SP4 Proposal

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# Game Idea 1

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| --- | --- | --- |
| Name: | | Gas Mask Stall |
| Genre: | | 2.5D Casual Simulation |
| Platform: | | PC (C++) |
| Selling Point: | | Resource Allocation game (Mind game) |
| Game Description: | | It’s that time of the year again! The haze is back once more in Singapore, and you won’t want to let this chance go to waste. Set up a gas mask stall and start racking up profits! Live the dream and become the next billionaire tycoon in Singapore! |
| Game Play: | | The player starts with $1000 on the first day of the week. At the start of the day, an average forecast (PSI reading) which may not be accurate is shown to the player. The player will be in charge of three stores and has to buy however many gas masks he plans to sell on the day and set the selling price. After that, the player will go to the game screen where the simulation starts playing. Buyers affected by the haze will come forward to your stall to buy your masks. Whenever the game is paused, the player is allowed to alter prices and shop location based on the changing needs and haze locations. When the day ends, the total profit is shown to the player and all gas masks that aren’t sold are thrown. The next day starts and the process repeats. The game ends on the last day of the week where the PSI exceeds 400. |
| Features: (Work Load) |  | Game States🡪 Main Menu, settings  Textures  Win Lose condition  UI  Sound  Change to Orthogonal view  Money System (Buy/Sell/No. of mask)  Buyer Class  Haze Class  Forecast Class  Load/Save Class |
| Inspiration: | | https://www.msu.edu/~bistakwe/Lemonade%20Stand%20Game%20Pic2.jpg  Reference Image ^ |

Gameplay:

**Core:**

One player simulation.

Money system.

Haze and Weather Algorithms.

Forecast System

Time System.

**Good to Have:**

Bubble Feedback System.

Algorithms

Stock collection.

Buy during simulation

Walk to people convince them to buy.

Lua init and variables.

Encryption

Feature Breakdown:

|  |  |  |  |
| --- | --- | --- | --- |
| PLAYERS | FEATURE | DESCRIPTION | WORKLOAD |
| Samuel | Game States 🡪 Main Menu, settings | Creating menus | 5 |
| Volunteer | Textures | Creating and implementing textures | 3 |
| Amos | Win Lose condition | Creating win/ lose conditions | 1 |
| Ying Tzi | UI (Basic only) | Creating game UI | 7 |
| Amos | Sound | Creating sound class to use. | 2 |
| Samuel | 2.5D Camera | Coding out camera | 5 |
| Ying Tzi | Money System (Buy/Sell/No. of mask) | Implementing algorithm for money. | 4 |
| Roland | Buyer Class (Rendering algo, personality algo, waypoints) | Creating algorithm that dictates buyers attitude. | 9 |
| Roland | Weather (haze) Class (single weather) | Creating algorithm that randomizes weather density. | 8 |
| Wei Qi | Forecast Class | Class that has random accuracy as to forecasting | 7 |
| Wei Qi | Load/Save Class | Load and Save from text file. | 5 |
| Samuel | Timer Class | Class with delta time and timers. | 1 |
| Amos | Grid Map | A grid map for placement of shops. | 5 |
| Samuel | Clicking | Clicking on customer to initiate purchase | 6 |
| Amos | Entity Class | Creates easy to manage entities | 3 |

**Good to Have:**

|  |  |  |  |
| --- | --- | --- | --- |
| PLAYERS | FEATURE | DESCRIPTION | WORKLOAD |
| Roland | Lua | Reading from Lua scripts for convenience | 6 |
| Samuel | Bubble generation algo. | Algorithm that randomly generates different speech text with different responses. | 6 |
|  | Competitors AI – Collaborative – Message board |  | 5 |
| Roland | Competitors AI – Genetic AI | AI algorithm that competes against the player | 10 |
|  | Losing customers rate algorithm. | Algorithm that changes the rate of losing customers. | 5 |
| Ying Tzi | Multiple Weathers. | Various weathers that affect gameplay | 5 |
|  | A star Path Finding. |  | 10 |
| Wei Qi | Negotiate Class | Code that simulates negotiating prices. | 7 |
|  | Stock Collection | Collecting various items that increase stock of masks | 7 |
| Roland | Encryption | Encrypting saved data to make editing of files harder. | 5 |
| Samuel | Buying during game. | Purchase of items during gameplay. | 5 |

**Things Added in:**

* **Sound**
* **Finite state machine**
* **Save and Load**

**List of Sounds:**

* Background Music
* Clicking sfx
* Purchase sfx
* Money gain sfx
* Stock placement sfx
* Game Over sfx

**Sketches**





