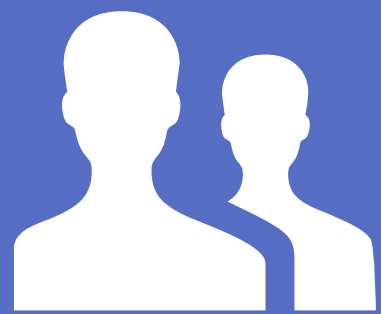Start

Load

Preferences

About

Help

Quit

S. Hatting, July 5, 2024

An Interactive Graphic Novel for ESL Learners with Ren'Py

Stars, Stripes, and Second Chances

1.0

Introduction & Background

Constraints & Deliverables

Timeline & Testing
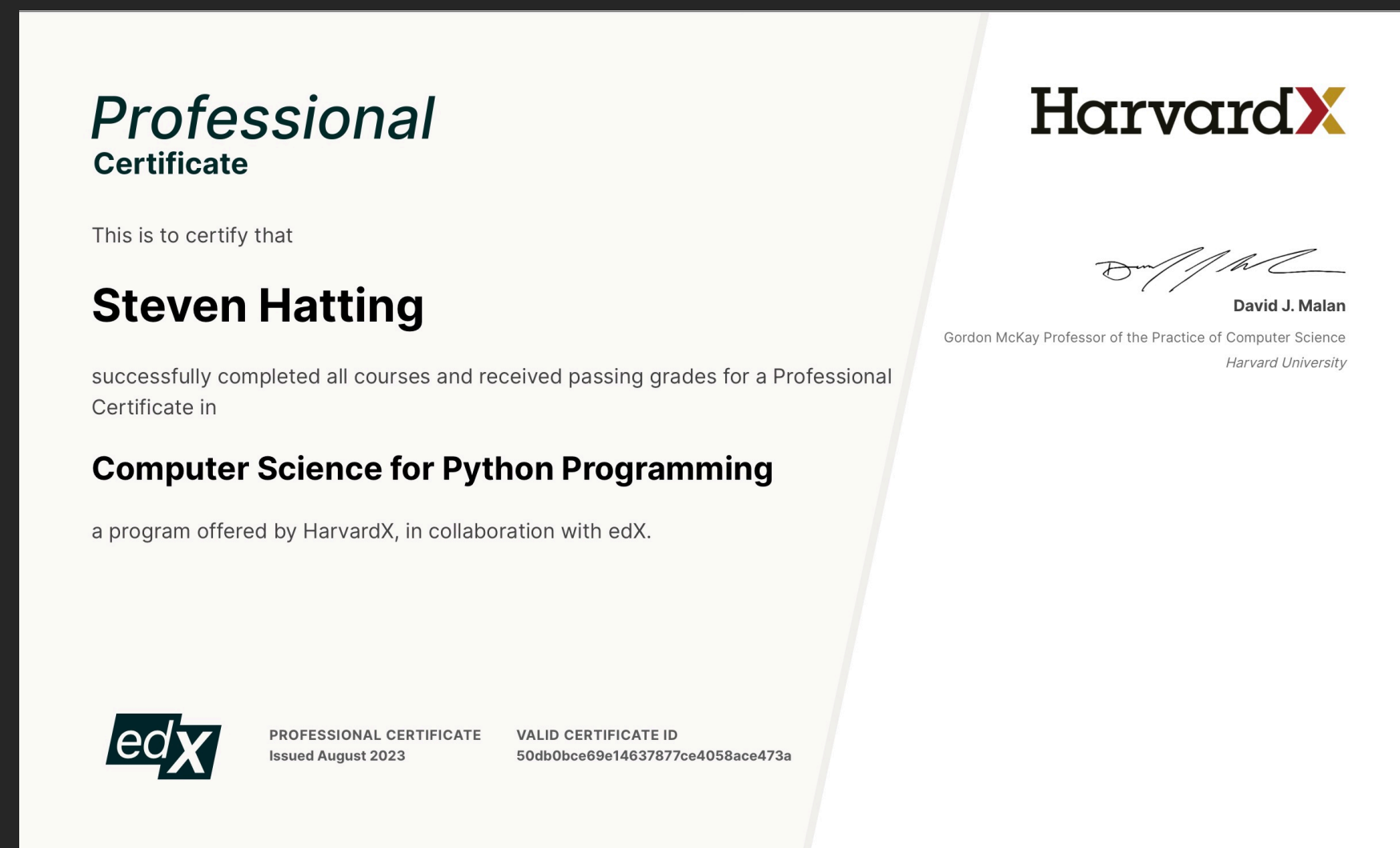
Visuals

Challenges

Meet the Creator

STEVE

Administrative & Lead Developer

Steven Hatting

I am very interested in using technology to further education and both personal and professional development.

During this project, I mainly worked with programming using Python & Ren'Py, creating and rendering 3D characters, and designing camera shots for various scenes

Professional
Certificate

HarvardX

This is to certify that

Steven Hatting

successfully completed all courses and received passing grades for a Professional Certificate in

Computer Science for Python Programming

a program offered by HarvardX, in collaboration with edX.

David J. Malan
Gordon McKay Professor of the Practice of Computer Science
Harvard University

edX PROFESSIONAL CERTIFICATE
Issued August 2023

VALID CERTIFICATE ID
50db0bce69e14637877ce4058ace473a

CS50 Certificate

CS50 congratulates

Steven Hatting

on completion of CS50's Introduction to Programming with Python, including nine problem sets and one final project.

Awarded from Cambridge, Massachusetts,
in the year two thousand twenty-three.

David J. Malan
Gordon McKay Professor of the Practice of Computer Science
Harvard University

https://cs50.harvard.edu/certificates/f303046d-9e86-4f17-933f-2d473117e5b7

STARS, STRIPES, & SECOND CHANCES

An Interactive Graphic Novel for ESL Learners with Ren'Py

Interactive

The Player plays as the main character and interacts with the other characters in the story throughout the game.

Diverse Mini-Games

Using both Python & Ren'Py, the player can practice with various vocabulary & grammar mini-games as well as developing listening and reading comprehension skills

Visual Novel Format

Based on Krashen's comprehensible input hypothesis of utilizing comic books in order to learn English.

Cross-Curricular Content

Focus is on the English language, but also incorporates American history, sports, emotional intelligence, culture, and holidays.

RELEVANT STATISTICS

10
Mini-Games

159
Vocabulary Words
with Images

500-600
Lines of Dialogue

9
Characters

5
Possible Endings

5
Reading Comprehension
Exercises

3
Listening Comprehension
Exercises

5
Interactive Grammar
Lessons

6
Covered Cultural
Topics

21
3D Rendered
Scenes

Literature Review of "Comic Book Reading, Reading Enjoyment, and Pleasure Reading Among Middle Class and Chapter 1 Middle School Students" (Ujiie & Krashen, 1996)

GAMING

PROGRAMMING

COMIC BOOKS & GRAPHIC NOVELS

COMPREHENSIBLE INPUT

COMMUNICATIVE APPROACH

~ Comic book reading correlates with increased pleasure reading & reading enjoyment

~ Comic book readers tend to read more books

~ Comics can also be a bridge between written and spoken language

~ Comics are more engaging than regular books

~ Less intimidating entry point for reading

~ Can potentially help struggling or reluctant readers

PROJECT CONSTRAINTS

Technological Constraints
Needs to be run on a computer with the correct hardware - Mac, Windows, or Linux
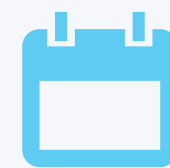
Development Constraints
This project only had around 1 month to really create and develop - imagine what could be with even more time...

Educational Constraints
While I am an EFL teacher, having someone who develops curriculum would be a great asset for better developing the lessons and introductions to grammar and vocabulary.

Cultural Sensitivity
Beta testers were difficult to find since the game incorporates music and the area where I live is very sensitive to using music

EXPECTED VS. FINAL DELIVERABLES

Storyline over 6 weeks

Originally designed to be a game encompassing a 6-week long story

Fun Party Game

Originally though to include a game similar to DDR during the party scene in week 3

6 Reading Comprehension Exercises

Originally designed to be 1 reading comprehension exercise per week

6 Listening Comprehension Exercises

Originally designed to be 1 listening comprehension exercise per week.

VS

Storyline over 3 weeks

Became a story that lasts for only 3 weeks

Fun Party Dialogue

Decided to include a dialogue instead - also music & dancing is a sensitive topic to some West Asian cultures

5 Reading Comprehension Exercises

Turned into multiple reading comprehension exercises per week, but in 3 rather than in 6 weeks.

3 Listening Comprehension Exercises

Became 1 listening comprehension exercise for week 1 and 2 for week 2, but 0 for week 3.
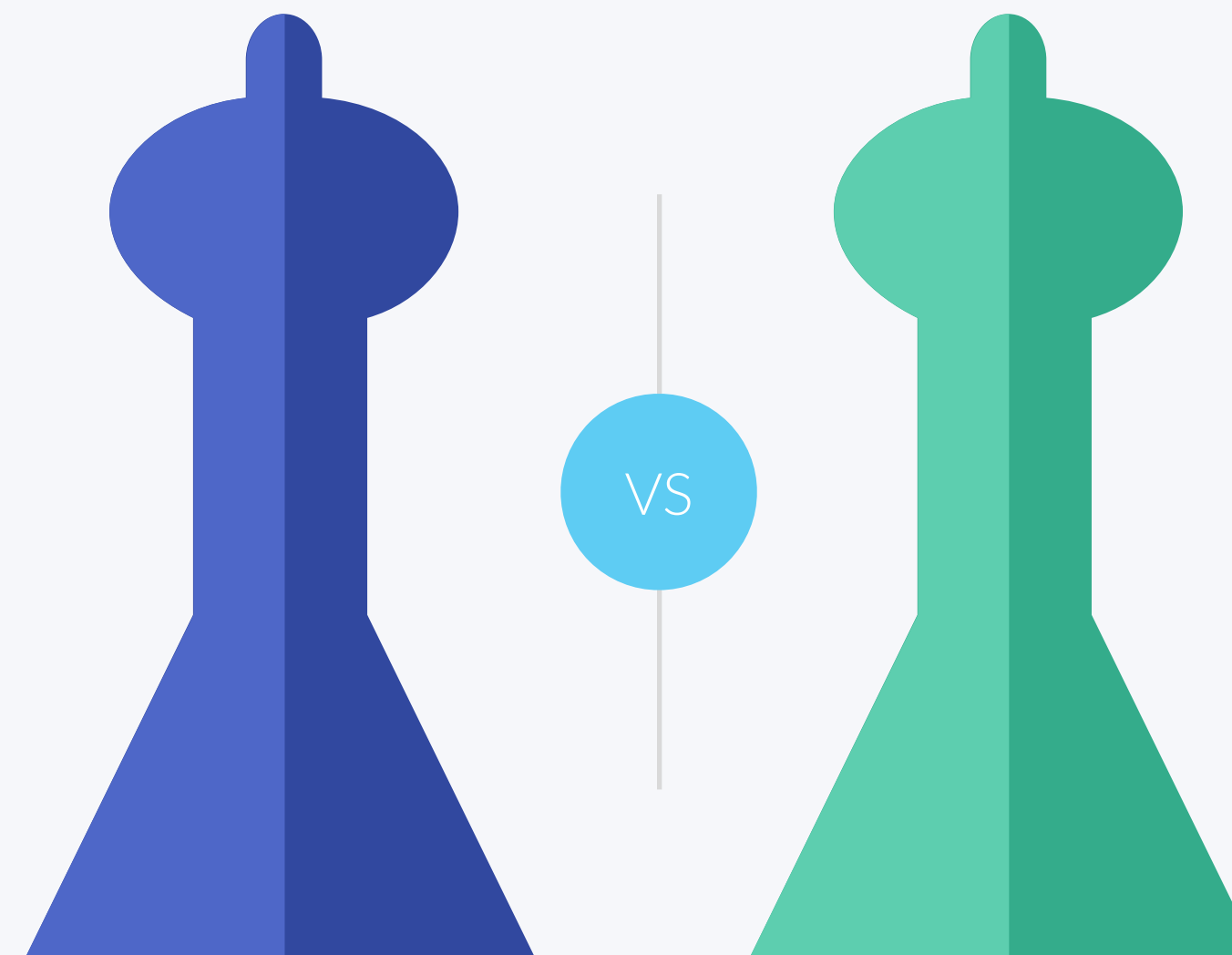
Major Milestones

Storyline Creation
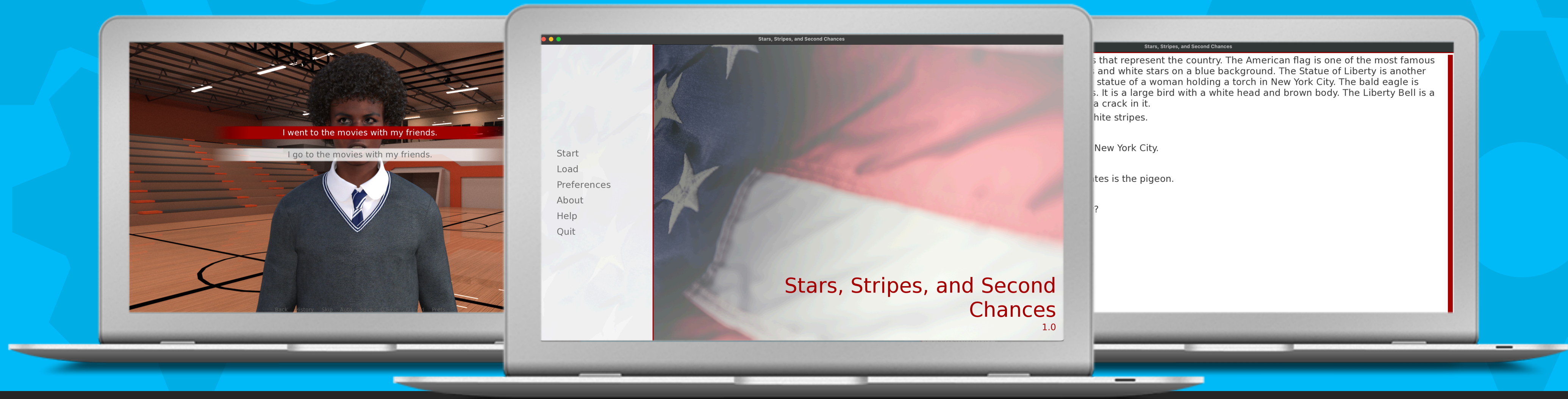
Curriculum Development

Graphics Design

Coding

A+ Review

GANTT CHART

	W	R	F	S	U	M	T	W	R	F	S	U	M	T	W	R	F	S	U	M	T	W	R	F	S	U	M	T	W	R	F	S	U	M	T	W	R	F	S
Design the user interface																																							
Develop story & char bgs																																							
Determine curriculum																																							
Design characters																																							
Create reading passages																																							
Create game script																																							
Implement mini-games																																							
Create listening exercises																																							
Prepare the game for submitting																																							

Laptop 1 screen text:
I went to the movies with my friends.
I go to the movies with my friends.

Laptop 2 (center) screen:
Stars, Stripes, and Second Chances

Start
Load
Preferences
About
Help
Quit

Stars, Stripes, and Second Chances
1.0

Laptop 3 screen:
Stars, Stripes, and Second Chances
...s that represent the country. The American flag is one of the most famous ...s and white stars on a blue background. The Statue of Liberty is another ...statue of a woman holding a torch in New York City. The bald eagle is ...s. It is a large bird with a white head and brown body. The Liberty Bell is a ...a crack in it.
...hite stripes.
...New York City.
...tes is the pigeon.
...?

TESTING & VALIDATION

Content Validation
Checked the accuracy of the grammar and content with another English language instructor

Technical Testing
Tested the ability to run on different operating systems of MacOS 14.5 and Windows 11 22H2

Pedagogical Review
Reading comprehension exercises were checked with an English language expert in reading and writing

VISUALS
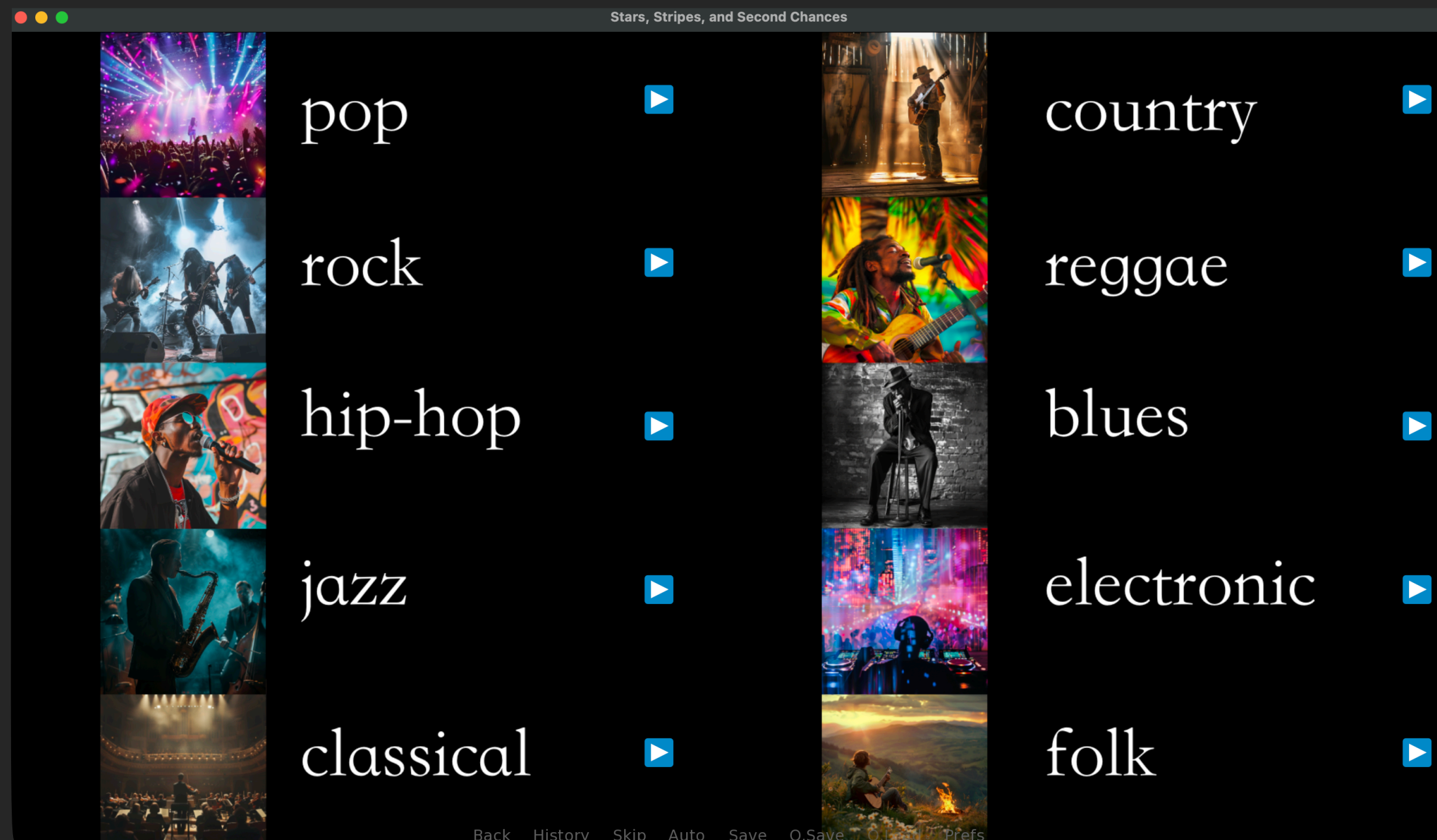
Vocabulary Learning Screen

A vocabulary training screen where the player can play the pronunciation of the word - later this turns into a vocabulary mini-game

The United States has many symbols that represent the country. The American flag is one of the most famous symbols. It has red and white stripes and white stars on a blue background. The Statue of Liberty is another important symbol. It is a large green statue of a woman holding a torch in New York City. The bald eagle is the national bird of the United States. It is a large bird with a white head and brown body. The Liberty Bell is a famous bell in Philadelphia that has a crack in it.

1. The American flag has blue and white stripes.

True False

2. The Statue of Liberty is located in New York City.

True False

3. The national bird of the United States is the pigeon.

True False

4. What color is the Statue of Liberty?

a) Red

b) Blue

c) Green

d) Yellow

5. Where is the Liberty Bell located?

a) New York City

b) Los Angeles

c) Washington D.C.

Back   History   Skip   Auto   Save   Q.Save   Q.Load   Prefs

Reading Comprehension Exercise

An example of a reading comprehension screen - most of which are based on American culture

VISUALS

Pelmanism Mini-Game

An example of a matching (pelmanism) mini-game based on some American football vocabulary that the player previously learned

Josefina
Remember, we're all here for you if you ever need to talk. But for now, let's focus on having fun!
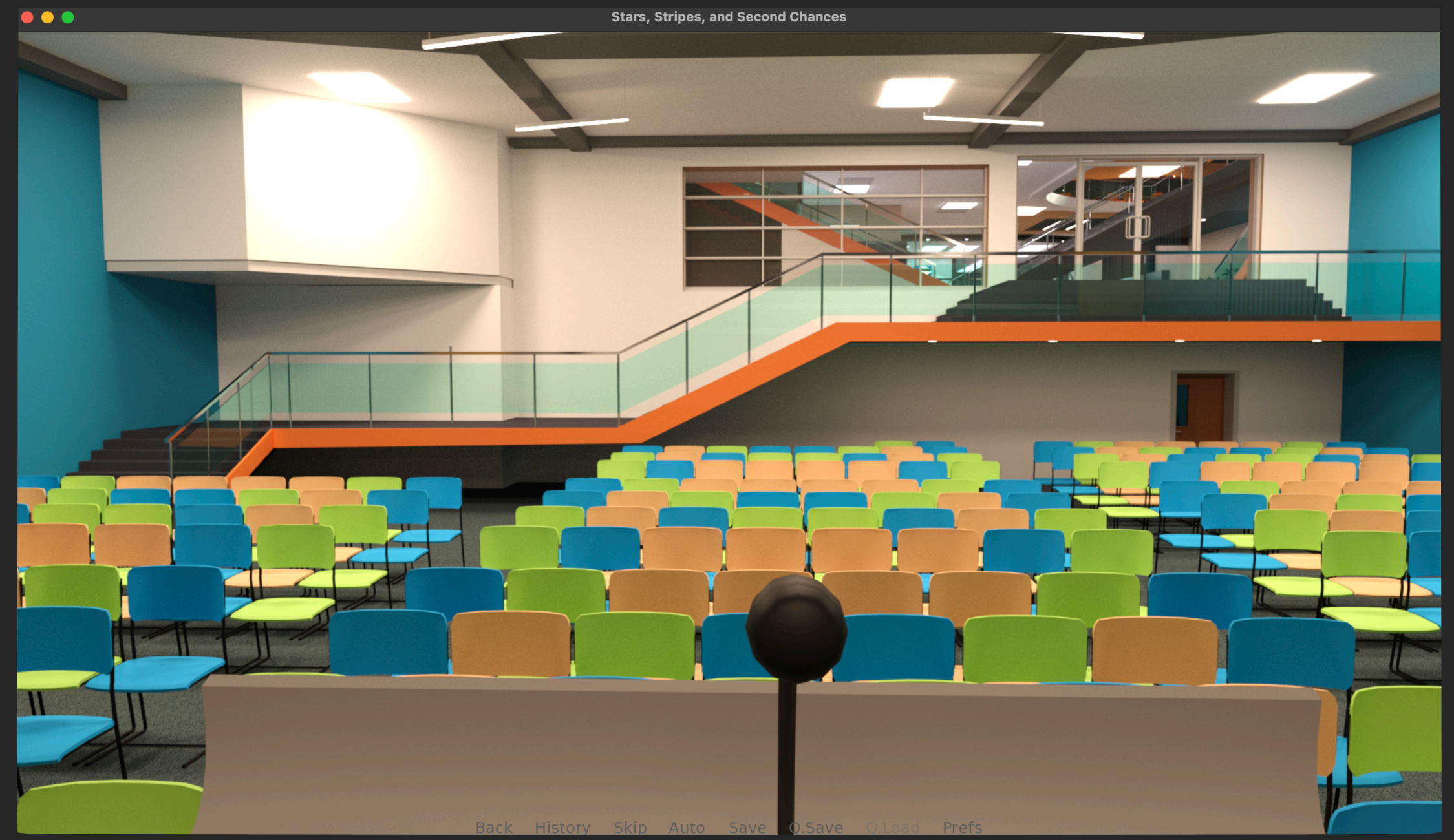
3D Rendered Character with Background

One of the main characters that the player interacts with throughout the game

VISUALS
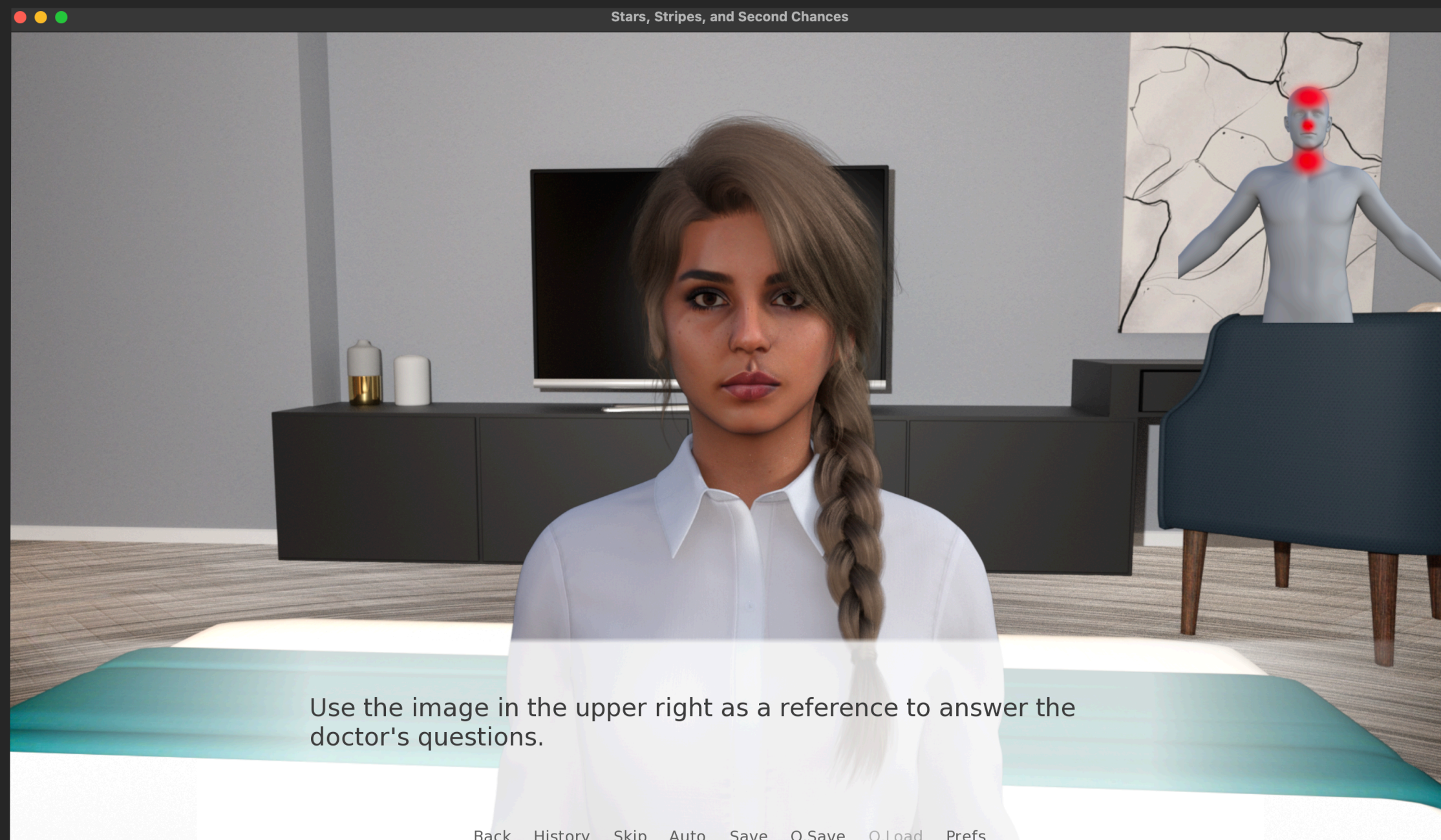
Interview with Doctor about Symptoms
A doctor who is going to interview the main character (role of the player) in order to find out what the symptoms are

3D Rendered Background of Auditorium
A 3D rendered scene in the finale of the school where the main character gives a speech which ultimately leads to a successful or failed ending

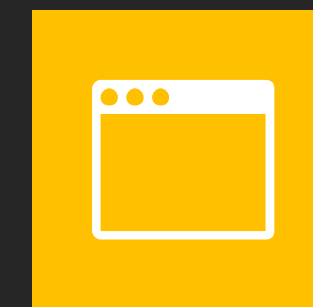# CHALLENGES

Finding a way to create images

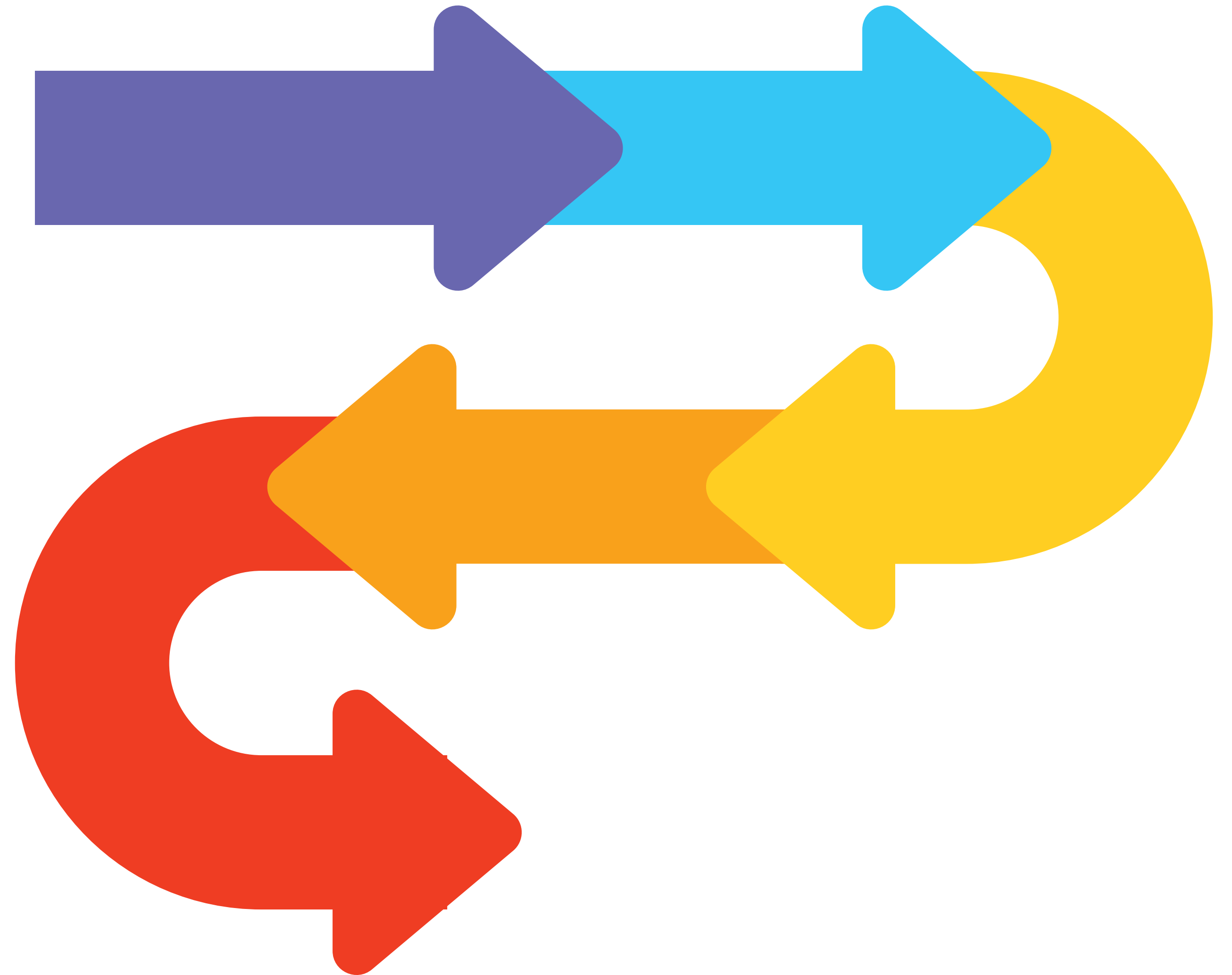Understanding Capabilities of Ren'Py
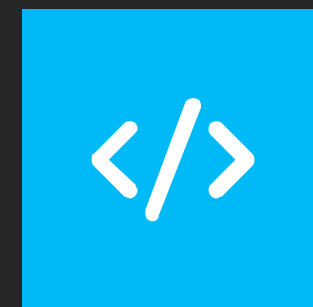
Adding different mini-games
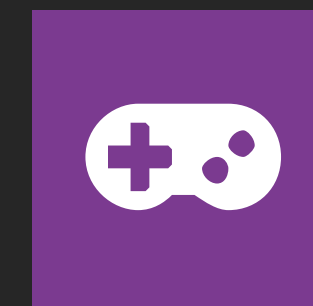
Working with Ren'Py Screens

Conclusion

- **Future Implications:**
  - Add the last 3 weeks as originally planned
  - Add more listening & reading activities
  - Cover more grammar topics
  - Add more dialogue and events to the storyline
  - Adapt mini-games into a revision program without a storyline

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