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COM218 Final Project Documentation Description

Title: Celebrate our Diversity

Description: This educational program helps users understand the diversity at Connecticut College and learn how to say "hello" in a few languages that are represented on the campus using three modes of learning; writing, listening and quizzes. There are many interactive buttons, video and audio elements throughout the program that users can interact with to aid in their learning process.

Background: The ultimate goal for this program is to convince our Connecticut College community that we have a rich diversity and we should really consider embracing and celebrating, not just on a surface level in promotional brochures but also more frequently in daily practice. Some of the pedagogical approaches I have incorporated in this program to encourage practicing languages are inspired by methods we use in teaching young children as well as my own experience learning languages. Those learning methods include visual(spatial), verbal(linguistic) and physical(kinestatic).

When I learn a new word, especially when it is in characters and pronunciation that I am not familiar with, it is very helpful to have some visuals association to a new word that I am hearing. As a visual learner, I always had to write the new word down on a piece of paper or it will not retain in my memory. This is the rationale for including a drawing/writing component in the program, similar to what we see in children's learning to write books where one can see as well as practice writing new words. The program allows user to learn and write down the new words. Since it is digital, user can practice writing as often as he/she wishes.

One of the main reasons we should learn how to say hellos in different languages is so that we verbally greet others on campus. Having a recording of the different hellos that users can play back easily will allow users to learn the correct pronunciation of those words and be confident enough to say it out loud. Based on my observation of students learning new languages at Conn, there seems to be a lack of confidence in practicing the language, further limiting their

use of the language to only within a classroom context. Hence, I included a listening component where user can pick a language and hear the word being pronounced to them. The more they hear it, the faster that they will able to learn the word. To build of the idea of having visual components when learning, I also included an animation of the mouth shape when a word is being said.

During my preliminary research, I tried looking for ways in which I can animate lip syncing easily as we see being used in most cartoon animations today. While that is for the purpose of making an animation look realistic, the idea of lip syncing animation can still be applied in this context. However, my research has proved futile because lip syncing is in fact not as easy as it looks, especially in case like this where the mouth shape should be highly accurate. To have a model of something as close to what I had imagined, I included a mouth shape that animates each time a language card is selected. User is able to hear the word and see the mouth move at the same time. This is to imitate how one learns to pronounce a word out loud.

I had considered different ways to present the findings from the research I conducted throughout the semester at Conn about our language diversity, however, I finally decided on using quizzes to go along the lines of this program being something highly interactive and engaging. Researcher Jeffrey D. Karpicke of Purdue University conducted a survey on college students and found that taking quizzes has helped students retain the information they learn. A model of a mini quiz was implemented in this program to allow users to be questioned, to think and to provide an answer. This way, users will perhaps retain the information longer than if I had chosen to simply presented the information of my research in plain text form.

The approaches I have used to create this interactive program to engage my users does in some ways mirror playful and childish methods which may not be suitable for my targeted audience. However, I want to believe that these learning methods, as I have personally experience, are universal and still applicable even to help young adults and adults learn new languages. To work around this, I made use of an elegant and simple design that would appeal more to my targeted audience. The colors I used in this program are mild pastel colors to bring out happy and positive emotions.

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Languages have the power to divide people because people cannot communicate with one another effectively. But the fact that we have so many different languages represented on our Connecticut College campus by students, faculty, staff and administrations only indicate the rich knowledge that we have and it would be a waste if we don’t tap on that diversity.

Project Description: Celebrate our Diversity was created to share the content of the research that I have done over this past semester, including conducting a survey of the different languages represented on campus and students’ perspective on language learning. My intention for this interactive program is to encourage students, faculty, staff and administrators to
celebrate and embrace of our language diversity more widely across campus. The idea is to start by learning and practice the simple but most powerful word: “hello”. Hence, this program consists of two parts, research content presented in a form of a mini quiz, and social engagement presented in a form of fun drawing and listening activities. Celebrate our Diversity has been set up in such a way that the user can discover the diversity on campus and then take steps to learn a few new words in other languages. My hope is that by passing on this knowledge from my research, members of the community will have the power to begin celebrating our language diversity by greeting others in the different languages that they know, speak, are learning or part of their culture.

User Manual: There are 6 main frames in this program

1. Cover Page
2. Menu Page
3. Learning I Page (Writing/Drawing different hellos)
4. Learning II Page (Listening to different hellos)
5. Quiz I Page (How many languages are represented?)
6. Quiz II Page (What are the languages represented?)

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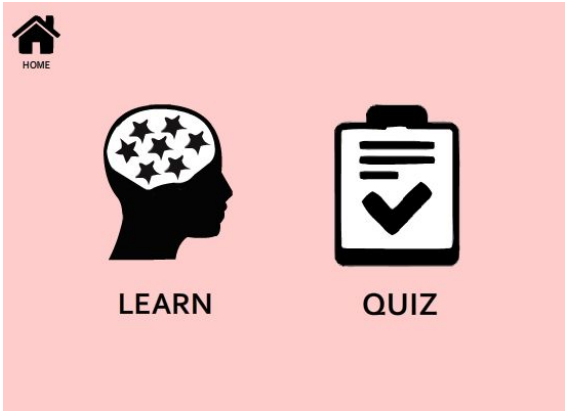
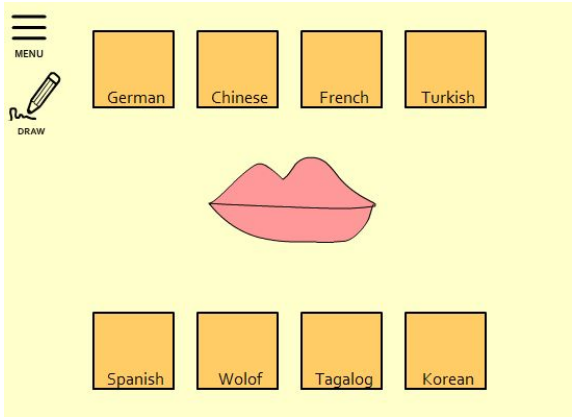
1. Cover page

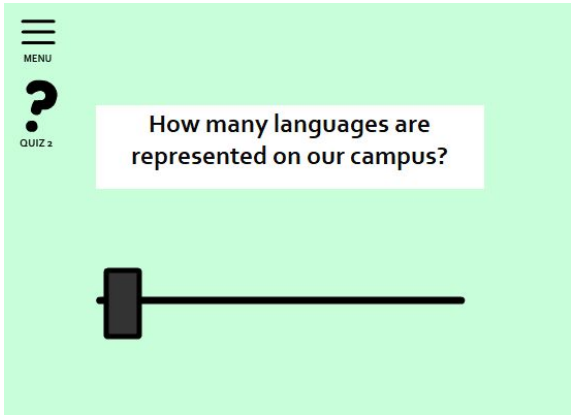


2. Menu Page

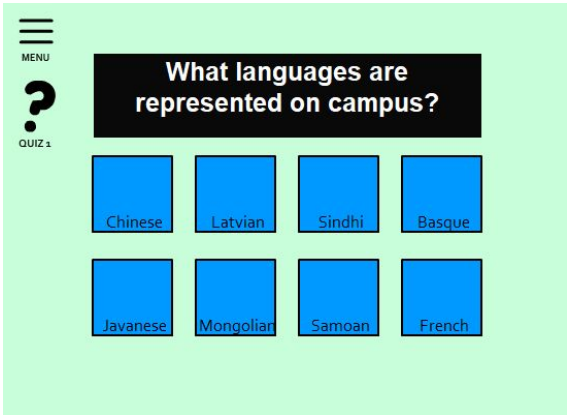
3. Learning I Page (Writing/Drawing)



4. Learning II Page (Listening)



5. Quiz I Page



6. Quiz II Page

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In the cover page, users can hover mouse over different videos and hear different perspective that students have of the importance of learning and embracing languages. When users’ click anywhere on the page, the title of the program shows up.

Title appears after user clicks anywhere on the page

The title is interactive in such a way that if the mouse is hovered over the title, it enlarges, also indicating that users’ can click on it. Once clicked, users enters a menu page, where they can select either to learn or to take a mini quiz. Or if they wish to return to the cover page to watch the videos again, they may click the home button which will bring them back to the cover page.

Similar to the title in the cover page, icons in the menu page are also interactive to indicate that users can click on them. When users click on quiz button, they enter the first quiz which has a question and a slider bar to “insert” their answer. The quizzes in this program are not designed to evaluate users’ knowledge, instead it is to share the research that I did. Users can easily find the answers to the quizzes. For the first quiz, users should move the slider until they find the digit highlighted in green.

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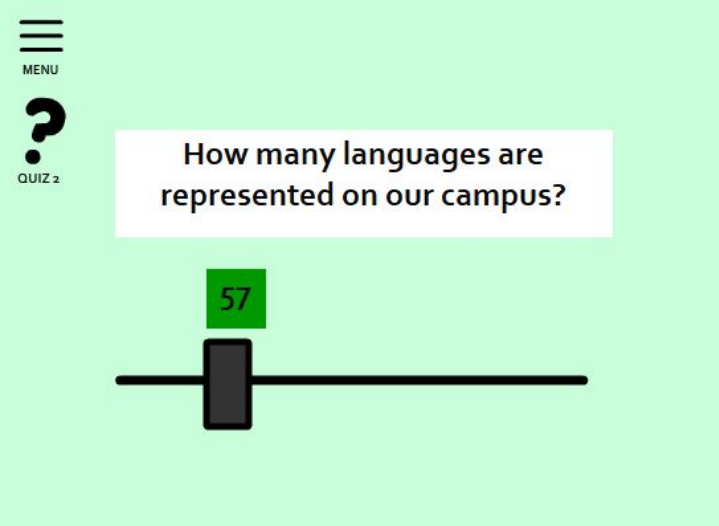
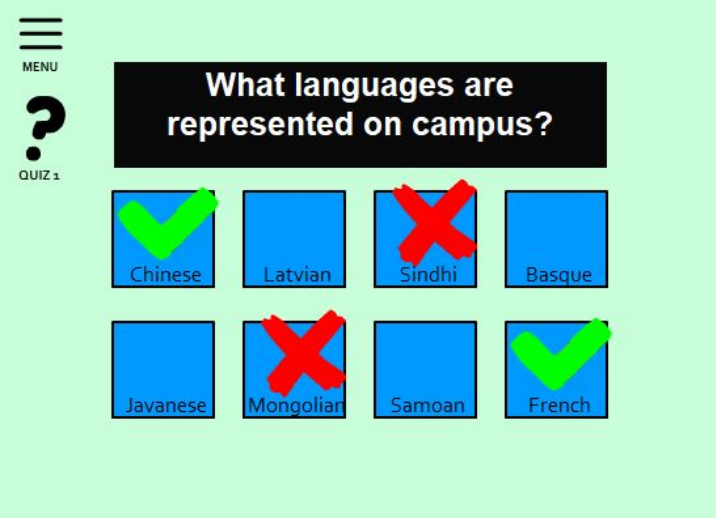


The number will be highlighted in green when user finds the right answer.

Then, user can move on to the next quiz by navigating through the buttons found on the top left corner of the page. Second quiz asks the question “What are the languages represented on campus?” As users click in the individual language cards, there will be a tick or a cross that appear to indicate the answer.



As user clicks on the different language cards, a tick or cross will appear to indicate the answer

To return to the menu page, users just have to click on the menu button, and they will be brought back to the menu page.

Next, users can click on the learn button to begin learning different “hello”s. Starting by learning how to write. On the right of the page, there is a toolbar where users can select different cards to be placed on the canvas. Users can also select the color of the pen that they use and write/draw over the cards. This method of learning is inspired by how we learned to write as a child. There is a clear button on the bottom right corner where users can clear what has been written on their canvas.

User can toggle between the canveses that they would like to practice writing on

In the next learning page, which is listen, users can click on different language cards and hear how to say “Hello” in those languages. There are two ways to navigate back to the previous learning page. Users can either click on the draw button on the navigation bar, or click on the menu button and navigate through again from the menu button.

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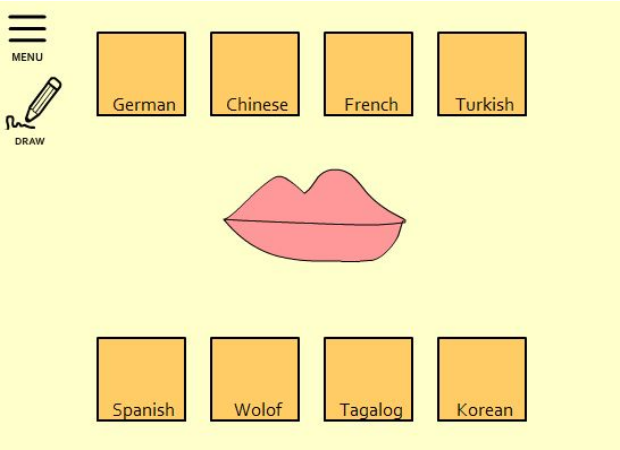

The mouth in the center of the page animates as different cards are selected.

Main Components:

The way in which this program has been set up is by pages. Each frame and layer in the main stage is incharge of a different page. Some of the main components of this project include video MC, language cards MC, navigation Buttons, and mouth Animation.

There are 4 video MC that can be found in the cover page. These individual video MovieClips contains different interview videos of students sharing their perspective on the importance of learning language. Initially, the state of these videos are at stop. Each of them have an event listener component attached to it such that when users hover the mouse over it, the video clip changes state to play the video. As seen in the code here, these event handler functions shows that when a video target is hit, it will play the video. And when mouse moves off, it changes the video state to stop once again.

```
function MouseRollHandler(event:MouseEvent):void{
        event.target.vid.play();
        //trace("play " + event.target.name);
}
```

```
function MouseRollOutHandler(event:MouseEvent):void{
        event.target.vid.pause();
        //trace("stop " + event.target.name);
}
```

The other component to notice in this cover page is the mouse click that triggers the title button. If user clicks anywhere in the page, a title button is visible and user can click to enter the program. Otherwise, user can stay in the cover page and continue watching the videos over and over again.

```
function s_MouseClickHandler(event:MouseEvent):void{
        title.visible = true;
}

function t_MouseClickHandler(event:MouseEvent):void{
                title.visible= false;
                stage.removeEventListener(MouseEvent.CLICK, s_MouseClickHandler);
                stop();
                gotoAndStop(3);
}
```

The other main component in the program are the language cards which are found in either the Quiz II page or Learning II page. These language cards movie clips have actionscript of their own as I wanted them to be generated dynamically.

In the main stage of the Quiz II page, these language card movie clips are called using the line:

```
var card1:langCards = new langCards();
```

The language card actionscript accesses an array list of languages that should be displayed. This actions script refers to an array initiated in the main stage actionscript.Each time, when languages have been selected at random and the card is generated, the index flag is changed. Hence, everytime users enter the Quiz II page, they receive a new set of language cards.

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//ACTIONSCRIPT FOR LANGUAGE CARDS (langCards MovieClip)

```
var indexnum = Math.floor(Math.random()*16);

while (MovieClip(root).used[indexnum]==true){
        indexnum = Math.floor(Math.random()*16);
}

//trace(MovieClip(root).used);
MovieClip(root).used[indexnum]=true;

var cardText:TextField = new TextField();
cardText.text = MovieClip(root).langList[indexnum];
this.name = MovieClip(root).langList[indexnum];

//trace(this.name);
this.addChild(cardText);
cardText.x = -10;
cardText.y = 50;

//var myFont = new Font();
var myFormat:TextFormat = new TextFormat();
myFormat.size = 17;
myFormat.align = TextFormatAlign.CENTER;
myFormat.font = "Corbel";
cardText.setTextFormat(myFormat);

stop();
```

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When each of the language cards are clicked, the main actionscript compares the name of the language cards to the list of languages to check if it is the language that are represented on campus. To simplify this, language from 0-7 in the language list are all languages represented on campus, and those from 8-15 are not. Using this array, the check an easily be done to indicate if user got the correct or wrong answer.

//ACTIONSCRIPT FOR QUIZ II PAGE

```
//CREATE LANGUAGE LIST
var langList:Array = new Array();
langList[0] = "Spanish";
langList[1] = "Turkish";
langList[2] = "Tagalog";
langList[3] = "Wolof";
langList[4] = "Chinese";
langList[5] = "French";
langList[6] = "German";
langList[7] = "Korean";
langList[8] = "Sindhi";
langList[9] = "Uzbek";
langList[10] = "Samoan";
langList[11] = "Mongolian";
langList[12] = "Latvian";
langList[13] = "Basque";
langList[14] = "Icelandic";
langList[15] = "Javanese";
```

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Similarly in the language cards in the Learning II page where users can click on different language cards to listen to the hello word being pronounced. As seen in this actionscript of the language cards created for the Listening II page, there is a variable that takes the name of the card being generated. This is then being compared to the card that is clicked by the user. And sound clip is played.

//ACTIONSCRIPT FOR LANGUAGE CARDS (soundCards)

….

```
while(MovieClip(root).s_used[s_indexnum]==true){
        s_indexnum = Math.floor(Math.random()*8);
        //trace(s_indexnum);
}

MovieClip(root).s_used[s_indexnum]=true;
//trace(MovieClip(root).s_used);

var scardText:TextField = new TextField();
scardText.text = MovieClip(root).slangList[s_indexnum];
//this.name = MovieClip(root).slangList[s_indexnum];

var soundName:String = "langSound" + s_indexnum.toString();
this.addChild(scardText);
```

….

In the main actionscript, there is an event listener attached to each cards, and calls the function playSound when the card is clicked by the user.

//A**CTIONSCRIPT FOR LEARNING II PAGE**

```
var soundCh:SoundChannel;
function playSound(event:MouseEvent){
        var soundIndex:String =(event.target.soundName);
        bigmouth.gotoAndPlay(1);
        soundCh = sounds_array[soundIndex.charAt(9)].play();
}
```

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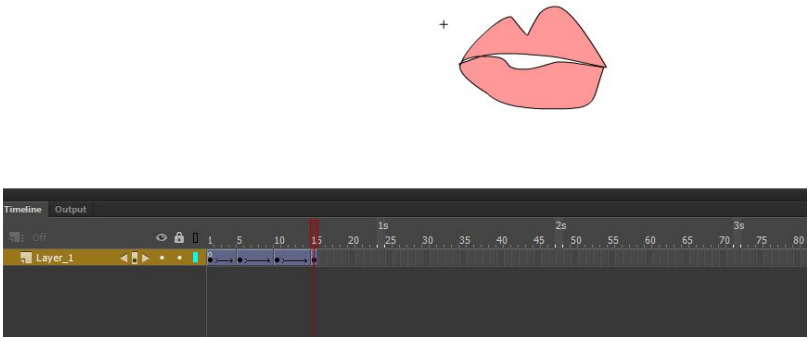
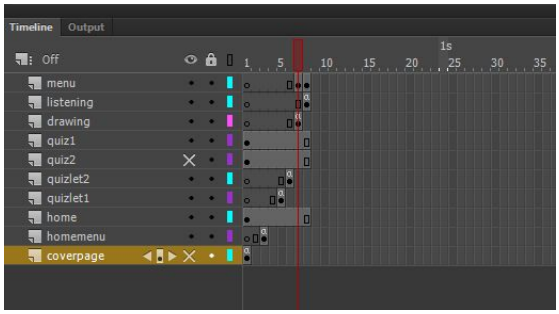
This third component is the mouth animation. Ideally, this mouth animation is of an actual lip synced animation, however, as of now, the mouth animation movie clip is played each time a sound card is clicked. In order so that the animation of only plays once when a card is clicked, a stop(); code is included in the first frame of this moute animation movie clip.



Mouth movie clip

Finally, the last main component of this program are the navigation buttons. While some buttons are generated dynamically when the program enters a particular frame page, others such as the menu, quiz1, quiz2, and home had to be created on a new layer. Using the .visible function, these navigation buttons are set to true only in certain frame pages. Otherwise, these navigation are placed at the same similar place, on the left top corner so that users can find them easily. They are all interactive so that when user hovers over them, they enlarge to indicate that it is a clickable button. The reason for this has also been because conflicts were occurring whereby main stage actionscript cannot access navigation buttons because they were deleted when changing from frame to frame.



Timeline of the frame pages and button layers