Planning Documentation

Burmese Group

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Summary

The reasoning behind pursuing this software project is to develop a fully functional web application based game, combining frontend and backend development skills. Problems to solve include learning how to work together on an industry style team, manage tasks and resources, work within deadlines, develop new skills as a software engineer, and learn valuable industry knowledge and tools.

Currently we have the main menu created with a placeholder background that will be implemented more aligned with the theme of our game. We have all three main functions of the game coded fundamentally. We have them combined into level 1. In the next sprint, we will take the code in level one and make level two and three more difficult by adding more ingredients and increasing the pacing, as well as implementing more features into the functionality of each level. The first portion requires you to left click the screen when the knife is over the vegetable in order to cut it. The second portion requires you to drag the burger meat to the bottom left portion of the grill, to flip the burger you press space bar, the level ends once the burger sizzles out and burns. The logic for this level is currently being worked on to properly check for completion. The third portion requires you to stack burger meat on top of each other reminiscent of games like tetris by moving the bottom bun with the left and right arrows on your keyboards numpad, once enough burgers have been stacked on each other and the bun is placed at the top. Once this is completed the game will send you back to the main menu.

This is the current developmental state of the game, and we will continue to add new functionalities and features to enhance the quality and robustness of the game.

How to Run (Currently)

Open your terminal and go to the directory where the repo was cloned from/downloaded from blackboard

Move into the directory cmsc447-sp2024-Burmese-sprint_2/src/Cooking Mama

Run the python script server.py, no user arguments are provided. python3 server.py

This will run a local web server at ip 127.0.0.1 on port 8000

Open up the browser of your choice and in the search bar enter 127.0.0.1:8000

The game should open and you will be greeted with the main menu screen

State Of The Game/How To Play

Currently have the main menu created with a placeholder background that will be implemented more aligned with

the theme of our game.

The only currently playable level is level one. It's not completed as is seen during play time.

The first portion is unfortunately broken on the web and will need to be fixed after sprint 2.

The second portion requires you to drag the burger meat to the bottom left portion of the grill, to flip the burger

you press space bar, the level ends once the burger sizzles out and burns. The logic for this level is currently

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moving the bottom bun with the left and right arrows on your keyboards numpad, once enough burgers have been

stacked on each other and the bun is placed at the top. Once this is completed the game will send you back to

the main menu.

Developmental Approach

For frontend development, we are using Godot as our game engine. We chose Godot mainly because it has a user-friendly visual editor that will help us design game levels and manipulate game objects with ease. Godot uses its own scripting language called GDScript, which is similar to Python. We will use GDScript to program character movement, game mechanics, and interactions. Godot also has a scene system that allows us to create game objects and organize them hierarchically with parent and children nodes. Scenes can represent everything such as characters, items, or even entire levels. This system simplifies game development by enabling us to reuse and combine scenes during the development process. Lastly, Godot includes a built-in debugger that allows us to run the game in debug mode and thoroughly test our frontend.

For the art for the game, we will be using mostly the Pixel Studio IOS app in order to create pixel art sprites, backgrounds, and other logos.

The leaderboard and user login system will be created and maintained using a database that will be created with sqlite3 and the interface will be hooked up with as well as interface with flask to properly update the DB. Godot Script supports calling JavaScript natively through their scripting language so this will be used to manage API calls, gets, and requests.

Primary Functions

The primary functions of the game includes:

- Home Screen with login
- Pause Menu
- Main Menu
- Level 1
- Level 2
- Level 3
- Customization Options
- Scoreboard

The game will open to the home screen, where the user will be able to either create an account or login to an existing account. Once logged in, the user will reach the main menu, where they can choose customization options, or play the game.

If they choose to play the game for the first time, they will start at level one. Once they finish level one, if they were to log back into the game, they would have the option to continue or restart the game. After completing all three levels, the user will be able to restart the game and play for a better score. At any point, the user will be able to check the leaderboard and see the score of themselves and other users.

Roles and Responsibilities

Overall - For this sprint we divided up the parts into the main functionalities of the game (not levels). Brian was in charge of the grilling & flipping functionalities. Michael was in charge of the chopping & prepping functionality. Nikki was in charge of the assembling functionality. Yonas was in charge of Github documentation, creating the main menu, setting up the backend, and putting all of our functionalities together. Allison was in charge of sprite design as well as documenting our planning period.

Allison Lenhoff - In charge of managing the Jira Board and tasks. Also responsible for writing up the planning documentation and developmental rundown. The main responsibility for this sprint was creating pixel art sprites, backgrounds, and other needed artwork using the IOS app “Pixel Studio”. The sprites completed this sprint included all cooking burger combinations with 5 different cook levels for each side, plates for uncooked and cooked burgers, side view of a cooked patty, top bun, bottom bun, lettuce, cheese, and tomato, a knife, 3 chopped versions of each tomato and lettuce, and a cutting board. Temporary sprites were also created for the grill, the counter, cooking timer levels, and arrows for each.

Brian Lawser - Responsible for implementing the cooking functionality of the burger game. This involved creating the mechanisms, objects, and scripts for the burger, as well as the main scene in which the burgers are cooked by the user. Focused on making the controls and interface intuitive and easy to use. The drag-and-drop control scheme for placing the burgers on the grill seemed to be reasonable, and the usage of 'space' for flip was chosen as it is the most accessible key for a quick, time-based input. Then developed scripts for the objects in the scene using the Godot engine. As the sprites were not finished for this part of the game, temporary placeholder sprites and animations were created for testing purposes. Once the drag-and-drop system was implemented, with collision zones placed on the area that is to be used as the grill, the next step was implementing the cooking functionality and animations within the burger itself.

Michael Dickenson - Responsible for developing the prepping functionality of the game using the Godot engine. This involved creating the logic and scripts for a sequence of cutting vegetables, including a tomato and lettuce. The game presents the user with a single vegetable at a time, and they must click at the right moment when a knife sprite swings back and forth across the screen to simulate cutting the vegetable. Furthermore, the vegetable sprite's texture changes based on the number of successful clicks, until reaching the end of that vegetable and advancing to the next. For further improvements, incorporating text cues to indicate successful cuts or missed clicks could enhance the user experience as well as working on improving alignment of the sprites to various screen sizes.

Nikki Cayas - Responsible for implementing the assembling functionality of the burger game. This involved creating a user-controlled mechanism for catching falling ingredients to put together a stacked burger. She focused on designing a user-friendly interface for assembling the burger. The left and right arrow keys were chosen for their familiarity and ease of use for the player. With the conceptual framework in place, the technical side was implemented using the Godot game engine. Allison created the necessary sprites such as a bottom bun and patty. Collision detection was then set up using mechanisms to detect when falling ingredients intersected with the bottom bun, triggering the assembly process. Additionally, a winning condition was implemented wherein successfully catching all required ingredients resulted in completing the burger and advancing to the next stage.

Yonas Tadesse - Responsible for creating the main menu for the cooking game and setting up the initial project structure in the Godot engine. Also responsible for the file structure to separate the various components of the game and created the necessary scenes and scripts for the main menu. The main menu includes options for users to create an account, login, and view the leaderboard. Godot's built-in UI nodes were used to create buttons and other interactive elements, ensuring that the menu was functional and user-friendly. A placeholder for the leaderboard was implemented, which will be fully implemented once the back end is developed. The main menu serves as a foundation for the game, and he aimed to provide a solid starting point for the team to build upon as we continue to develop and expand the cooking game.