

Day 8

Teams (Aliases):

- A: Alice and Luke
- B: John and Bob
- C: Katie and Scott and Martha

Survey link: <https://forms.gle/M1FZKLJdcNk9qZvAA>

Pacman Previous Days' Instructions

1. CGCC Day 2:
<https://docs.google.com/document/d/15l1lyj40ZI9Hk4wFv98oNpkEx6D7PsEflcRgfEh8r4/edit?usp=sharing>
2. CGCC Day 3:
https://docs.google.com/document/d/10GdXNLsxNCRCX_H4Ugw0zRshu9PshggEwfH3HOs7T20/edit?ts=5f11c157
3. CGCC Day 4:
<https://docs.google.com/document/d/1kmrGkTAZQe7nQ-JRIqVzcDKVQCC6lUXhYZX3Z6ECMoc/edit?ts=5f14f9ab>
4. CGCC Day 5:
<https://docs.google.com/document/d/1t48Gia-dOcwU7OeqWcf7-YJ5Zo7lj7WLSO5Sx-o5eeA/edit?usp=sharing>
5. CGCC Day 6:
https://docs.google.com/document/d/1CZk_ftuzb6qx9lr7_YxlMorrAwYY48hu65-wLz_k0g/edit?usp=sharing
6. CGCC Day 7:
<https://docs.google.com/document/d/1NExvMnGcBy64F6tCpu5TB1ELPRN3FCXR5AISimPI2aY/edit?usp=sharing>

Resources:

- <https://youtu.be/9bSX9Q5aP6E>
- https://youtu.be/_sXUtlg7upA
- <https://arcade.makecode.com/tutorials> (most useful).
- <https://www.blender.org/>
- https://www.youtube.com/playlist?list=PLa1F2ddGya_-UvuAqHAksYnB0qL9yWD06

Activity:

- Every team reports their 135 character Tweet that describes the game they intend to build.

3D Graphics (James)

1. Introduction to blender.
 - a. Create Pacman in Blender.
 - i. Walkthrough the steps of creating Pacman in blender.
 - b. Create a Ghost in Blender.

Work on Project with your Team

Advice on How to Turn an Idea into a Actual Game

1. Draw your sprites and game tilemap **on paper** to prototype them and edit until you are satisfied with how they look.
 - a. Be as hi-fidelity as you are able to on paper. If you are “drawing” your sprite on paper, use graph paper with each pixel is a cell.
2. Draw the tilemap background for the game in MakeCode.
 - a. Draw in the walls.
3. Create your startup screen.
4. Work on one character at a time.
 - a. Create/customize sprite in MakeCode for the character.
 - b. Place the character on the screen in the start position.
 - c. Define the controls that move the character.
5. Define collisions
 - a. What happens when characters touch one another?
 - b. What happens when characters touch parts of the background tilemap?
6. How does scoring work?
 - a. Make blocks to increment the score.
7. How many lives are in the game?
 - a. Make the blocks to decrement the lives.
8. How does the player win the game?
 - a. Check for the game over condition and call the game over block.
9. Testing the game play.

Brainstorming

- Characters:
 - The Fighter: A hero who fights the enemy with their fists, feet, or weapon.
 - Examples: Street Fighter, Karateka, Mortal Kombat
 - The Big Bad: A dastardly villain who appears to be stronger than the hero, but has a hidden weakness.
 - Examples: Gannon, Donkey Kong
 - The Sage: A mystic, an odd character allied with the hero who provides helpful hints at crucial times during the game.
 - Examples: Legon of Zelda, Skyrim, Metal Gear Solid
 - The Sidekick: A companion to the hero who provides comic relief or aids the hero in solving their quest.
 - Examples: Luigi in Mario Bros, Yoshi in Mario World, Sonic 2's Tails.
- Narrative:
 - Overcoming the monster: The hero must flight and slay the monster that threatens their community.
 - Examples: Beowulf, Dracula, King Kong, Pacman, Mario Bros., Space Invaders, Asteroids, Galaga
 - Rags to Riches: An insignificant person is dismissed by others. Something happens to elevate them, revealing that person to be exceptional.
 - Examples: Ugly Duckling, Aladdin, Superman
 - The Quest: The hero must set out on a long hazardous journey to battle obstacles until they are triumphant.
 - Examples: Lord of the Rings, Harry Potter, Wizard of Oz
 - Voyage and Return: The hero travels out of their normal world into the unknown and overwhelming, before escaping back to the safety of their home.
 - Examples: Alice in Wonderland, Finding Nemo, Gulliver's Travels, Legend of Zelda, Super Mario Bros.
 - Rebirth: The hero falls under a dark spell (e.g. sleep, sickness, enchantment) before breaking free and being redeemed.
 - Examples: Sleeping Beauty, Beauty and the Beast
 - The Neverending Story: A repetitive story with infinite challenges that get more and more difficult to beat
 - Examples: Donkey Kong, Q*bert, Tetris
- Activity: Think-Team-Share
 - With a partner, choose two characters from the MakeCode Sprite gallery. Choose one of the narratives above and create a storyline for a game in which these two characters play starring roles.

- Activity: Show two pictures of pets/animals in your house and create a narrative that describes their relationship to one another. Use this to develop a game storyline with these two animals. Attach the pictures to the chat in Zoom. (teach how to share files on Zoom)
- Rules: Defines how the characters can move through the game world and describes the actions they can take and their effects.
 - Navigation
 - Walking, Running, Swimming, Flying
 - Constraints to only walk up/down, left/right
 - Information
 - Reading a scroll
 - Listening to a character
 - Inventory
 - Picking up an item
 - Choosing to use an item
 - Dropping an item
 - Losing an item
 - Obstacles
 - Jumping
 - Running through
 - Punching at
 - Fighting
 - Punching at
 - Jumping on top of
 - Kicking
 - Running through
 - Round-off back handspring
 - Dying
 - Getting run over
 - Getting hit
 - Jumping into a pit
 - Running into yourself
 - Winning
 - Eating all the food
 - Defeating all the enemies
 - Solving all the puzzles
- Technology:
 - Mapping the game buttons to player actions
 - Secret game modes

- Example: Pressing A and B buttons together makes the character invisible to monsters.

Advice on How to work with a partner

- Set up regular times during class to check in with one another: every 10 minutes
- The more attention you give to your partner, the more welcome and included they will feel.
- Discuss: How shall we divide the work between us? What parts of the project would you like to work on?
- How should you get your partner's attention when they're not looking at you?
- How do you define success? What is our goal?
- For how long should you work to solve a difficult problem before asking your partner for help?
- For long should you both work to solve a difficult problem before asking the class instructor for help?
- Takeaway lessons:
 - Communicate.
 - Proactively.
 - As Often as You Can Stand It.

How to Scrum

1. 3 minute standup meeting with team
2. Commit your code to the repo
3. Teach three questions that should teams should go over each Scrum
 - a. What did you do?
 - b. Where are you stuck?
 - c. What are you going to do next?
4. If you switch tasks and the person who is editing the code,
 - a. The new person should open up the project.
 - b. Sync the current version of the code to their computer.
 - c. Start working.