Faith, Luis, Sam

To The Moon

Fall 2021

Butter Melt

A picture containing cup, table, food, plate

Description automatically generated

# About the game

In this game, the player must keep the butter at a perfect temperature and survive the process of going to and being in space. The player will be hit with various obstacles that prevent the goal from being reached. To combat these obstacles the player must use items. These items can be bought through an in-game currency that the player earns through a mini-game. This is heavily inspired by both Plants Vs. Zombies and Mario Party.

## Why Mobile

This game is a great design for mobile because it is a very simple, laid-back game. The player can easily start playing at any time and leave whenever they want. The story is also quite loose that doesn’t require a very large time investment to follow. This makes it perfect as a mobile game.

Scenario

There is to be a birthday on the moon that they need to make a cake for. The butter is a necessary ingredient but was forgot on Earth. So thus, the Butter Program is born. The only issues are that the butter is in unstable and needs to be kept at the perfect temperature. The player plays as an esteemed baker that must keep the butter safe.

## Genre

Butter melt is an arcade food game. This game is about trying to keep a stick of butter (as well as other items traditionally kept cold) from melting on a hot summer day for as long as possible.

## Target Audience

The target audience for this game are people who enjoy idle type games. It is mainly meant for kids in the age range of 12 – 16. This game is meant to be causally played by people who need to kill a couple minutes of time.

References

Plants v Zombies inspired our progression system and difficulty curve. One example of our progression inspired by Plants vs. Zombies. Their shop involves gaining suns and spending them on defenses against the incoming zombies. We are implementing a similar system by having the player collect Doge coin to get items to help the player get to the Moon and save the day!

Mario Party also inspired the idea of butter melt through its mini-games. In Mario Party, there are thousands of mini-games that can be played by a user(s) as to determine if they won or not. Butter Melt is supposed to be similar to one of those mini-games but is intended to be played on mobile devices only.

## Key features & Mechanics

The player must use items to either stop a stick of butter from melting or freezing. The player will gain coins the longer they play the mini-game and avoid asteroids. These coins will allow the player to purchase items to make keeping the butter alive easier. These items can include a cooler and heater.

# Game Mechanics and Dynamic

## Concept Art

Menu Screen Options How To Play Credits

Diagram

Description automatically generated with medium confidence Graphical user interface, application

Description automatically generated Graphical user interface, text, chat or text message

Description automatically generated A picture containing text

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Level Selection Level 0 Level 1 Level 2

A picture containing diagram

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Level 3 Shop Mini Game Level Won

Diagram

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The Butter Melting Stages

A picture containing kitchenware

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A logo on a black background

Description automatically generated with low confidenceA picture containing star, outdoor object, dark, night sky

Description automatically generatedA picture containing star, outdoor object, night sky

Description automatically generatedA screenshot of a computer

Description automatically generated with low confidence

Leaving Earth Orbiting Earth Deep Space Landing on Moon

## Game Mechanics

The player uses items to make sure that the butter stays in the perfect temperature. The player must work between a mini game and the butter to buy items. These items will keep the butter from melting or freezing. The game will cause the temperature to fluctuate due to outside events such as a solar flare. If the player lets the butter get to temperatures outside of the range, the player will lose and have to start over from the level selection scene. We considered using touch screen

## Scoring System and Achievements

The player will get points by playing the mini game and attempting to avoid asteroids. There is a higher level of an item when it is bought more than one time. The player will have to navigate between a mini game and the butter to keep them from losing. The goal is to keep the butter from melting or freezing under these extreme conditions.

## Interface

This game will involve touch gesturing. The player will be able to touch the screen to access the store to buy items to stay alive longer. They will touch to purchase items to help aid the player to get the perfect temperature. The player will also drag a ship across asteroids to gain coins.

## Game Flow

Diagram

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## Screen Flow

Diagram

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# Tech

## Tech Aspects

This game will use touch sensors to know when a player touches the screen for various events such as purchasing and placing items.

## Resources

Our group will write all the code in Lua. Our group will also utilize Gimp for a better GUI. Solar 2D will be utilized to test and debug the Lua code that we created. GitHub will also be used to keep track of all the team members’ progress and stay organized.

## Game Assets

We are using GIMP to make Sprites for the game. We will also be using bfxr to create sound effects for the game. We also included background music called Hot Milk by the artist Snail’s House (<https://www.youtube.com/watch?v=N8nGig78lNs>). A dancing doge sprite was also used from the internet user ShadowWarrior11 (<https://tenor.com/view/doggo-doge-dance-dog-gif-13766778>). This gif was then turned into a sprite sheet using ezgif.com.

## Camera Information

Isometric camera, 3D thanks to the drawing, but not in programming.

## Discussion

We could not implement some things due to the time frame. For instance, we had originally planned to include more than 4 items however we ended up deciding to only add two items, heater and cooler, to the shop. We also proposed add a tapping event so the player could find a way to gain coin in the level scenes. In the end, we did not do this but instead added a physics mini-game to collect coins. The team initially wanted to make a scene that would congratulate the player but we could not do it in time. So, we just removed it all together and make a finite amount of levels. The proposal flow chart was a bit different from the end product. We ended up just creating the main menu and having the settings contain the credits button. The team had some difficulty collaborating. The main issue was that each team member was writing code that would interfere with another persons code. We decided that Faith would mainly work on the Gui design, Sam would work on some of the mechanics of the project and Luis would work on some of the object oriented files. We currently do not have plans on continuing this game however we hope that this game concept will help up in our careers.