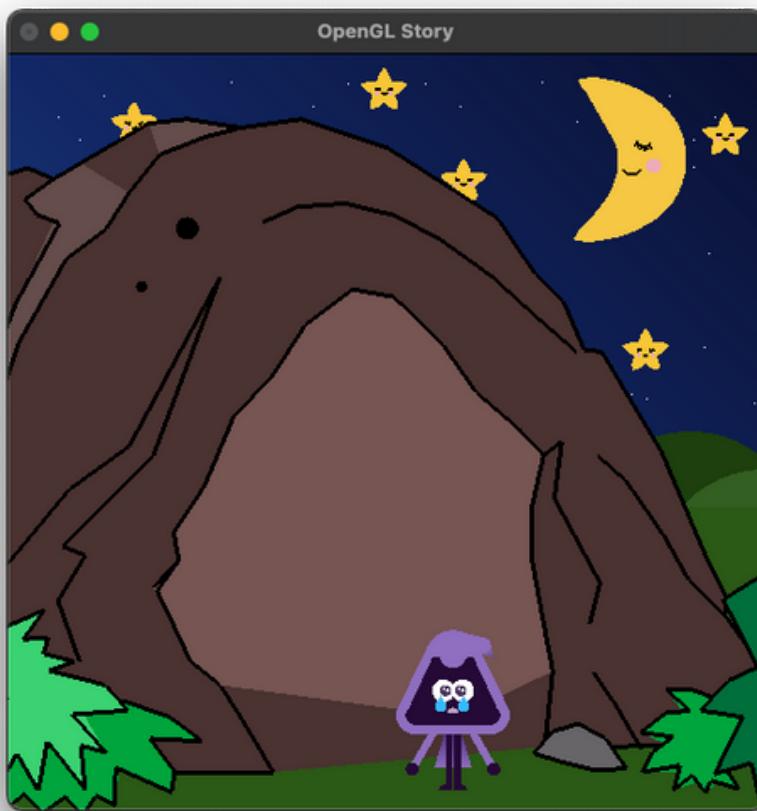
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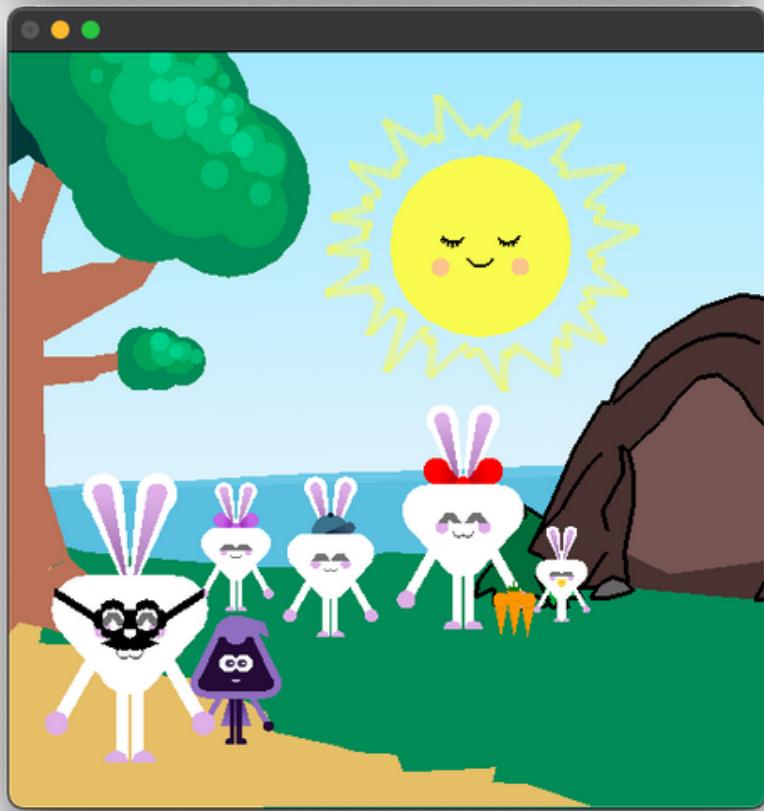
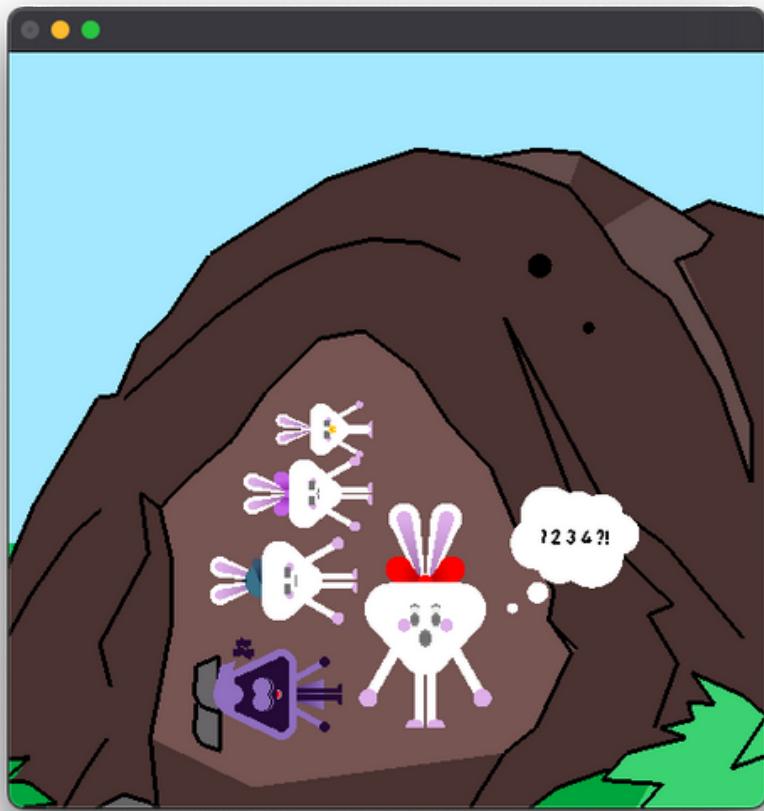
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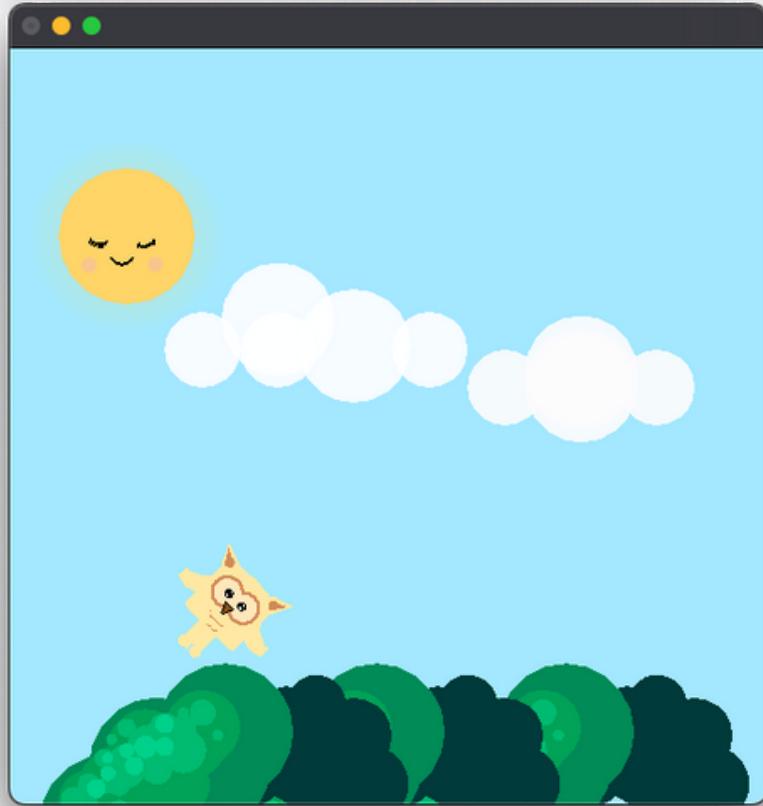
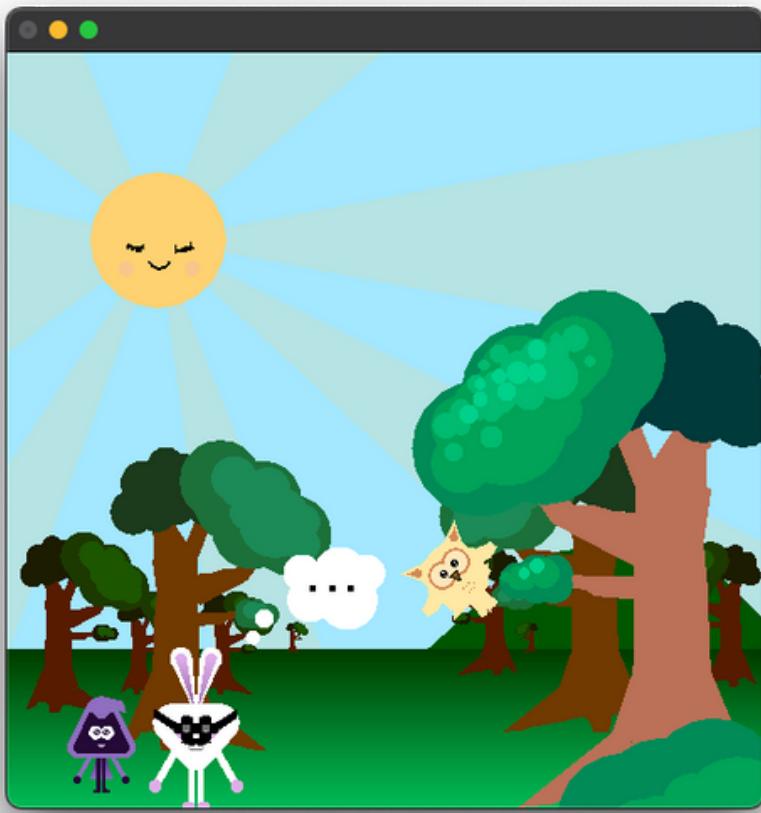
SCREENSHOTS:



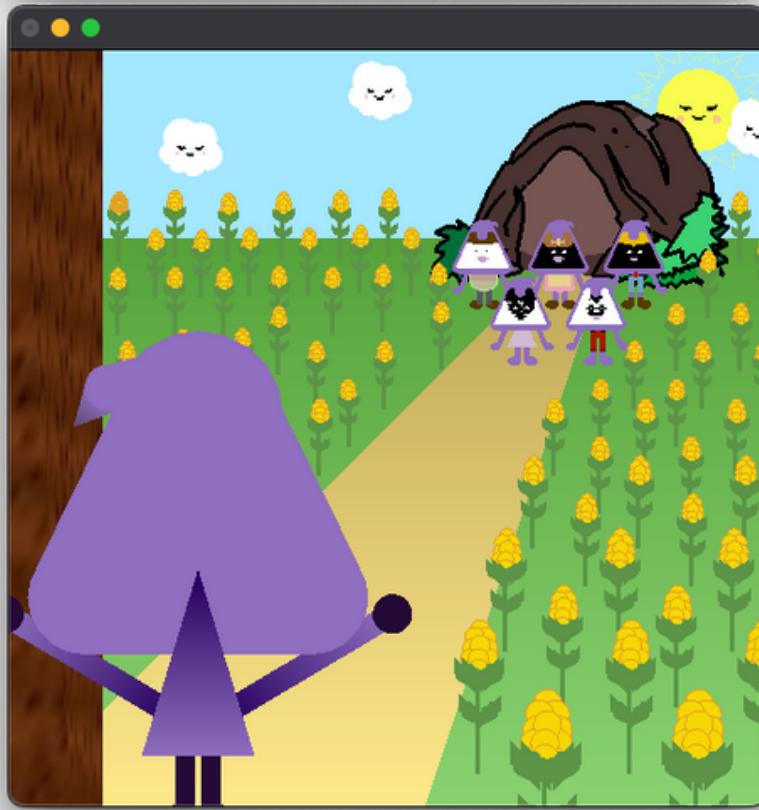
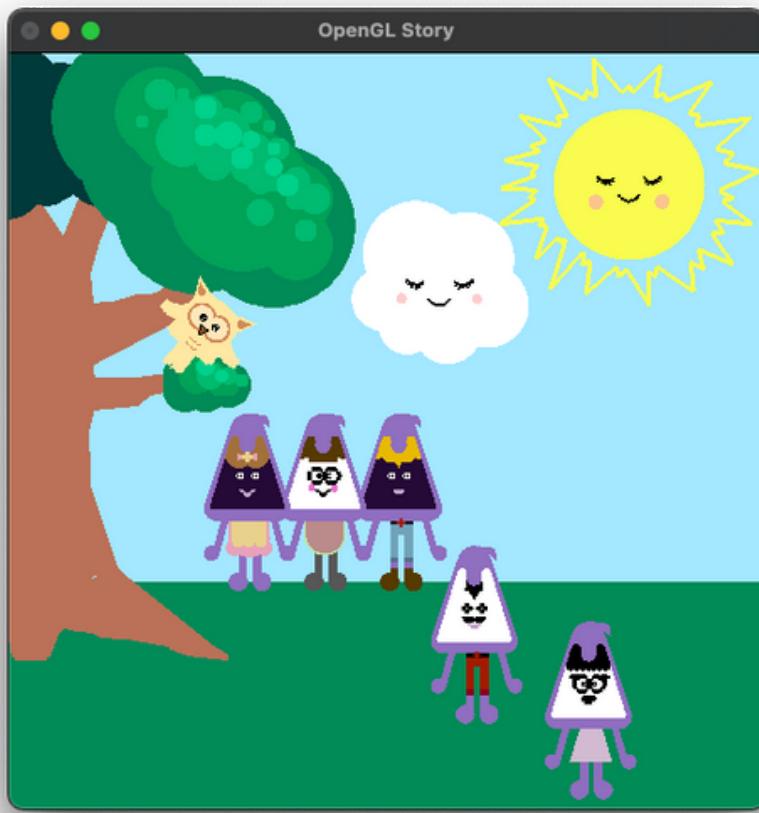
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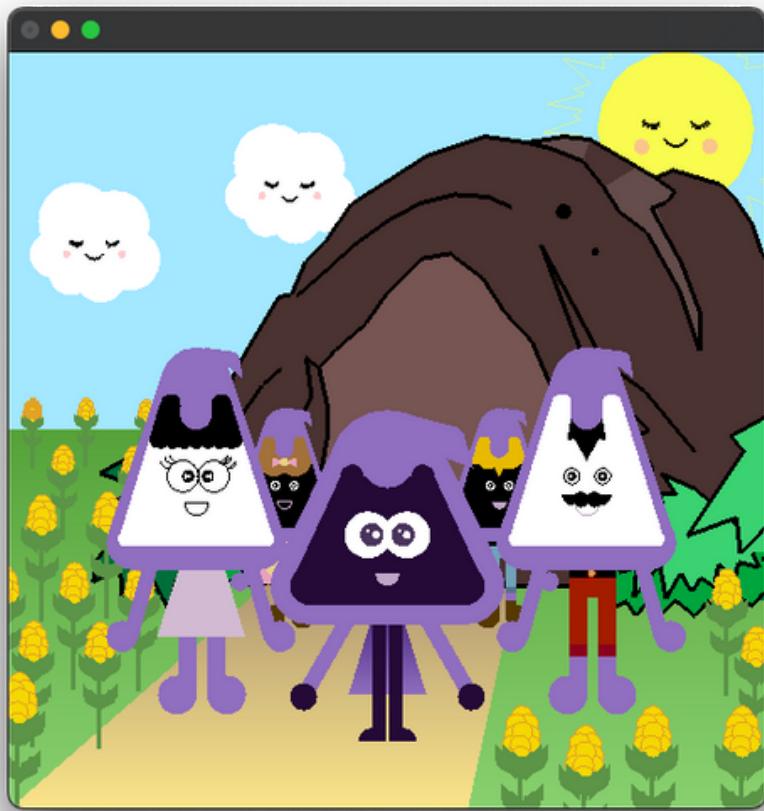
SCREENSHOTS:



SCREENSHOTS:



SCREENSHOTS:



CONCLUSION & FUTURE WORK:

FINALLY, IN THIS PROJECT, WE APPLIED EVERYTHING WE HAVE LEARNED IN THIS COURSE AND WE DID OUR BEST TO END WITH THIS RESULT.

FOR THE FUTURE, WE WOULD ADD AN INTERACTIVE GAME SECTION WHICH IS A MAZE TO RETURN KEMO TO HIS HOME, ADD MORE COMPLEX GRAPHICS, ADD SOUNDS TO THE STORY, AND ALSO ADDING BUTTONS TO GO TO THE NEXT AND PREVIOUS SCENES

REFERENCE:

To switch between scenes :
we used a library : <chrono>

Reference :

<https://www.opengl.org/resources/libraries/glut/spec3/node64.html>

We used the method : glutTimerFunc

Reference : [7.19 glutTimerFunc \(opengl.org\)](#)

To write on the screen :

We used the method : glutBitmapCharacter

Reference : [10.1 glutBitmapCharacter \(opengl.org\)](#)

To handle mouse button :

Reference:

[c# - How can I use screen space coordinates directly with OpenGL? - Stack Overflow](#)