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APCS2 pd1
Final Project Proposal
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Proposal

        For our final project, we decided to make an Island Survival Game. The goal of the game is to stay alive in an island setting as long as possible, where many things challenge one's survival. The game will ask the user to do different things, such as forage for sources of food, water, shelter, and other resources. The program will keep track of time, and many other factors will determine the player's survival, such as natural disasters, predators, and onset of health problems. Some GUI/processing will be implemented.

Functions
- Player generates with appropriate stats, according to user input of age, height, and weight.
- The player appears on a random location on the shore of the island. The island is generated, and a map of it is included for movement of the player.
- Player must search for food, water, and shelter, for they cannot survive long without them. Resources are difficult to find, but knowledge of where resources are located aids the player.
- Player is constantly at risk for malnourishment, natural disasters, and predators. Events can occur at intervals of time during the game.
- Time is recorded by the program and the success of the player is determined by the amount of time they survived.
- Harvesting Plants in a queue manner
- Hunt animals using an attack method that follows LinkedList of "clues" like a hunting map
- Fishing for fish can be accomplished if the player has required the adequate resources to make a fish net, which is designed like a linked list.

Features
- Changing GUI background according to time
- Health/life will alter according to nutrition
- Customized player attributes
- Hunt animals, animals can attack as well
- Harvesting plants
- Animals have health; Plants have grow

TERM 2 TOPIC SUMMARY

Priority Queue:
- Items that the player has with them and stored items. Stored based on level of importance. This will be compared with quicksort.

Queue:
- Plants that grow food, meaning the first fruit grown is the first fruit picked
- The player will come across certain plants that have a supply of food as well as leaves. When nutrients (food or leaves) are removed from the plant, they are removed from the top down.

Stack:
- Animals and Plants are stored in stacks within the list of items,
- The roof of a shelter can also be a stack, and rain removes the top of the stack gradually.

Linked List:
- Fishing is accomplished by means of a fish net, which is designed as a linked list. Each node can hold one fish.
- Used to store clues to hunt animals. Each node will store a clue with data and information that requires usage of weaponry from the player's stack