In the school game, the character moves around the map and locates the different spots on the school campus. Possibly solves riddles when it arrives at spot. Wants to be made into a mobile game, web browser based, built on computers, run through a server. A server computer runs the server and client computers connect to this. The interface will be 2D dimensions on macroquad. Quests will be in the game with minigames to solve each quest. The Gwynedd griffin will somehow be involved. An avatars/sprites for the user will be created. There will be an interactive story text with a storyline. Interactive maps and buildings are ideal. Easter eggs? One minigame per quest. Click on an area on map and teleport there, maybe with walking animation. Win trophy at the end. Start with a basic quest line to form ideas around, actions, movements, mechanics. Secondly, make the game engine for moving around and interactions. Use place holders until art is done. One main storyline with side quests. Character creation, profile creation, auto save, stat builds from interacting with mini games.

Priority:

1 Storyline - Ian + John

2 Game Engine ← Macro Quad, WASM Sockets - Aiden + Ian

3 Sprites - John R + Chris

4 Server Backed\_AfterGameEngine (Probably Chris)

**February storyline due date**

Storyline will have multiple chapters with main points for each chapter.

* Find the battery for dog
* Fix the dog, but it runs away
* Find the robot dog
* Find a chinese translation book
* Find Pictures of Mark
* Cindy Meets with you at the door
* 2-3 Interactive – buildings\_St.Bernards, U-Hall\_first floor\_and Library
* ///////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
* You explore St.Bernards building
* Each teacher has one or more specific requests from you
* Cindy’s is to fix the dog using battery but it runs away
* You find the dog in the cafeteria rolling around in the food
* Take the dog back to Cindy to program obedience
* You meet Greg and he needs help building a drone from the Arduino Kits.
* You must find four different components scattered across campus.
* Howard needs help programming the dog because its all in chinese, you must go to the library to get a translation book
* Second Task, Cindy needs help fixing a part in her desktop
* Second Task, Howard needs you to program a small piece for a GPS
* Second task, Greg needs help building a website
* Third Task, Cindy needs help networking the wifi for the University
* Third Task, Howard needs you remove a school hacker
* Third task, Greg needs you to program the drone
* ///////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
* Next, leave St.Bernards and walk to the university hall
* Each teacher will ask a problem that relates to their subject
* Talk to X professor, Let's say English, X will ask for help for grading a student's grammar in an essay but only for a paragraph.
* Transverse to the next room and Professor X is an algebra teacher that wants help solving an algebra problem and so on.
* Food cart truck comes and needs help making burgers, hotdogs, salads, icecream for students, you make the food per order.
* Organizations come to present their info on tables and you must help them spread the word of their info to 10 students.
* Security guard needs help checking the IDs of cars coming into, checking 10 ID’s.
* The sports team is down a player, fills the position and plays the designed sport.
* The cafeteria cooks need help making food, help them make food.
* Dish washer needs help washing dishes, help them wash dishes
* Help a student buy a book
* Help a teacher decide on how harsh a punishment should be
* ///////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
* Earning Coins through Missions:
* Completing missions successfully rewards players with coins, which serve as the in-game currency.
* Coins can be earned by solving puzzles, completing tasks, or achieving specific objectives within the game world.
* Purchasing Merchandise at School Stores:
* Players can visit school stores to spend their coins on various merchandise.
* Merchandise may include school uniforms, stationery, books, gadgets, snacks, and other useful items.
* Buying Clothes, Supplies, and Food:
* Players have the option to purchase clothes, supplies, and food items from school stores to enhance their gameplay experience.
* Clothes may offer bonuses to specific attributes or provide cosmetic customization options.
* Supplies such as notebooks, pens, and tools may be required to complete certain missions or tasks.
* Food items can increase stamina, boost energy levels, or provide temporary stat bonuses.
* Increasing Attributes through Experience Points:
* Players earn experience points (XP) by completing missions, solving puzzles, and achieving goals.
* XP contributes to the development of various attributes, including intelligence, speed, charisma, and strength.
* As players progress and accumulate XP, their character's abilities improve, enhancing their effectiveness in completing missions and overcoming challenges.
* Mission Requirements based on Supplies and Stats:
* Certain missions may have specific requirements that must be met before players can attempt them.
* Required supplies, such as tools, equipment, or information, may need to be acquired from school stores or other sources.
* Players must also consider their character's stats and attributes when undertaking missions, as some tasks may demand a certain level of intelligence, speed, charisma, or strength to be successfully completed.
* Unlocking New Rooms and Areas:
* Keys to new rooms or areas can be obtained by completing missions, solving puzzles, or achieving milestones within the game.
* Access to these locked areas may reveal new challenges, opportunities, and storylines, enriching the overall gaming experience.
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* Problem-Solving Challenges with Teachers:
* Each teacher presents a problem related to their subject area, such as a math puzzle, a coding challenge, a grammar exercise, or a physics problem.
* Players interact with each teacher, solve the presented problem, and receive feedback or rewards based on their performance.
* Assisting English Professor with Grading:
* The English professor requires assistance in grading a student's grammar in an essay but only for a paragraph.
* Players analyze the paragraph, identify grammatical errors, suggest corrections, and provide feedback to the professor.
* Helping Algebra Teacher with Problem Solving:
* The algebra teacher needs help solving an algebra problem.
* Players collaborate with the teacher, work through the problem, apply algebraic principles, and arrive at the correct solution.
* Food Cart Truck:
* A food cart truck arrives, and players are tasked with preparing orders for burgers, hot dogs, salads, and ice cream for students.
* Players manage food preparation, ensure timely delivery, and maintain quality standards to satisfy student hunger.
* Interacting with Organizations:
* Organizations set up information tables, and players must engage with them to learn about their initiatives.
* Players act as ambassadors, disseminating information to other students, answering questions, and promoting awareness about the organizations' activities.
* Navigating Campus Events:
* Players navigate through various campus events, such as career fairs, club meetings, and cultural festivals.
* They interact with event organizers, participate in activities, and explore opportunities for personal and professional development.
* Participating in Academic Competitions:
* Players participate in academic competitions, such as quiz bowls, hackathons, or science fairs.
* They collaborate with team members, demonstrate knowledge and skills, and compete against other students to achieve academic excellence.
* Engaging in Student-led Projects:
* Students initiate projects, such as research studies, community service initiatives, or creative endeavors.
* Players join project teams, contribute their expertise, and work towards achieving project goals and objectives.
* Mentoring Peers:
* Players serve as mentors to junior students, offering guidance, support, and encouragement in academic and personal matters.
* They share knowledge, share experiences, and foster a sense of community and belonging within the student body.
* Exploring Career Opportunities:
* Players explore career options, attend workshops, and network with industry professionals.
* They gain insights into various career paths, develop skills relevant to their chosen fields, and prepare for future employment opportunities.

Tasks and Challenges: Each floor represents a different aspect of computer science. For instance:

Basement: Solve coding puzzles or debug programs.

Ground Floor: Complete hardware-related tasks, like fixing computers or setting up networks.

Upper Floors: Work on algorithm challenges, data analysis tasks, or software development projects.

Progression: As the player completes tasks on each floor, they gain experience points (XP) and unlock access to new areas within the building.

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Final Challenge: To complete the game, the player must tackle a final challenge, such as solving a complex algorithm or debugging a critical program.

Solve algorithmic problems such as sorting, searching, and graph traversal.

Optimize algorithms for efficiency and performance.

Hardware Challenges:

Assemble and disassemble computer hardware components.

Troubleshoot hardware issues by diagnosing faulty components.

Escape Room-style Puzzles:

Navigate through themed rooms within the computer science building, solving puzzles to unlock the next area.

Combine items and clues found in the environment to progress.

Codebreaking and Cryptography:

Decrypt encrypted messages using cryptographic techniques like Caesar cipher, Vigenère cipher, or substitution ciphers.

Crack codes and decipher hidden meanings within texts or images.

Interactive Programming Environments:

Use visual programming tools to build simple applications or games.

Explore programming concepts through interactive simulations and challenges.

Memory and Pattern Recognition:

Remember sequences of symbols, numbers, or patterns and replicate them.

Recognize patterns in code snippets or data structures.

Simulation Challenges:

Simulate real-world scenarios such as traffic flow, resource allocation, or population dynamics using computational models.

Optimize parameters to achieve desired outcomes in simulations.

Database Query Puzzles:

Write SQL queries to retrieve specific data from databases.

Join tables, filter results, and perform aggregations to solve database-related challenges.

Graph Theory and Network Topology:

Explore graph theory concepts through puzzles involving graph traversal, shortest path algorithms, and network topology analysis.

Construct and analyze graphs to solve problems related to connectivity, routing, and network optimization.

Machine Learning Challenges:

Train machine learning models to classify data or make predictions.

Tune hyperparameters and evaluate model performance using validation techniques.

Operating System Tasks:

Manage processes, threads, and resources in a simulated operating system environment.

Solve challenges related to memory management, scheduling algorithms, and file system operations.

Web Development Tasks:

Build web pages or web applications using HTML, CSS, and JavaScript.

Implement interactive features, form validations, and user interfaces to complete web development challenges.

Version Control Puzzles:

Use version control systems like Git to manage code repositories and collaborate with team members.

Solve branching, merging, and conflict resolution challenges to maintain project integrity.

Code Golf Challenges:

Write concise and efficient code to solve programming problems in as few characters or lines as possible.

Compete with other players to achieve optimal solutions within constraints.

Community Challenges:

Engage in collaborative puzzle-solving activities with other players in multiplayer modes.

Share strategies, hints, and solutions within the game community to tackle complex challenges together.

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First Quest:

Cindy: Located in her office.

Cindy: Hello Griffin, I'm Cindy, I'm dean of the computer science department and i have a quest for you. I bought a robot dog and need help putting it together. There is a battery located down the hall in the computer room. Retrieve the battery and bring it back to me

Gregg- Get the battery

Howard-Get the thumb drive with the program.

Reward: Experience/Maybe coins.

Last Quest:

Cindy: Griffin!, I need your help controlling the dog, it’s going haywire!. Quickly, I need you to retrieve a translation book from the library. The directions are inMandarin.

Cindy: Fantastic! You found the book. Give the book to Howard so he can use it to program the robot dog.

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First Quest:

Gregg: Located in his office

Gregg: Hey Griffin, Im Greg a full time professor for the Computer Science department. I need you to help me build a drone from our Arduino kits. Find four/three,two of the parts scattered around the building and bring them to me.

Gregg: Griffin, thanks for your help. Please place parts of the drone on the desk for assembly.

Reward: Experience/Maybe coins.