Fruit Fall Frenzy

Game Design Document

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GEX SR. NBCC - 2025 Winter Project

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1. Section I - Game Overview

1.1. Game Concept

A magical fruit tree is under attack by mischievous spirits. Players must protect the tree by catching falling fruits to score points and avoid bombs that reduce lives. The gameplay becomes progressively challenging with increasing fruit and bomb speeds.

1.2. Design History

This document will record changes as the game evolves.

1.3. Feature Set

- Fast-paced arcade gameplay.
- Increasing difficulty as the game progresses.
- Power-ups to enhance player abilities.
- High-score tracking for replayability.
- Vivid and cheerful visual theme.

1.4. Genre

Fast-Paced Arcade Action

1.5. Target Audience

Casual players of all ages, particularly those who enjoy simple yet challenging gameplay.

1.6. Game Flow Summary

Players navigate through a simple interface starting from the Main Menu. Gameplay involves catching fruits while avoiding obstacles, with increasing difficulty over time. The game ends when time runs out or the player loses all lives, followed by a score summary.

1.7. Look and Feel

The game features a vivid, cheerful orchard setting, with colorful fruits falling against a sunny sky. The visual style emphasizes simplicity and clarity, ensuring all objects are easily recognizable at a glance. The bright and inviting colors of the fruits contrast with the more subdued tones of obstacles, helping players quickly differentiate between targets and dangers.

[*Time, optional:* Animations are lively, with fruits bouncing slightly when caught and breaking into juice splashes when they hit the ground. The UI integrates seamlessly with the theme, featuring a rustic, wooden texture for scoreboards and timer frames. The overall look and feel aim to immerse players in a delightful and engaging environment.]

1.8. Project Scope

A summary of the scope of the game.

1.8.1. Number of locations

1 (orchard backdrop).

1.8.2. Number of levels

Endless with escalating difficulty.

1.8.3. Number of NPC's

2.
1 type of mischievous and a good spirit (background).

1.8.4. Number of weapons

None, but includes power-ups.

1.8.5. Etc.

Additional elements: Power-ups and unique fruits.

2. Section II - Gameplay and Mechanics

2.1. Gameplay

2.1.1. Game Progression

The game progresses through a timed sequence where the challenge increases as time advances:

- Initial Phase (0–5 seconds): Fruits fall slowly without bombs, introducing players to the controls and mechanics.
- Early Stage (5–15 seconds): Bombs are introduced with moderate fruit speed, requiring the player to focus on avoiding them.
- Mid-Stage (15–30 seconds): Falling speed and bomb ratio increase, and power-ups start to appear, requiring the player to make quick decisions.
- Climactic Phase (30–50 seconds): Peak difficulty with maximum object speed and quantity. Power-ups and golden fruits provide brief relief amid intense action.
- Final Phase (50–60 seconds): The pace slows slightly for a smoother conclusion, providing a final chance to score before time runs out.

The ratio of fruits and bombs:

- Earlier stage: fruits 90%, bombs 10%;
- middle stage: fruits 70%, bombs 30%;
- later stage: fruits 60%, bombs 40%, to main the chanllenge ;

2.1.2. Mission/challenge Structure

The player's mission is to:

- Protect the Tree of Abundance by catching fruits and avoiding bombs.
- Maximize their score by catching high-value fruits, golden fruits, and leveraging combo bonuses.
- Use power-ups effectively to handle increasing difficulty.

Challenges increase progressively through:

- Higher object speeds.
- Increased bomb-to-fruit ratios.
- Limited time to achieve high scores.

2.1.3. Puzzle Structure

N/A

2.1.4. Objectives – What are the objectives of the game?

- Achieve the highest possible score by catching fruits and maximizing combo bonuses.
- Survive until the timer runs out by avoiding bombs and managing lives.
- Leverage power-ups to enhance gameplay and overcome challenging moments.
- Experience the satisfaction of protecting the magical tree and watching it bloom.

2.1.5. Play Flow – How does the game flow for the game player

The player's job is to catch as many fruits as possible and get high scores in 1 minutes for big harvest. Player has 3 lives, if catch a bomb will lose 1 life. So player has to avoid catching the bombs.

Lives and Penalties:

- Players start with 3 lives. Each bomb hit deducts one life and 10 points.
- When the player is down to their final life, a visual cue (e.g., screen flashing or a red warning) increases tension.
- If all lives are lost before time runs out, the game ends in failure. However, if the player survives until the timer hits 0, they win, and the magic tree blooms, showing fruits in abundance and thanking the player for saving the harvest.

In-Game Messages:

- Catching fruits prompts messages like "Great catch!"
- Near-misses with bombs display warnings like "Watch out!"

Game Over:

- Victory: Displays the player's score and the all-time high score. If a new record is achieved, the game congratulates the player for setting a new high score.
- Defeat: If all lives are lost, the screen shows a "Tree Withered" failure scene.

2.2. Mechanics

2.2.1. Physics

Fruits and bombs follow gravity-like mechanics. Objects are caught immediately when overlapping with the basket.

2.2.2. Movement

The player controls a basket, moving left and right with the arrow keys. Movement is smooth and limited to screen boundaries.

2.2.3. Objects

The game features various objects, each contributing to the gameplay experience.

Fruits:

- Apple: A common red fruit worth 1 point.
- Mango: A yellow fruit worth 2 points and falls faster than other fruits.
- Cherry/stawberry: 3 points
- Golden fruits: A rare fruit that doubles the score when collected, glowing with a golden shine.

Bombs:

- Standard Bomb: A black, round object that deducts 10 points and 1 life if collected.
- Frozen Bomb: A special blue bomb that if player catch the Ice power-up.

There's a kind sprite, will help player by sending some **power-ups**.

- Time Extension Power-Up: Adds 5 extra seconds to the game timer.
- Magnet Power-Up: Automatically attracts all falling fruits to the basket for 5 seconds without the need to move. It does not attract bombs, so the player still needs to move to avoid them.
- Ice Power-Up: Freezes all falling bombs for 5 seconds, allowing the player to only catch fruits. When the effect ends, the frozen bombs disappear.
- Slow Motion Power-Up: Slows down the falling speed of all objects, including fruits and bombs, for 5 seconds.
- Golden Fruit: Doubles the score when collected.
- Fruit Frenzy Power-Up: Triggers a burst of fruits falling without any bombs. The fruits glow, and exciting text appears on the screen, such as "You are on fire!" or "Unstoppable!".

2.2.4. Actions

2.2.4.1. Switches and Buttons

2.2.4.2. Picking Up, Carrying and Dropping

The player can pick up falling fruits by positioning the basket beneath them. Once the fruit overlaps with the basket, it is automatically collected.

All picked up items are automatically stored, except for the player's actions in relation to power-ups (e.g., using them). Press number 1- 4 for use different kinds of power-ups.

2.2.4.3. Talking

2.2.4.4. Reading

The player can read the in-game instructions or notices posted around the level to get additional information about the game rules or upcoming challenges.

Certain power-ups might have descriptions that explain how they work when the player interacts with them.

Scoring:

- Base Score: Each fruit caught grants +1 point; Golden Fruits grant +5 points.
- Combo Bonus: Players earn extra points for catching 10 consecutive fruits without missing or hitting a bomb.

2.2.5. Combat

The game does not feature direct combat. Instead, players must avoid bombs and make split-second decisions to survive as the game increases in difficulty. Bombs represent a form of conflict where the player is in a race against time to dodge and avoid being hit.

If the player catches a bomb, the game timer is reduced or player lose a life, adding pressure to the player. However, if they successfully catch a fruit without missing or hitting a bomb, their combo points increase, rewarding the player for careful gameplay.

2.2.6. Economy

The game's economy revolves around the collection and management of resources such as fruits, score, and time.

- Fruits are the primary collectible, generating score when caught. Golden Fruits provide a score multiplier.
- Time is a critical resource, and players must maximize their score within the given limit. Time Extension Power-Ups help extend the timer by 5 seconds.
- Power-Ups provide temporary advantages, such as slowing object speed, attracting fruits, or freezing bombs, making them valuable but rare.
- Bombs serve as a penalty mechanic, reducing the player's score or potentially ending the game if hit.

Balancing the frequency of Power-Up appearances and the proportion of fruits to bombs ensures a fair challenge, creating an engaging yet manageable experience for players.

2.3. Screen Flow

2.3.1. Screen Flow Chart

A graphical description of how each screen is related to every other

2.3.2. Screen Descriptions

2.3.2.1. Main Menu Screen

This is the first screen players see when they launch the game. It serves as the central hub to navigate to other game areas. Players can choose to start a new game, adjust options, or exit the game.

2.3.2.2. Options Screen

To allow players to adjust game settings, such as volume. This screen ensures that the player can customize their gameplay experience to their preferences.

2.3.2.3. Etc.

Gameplay Screen: The core screen where the player engages with the game mechanics. Players control the basket, catch fruits, and avoid bombs to accumulate points and time.

Game Over Screen: To display the results of the game, including the player's score and any special achievements (like combos or high scores). The player can either restart the game or return to the main menu.

Pause Screen: When the player pauses the game during gameplay, this screen provides options for resuming the game or navigating to other parts of the game (Options or Main Menu).

2.4. Game Options

Volume Control: Allows the player to adjust the sound levels, including background music and sound effects, to suit their preferences.

2.5. Replaying and Saving

Replaying: The player can restart the game from the Game Over Screen or after completing a level or challenge. This option allows players to try again, aiming for a higher score or improved performance.

Saving: The game automatically saves the highest score. However, if player quit the game during the game will save anything.

2.6. Cheats and Easter Eggs

3. Section III – Story, Setting and Character

3.1. Story and Narrative

3.1.1. Back story

In a magical forest, there is an ancient "Harvest Tree." This tree grows amazing magical fruits that bring happiness to the forest creatures. But naughty wind spirits appear and try to steal the fruits and damage the tree. As the guardian, the player must protect the Harvest Tree, collect fruits, and stop the spirits.

3.1.2. Plot Elements

The Magical Tree: The game begins with the story of the Harvest Tree, a magical source of fruits that keeps the land thriving. Mischievous spirits threaten the tree, creating chaos.
The Player's Mission: The player is chosen as the guardian of the tree, tasked with protecting its fruits and saving the land from the spirits.
Progressive Conflict: As the game progresses, the spirits grow more aggressive, causing fruits to fall faster and bombs to appear more frequently. This mirrors the increasing difficulty in gameplay.
Moments of Triumph or Defeat:

- **Victory**: Successfully protecting the tree leads to restoring peace to the land, showing a vibrant, thriving tree in the victory screen.
- **Defeat**: Failure to protect the tree results in the spirits overpowering it, leading to a withered tree shown on the failure screen.

Potential Expansions: Later versions could include seasonal events where the spirits' powers change, introducing new fruit types and challenges for the player to overcome.

3.1.3. Game Progression

Beginning: The game starts with the Harvest Tree under attack by mischievous spirits. Players must protect the tree by catching its falling fruits.
Middle: As time goes on, the spirits become more aggressive. The speed of fruits and bombs increases, and power-ups start appearing to help the player.
End: The game reaches its peak intensity, and players must use all their skills to protect the tree. Victory or defeat is determined at the end of 1 minute.

3.1.4. Cut Scenes

3.1.4.1. Cut scene #1: Game Start

3.1.4.1.1. Actors

The Harvest Tree, mischievous spirits (represented as floating silhouettes), and the player's basket.

3.1.4.1.2. Description

A short animation introduces the Harvest Tree and the spirits attacking it. The player is shown taking control of the basket to protect the tree.

3.1.4.1.3. Storyboard

A bright, flourishing tree is shown in the center of the screen.

Dark spirits appear, surrounding the tree and shaking its branches. Fruits begin to fall, and the player's basket appears, ready to catch them.

3.1.4.1.4. Script

Narration text (on-screen):"The magical tree of harvest is in peril! Mischievous spirits are attacking its branches, trying to ruin the harvest. Protect the fruits and save this land!"

3.1.4.2. Cut scene #2: Victory Screen

3.1.4.2.1. Actors

The Harvest Tree, and the player's basket.

3.1.4.2.2. Description

If the player wins, the tree is shown flourishing with vibrant fruits, and the spirits retreat.

3.1.4.2.3. Storyboard

The tree is full of colorful fruits again, and the spirits vanish into the background.

3.1.4.2.4. Script

On-screen text: "You win! Thank you for protecting the Tree of Harvest! The valley thrives once again!"

3.1.4.3. Cut scene #2: Defeat Screen

3.1.4.3.1. Actors

The Harvest Tree, and the player's basket.

3.1.4.3.2. Description

If the player loses, the tree is shown wilting.

3.1.4.3.3. Storyboard

The tree appears dry and withered. Broken fruits lie on the ground.

3.1.4.3.4. Script

On-screen text: "You lose! The Wind Sprits’ destruction has withered the Tree of Harvest. The valley awaits a new hero!"

3.2. Game World

3.2.1. General look and feel of world

3.2.2. Area #1

3.2.2.1. General Description

3.2.2.2. Physical Characteristics

3.2.2.3. Levels that use area

3.2.2.4. Connections to other areas

3.2.3. Area #2

etc.

3.3. Characters

3.3.1. Character #1

3.3.1.1. Back story

3.3.1.2. Personality

3.3.1.3. Look

3.3.1.3.1. Physical characteristics

3.3.1.3.2. Animations

3.3.1.4. Special Abilities

3.3.1.5. Relevance to game story

3.3.1.6. Relationship to other characters

3.3.1.7. Statistics

3.3.2. Character #2

etc.

4. Section IV – Levels

4.1. Level #1

4.1.1. Synopsis

4.1.2. Introductory Material (Cut scene? Mission briefing?)

4.1.3. Objectives

4.1.4. Physical Description

4.1.5. Map

4.1.6. Critical Path

4.1.7. Encounters

4.1.8. Level Walkthrough

4.1.9. Closing Material

4.2. Level #2

etc.

4.3. Training Level

5. Section V - Interface

5.1. Visual System

5.1.1. HUD - What controls

5.1.2. Menus

5.1.3. Rendering System

5.1.4. Camera

5.1.5. Lighting Models

5.2. Control System

How does the game player control the game? What are the specific commands?

5.3. Audio

5.4. Music

5.5. Sound Effects

5.6. Help System

6. Section VII – Technical

6.1. Target Hardware and operating system

6.2. Supported game controllers and peripherals

7. Section VIII – Game Art

Only show concept art here (rough sketches)

7.1. Concept Art

7.2. Style Guides

7.3. Characters

7.4. Environments

7.5. Equipment

7.6. Cut scenes

7.7. Miscellaneous