**Welcome to Day #5 of CGCC!**

Every day we will have a GitHub repository page that outlines each day and the activities that we will complete. We will also provide all homework on these pages.

Feel free to browse the other days to see what is coming up!

As always, let us know if you need any help or have any questions.

**Day 5: UI and More Prototyping!**

**SCHEDULE:**

* Instructors start the video call.
* Full camp activity (~30 min.)
* Go over how to use GitHub wiki and what we can use it for in context of CGCC. (~5 min.)
* What is UI Design?
* UI Blitz.
* 10 Minute Break.
* GoDot UI development practice
* Brainstorm your UI for your game.
* Paper prototype UI for your game.

**ACTIVITY:** Full camp activity (~30 minutes)

* <Twitter camp activity?>

**INSTRUCTION:** Using GitHub wiki for personal journals/logs. (~5 minutes)

* Students should be guided back to GitHub to their game’s repository (Assuming they already have it created, even if it’s empty)
* Navigate to the wiki page and have students create the first page for their wiki
  + The first page should be an introduction to the game and its creator(s).
* Introduce using the wiki to create a daily log for their project.
  + Each day, students can create a new page marked for each day.
  + For each page, students will keep track on the progress that was made during the camp for that particular day.
  + Even if nothing “of use” was accomplished in developing their game, students can still log what they did during the camp and if they learned anything that they believe might be useful later during the camp.
  + **An outline of what the journal could look like is at the bottom of the page**

**INSTRUCTION:** What is UI Design? (~10 minutes)

* User Interface, or UI, is what the user interacts with in order to use an online/digital service, program, application, etc.
* Have everyone pull up YouTube.com
* What are the components YouTube’s UI? Some examples:
  + Suggested videos in the middle
  + Top search bar
  + Left nav bar
    - Subscription tab
    - YouTube music
    - History
    - Liked videos
    - More tab
    - Settings
  + On a video:
    - Likes/dislikes
    - Share
    - Comments
    - More suggested videos
* Discuss what the goal of YouTube’s UI is:
  + Keep viewers watching a certain video.
  + Keep views on the website as a whole.
  + Have proper places for advertisement.
  + …
* Discuss why it is important a website has an easy-to-use UI System. (Not to say YouTube has a perfect UI system or that this website doesn’t) but navigate to <https://sallysbakingaddiction.com/easy-homemade-soft-pretzels/>
  + List 5 things the UI of this website does well. Some examples:
    - Jump to recipe button.
    - Step-by-step picture guide
    - Comment section at the bottom
  + Now list 5 things the UI of this website does not do too well. Some examples:
    - Not enough contrast in the search bar.
    - Too many pictures cause mobile site to load slowly.
    - 10 years worth of scrolling to reach the recipe.

**ACTIVITY:** Identify important UI elements (5 minutes)

* <https://www.toptal.com/designers/gui/game-ui#:~:text=A%20video%20game%20user%20interface,Diegetic%2C%20Meta%2C%20and%20Spatial>.
* This website has several images showcasing different UI. Blitz through some of them and as a camp point out the first 3 elements in each picture that grabs your attention first.
* Reflect: Was there any patterns in the elements that were always spotted first?
  + Ex: elements in the top right of the picture were spotted first.
  + Ex: health indicators were spotted first

10 Minute Break

**ACTIVITY:** PracticeGoDot UI development (50 min)

* Go into GoDot and open up the Asteroids game that you worked with yesterday.
* We need to give this game some UI elements to make the experience more enjoyable.
* Here’s a list of things we want to consider adding:
  + A message at the start that displays the controls
  + Asteroid count
  + Ship health
* To begin, we’ll start with the message the beginning.
* The message should appear once the player starts the game. Hitting the spacebar (or whatever key used to shoot) should get the message to disappear.
* While this message is on screen, the game should be “paused” in that none of the asteroids should be moving.
* We’ll then design the asteroid counter. Every time an asteroid is hit by a bullet, the counter should increase by one. This counter should be displayed in the corner of the game. Include a graphic with your counter!
  + Just an idea: think of a grey box. The left side actually has the number, and the right side of the box is a picture of your asteroid so it’s clear what the counter represents.
* Finally, we want to add a ship health. Use the same idea as the asteroid counter, but instead of incrementing the counter every time a bullet hits an asteroid, have the counter decrement when an asteroid hits the ship.

**ACTIVITY:** Brainstorm the UI for your game (15 min)

* By this point, you’ve brainstormed and maybe even created your characters, you’ve decided how your game is going to function mechanically, and you might even have a basic story. Now we need to decide how the user is going to view your game from a player POV.
* When developing a UI, it is important to keep in mind what bits of information is most important for your player to have access to. If your game is an adventure or fighting game, for instance, the player should always be able to have some sort of indicator of their health.
* Create a list of all the key elements you want to put in your UI. While developing this list, assign a “Priority value” to each item. Back to the adventure/fighting game example, health might take a priority level higher than a map (It doesn’t have to, though!)

**ACTIVITY:** Prototype the UI for your game (35 min)

* Yesterday, you designed paper prototypes for common applications. Now, we’ll use the same idea to make paper prototypes of our UI.
* Use paper, pencil, markers, etc. and the list you created a few minutes ago to begin making your game’s UI.
* While designing the prototype, take notes of the process for use in developing the UI in GoDot. Here are some things that might be worth writing down:
  + What was the priority (or order) of each created element?
  + Which elements were simple in theory, but more complicated to put on paper?
  + Is there anything we didn’t expect to need, but ended up needing anyway (such as more assets or more components of each element)
* When you’re finished. Take some time share your prototype with the group and discuss the notes you took.
* Everyone in the group should have a prototype (or pairs will have 1). Discuss which elements you like from everyone’s prototype.
  + Keep in mind you don't have to use every element from *your* prototype. The purpose of having everyone create one is so that we can take the strongest elements from each one and use it to fix some gaps in your own. The end goal is to have a combination of everyone’s best work so that our final prototype is the best it can be.
* Discuss which elements from who’s prototype you would want to add to your game.

**INSTRUCTION**: Ask if there are any final questions for the day before bringing the day to a close

Journal Outline:

Day <#> Goals: <Fill in what it is you ***hope***to accomplish today. It’s okay if you list some goals that you aren’t able to accomplish by the end of the day. This is just a chance to try to outline your tasks for the day.>

Day <#>: <Fill in what you **Actually** accomplished today. If you finished all your goals, great! If you missed a few, that’s okay too. Either plan on accomplishing them on a later day or reflect on why you we’re able to accomplish something>

-----Example-----

Day 5 Goals: I hope to meet with my group to discuss what kind of assets we need for our game. I am familiar with Piskel, so I’m going to try to create some of the assets myself. Once we have the assets, I was assigned to make sure all the assets make it into GoDot and that they look as good as we hope they would in the engine (not too small, not too low detail, etc.)

Day 5: We met as a group and decided for our game that I would create the trees and the fish in Piskel. I was able to get the trees created, but I didn’t have enough time to also create the fish, so we instead decided that for now we would use a temporary asset from the asset store. Once we got our assets in line, I got them all into GoDot and realized some of the walls will have to be created in piskel as well since the ones we found online don’t match the theme we’re going for.