Marmo-nator™

Created by: Nicolas Fuentes, Yassin Ali, Kevin Estrada, Ignacio Garcia, Christopher Zavala

1. Game Overview

- **Genre**

  [2D] [Arcade] [Platformer]

- **Art Style**

  2D pixelated cartoon

- **Audio, music, sound effects**

  Funny arcade type music.

- **Target Experience**

  Endless, high-score, challenging.

- **Target Audience**

  Players who enjoyed playing retro games inspired by classic gameboy titles like warioland, aiming to recreate their nostalgic childhood experience; Rated E for everyone.

2. Gameplay

- **Player Character**

  The playable character is a marmot.

- **Player Abilities**

  The player can:

  Navigate buildings and platforms to locate food.

  Eat the food in hand.

  Jump between platforms.

  Dash to evade enemies easier.

Tussle with other marmots to defend his food, this will be done with button-mashing to free the player from other marmots. Should the player lose the tussle, the player will be pushed back and food in marmot's possession will be stolen.

Whistling as a defense mechanism against his enemies within range. The whistle will stun the Pest Control agent and will make the dog run away.

Wiggle away from the dogs paws if he properly hits the required keys quickly enough

- **Objectives**

Eat the required amount of food before sundown

Avoid getting captured by dogs and pest control

Protect your food from other marmots

- **Game Progression & Play Flow**

The game is structured around an infinite series of levels, each level is represented by a cycle where you forage for food before sundown. Every level lasts 90 seconds and the player must eat the required amount of food to move on to the next level.

Progression is endless, there is no final level. As players continue to move forward successfully completing the levels, they will find that the enemies become faster, and the amount of enemies that spawn increases.

The player's score is based on the total amount of food eaten, and this score carries over to the next level encouraging long-term performance.

During the gameplay, players must balance feeding with survival. Rival marmots attempt to steal food, dogs try to incapacitate the player, and pest control agents attempt to capture the player.

- **Win/Lose state**

Eat food required before sundown: The level is successfully completed, you move on to the next level.

Fail to eat food required before sundown: GAMEOVER back to level 1

Dog attack: You can get your way out of the dog's attack wiggling out of its paws by wiggling joystick or pressing the proper keys. If you fail to do so, it's GAMEOVER back to level 1.

Button mashing to break free from the other marmot allowing you to keep the food you have. If you fail to do so you get your food stolen. This can potentially lead to failure to eat food required before sundown.

Pest Control: Pest control will try to capture you with a net, their attacks will be telegraphed giving you a chance to either stun them with the whistle or dodge. If you get caught by pest control it's an automatic game over. Additionally, as the game progresses, Pest Control will place traps.

3. Game Mechanics

- **Rules**
  - ★ Player must eat required amount of food before sundown to advance to the next level
  - ★ Each level lasts exactly 90 seconds
  - ★ If player is captured by Pest Control, Game Over
  - ★ Dogs can temporarily trap the player, if you fail to escape, Game Over
  - ★ Rival marmots may steal food if a player fails to successfully button-mash quickly enough to win the tussle.
  - ★ All foods with progressively slow the player down
  - ★ Junk food slows the player significantly, while weight loss pills help restore the speed.
  - ★ Energy drinks temporarily increase player speed.
  - ★ Spinach grants immunity to the player. In addition, the player can also destroy pest control, traps, dogs, and other marmots.
  - ★ As levels progress, enemies move faster and additional enemies and traps are spawned by the Director system.

- **Objects**

  Food Items: Junk Foods and Healthy Foods

  Energy Drinks - Grants temporary speed boost

  Weight loss pills - Restores movement speed

  Spinach - Grants immunity; can destroy enemies.

  Enemies: Rival marmots, Dogs and Pest Control agents

  Environmental Objects: Shops, Pedestrians, Traps placed by Pest Control

- **Major Technical Systems (at least 2 required for undergrad group)**

Major Technical System #1

Food: Food will affect the marmot. Junk food will slow the marmot down significantly. Weight loss will recover the marmot's speed, and energy drinks will speed the marmot up for a period of time. Spinach will grant immunity to the marmot and also grant the ability to destroy enemies.

Junk food will include: French Fries, Shakes, Pizza, Ice Cream, Cookies, Doughnuts.

Quality foods include: Celery, Carrot, Nuts, Berries, Beets, Lettuce.

The marmot can lose weight if he gets too fat by taking a weight loss pill, which will spawn primarily inside pharmacies.

Major Technical System #2

Director: The 'Director' will determine the difficulty of the game as the player passes more levels. It can spawn more food, enemies, and traps that can instantly end the game. In addition, the 'Director' can also spawn specific buildings in any way or order.

- **Physics**

  2D side-scrolling platformer

  The player can jump, tussle with other marmots, dodge enemy attacks and navigate buildings and platforms to locate food.

- **Combat**

  Tussling with other marmots involves button mashing quickly enough to get away from the other marmot to avoid any loss of food.

4. Art/Audio

- **Art**

  2D pixel-art

- **Audio**

  Cute and cartoony sound effects and music. Kevin is planning to learn how to make the music needed for the game and he will be working on sourcing the sound effects.

5. Story and Narrative

- **Backstory**

You are a marmot trying to steal enough food to survive, you go into town at the start of the day and you have 90 seconds to steal enough food before sundown. You can steal food by breaking into shops, finding it on the street, or by stealing it off random pedestrians. While you're trying to get food you will be attacked by pest control who are trying to capture you, dogs who are trying to knock you out, and other marmots who want to steal your food. Your main goal is to steal enough food to survive before sundown and to avoid getting attacked by dogs and other marmots or captured by pest control.

6. Project Roles

- **How will the work be divided up?**

These roles aren't set in stone, as we are working together ultimately; "All hands on deck!"

Kevin: <mark>Audio and Sound effects</mark>

Ignacio: <mark>Art and Visual</mark>

Yassin: <mark>Gameplay Systems: Food and Director System</mark>

Nicolas: <mark>Lead Programmer and Controls</mark>

Christopher: <mark>UI and HUD Design</mark>

Roles: <mark>UI integration</mark>, <mark>Lead Programmer</mark>, <mark>Gameplay Systems: Food and Director System</mark>, <mark>Design + Document Rules:</mark> <mark>Controls</mark>, <mark>UI and HUD Layout</mark>

What tools are we planning to use for organization?

Github

7. User Interface

- **Saving and Loading**
    - High Scores.
- **HUD** - what's displayed?
    - Countdown timer. Food counter. Current score.
- **Control System** – How does the game player control the game? Controller? Keyboard?
    - Controller and keyboard (with possible adaptation for Steam Deck users).
    - What buttons on the controller or keys on the keyboard will be used to jump, whistle, or tussle

    KEYBOARD

    - A/Left Arrow: Move left

    - D/Right Arrow: Move right

    - (Double tap either arrows will prompt dashing)

    - Space: Jump

    - E: Eat food (Used to escape tussles too)

- W: Move into building (when prompted)

- ESC: Pause

CONTROLLER

- Left Stick X-axis: Move (Double tap either will prompt dashing)

- Button South: Jump

- Left Stick Up: Move into building (when prompted)

- Button West: Eat food (Used to escape tussles too)

-Start Button: Pause

- **MINIMUM VIABLE PRODUCT FOR PROTOTYPE**

By March 9th, we want to have the movement and functions, camera, technical systems, art and animation done.

- **MINIMUM VIABLE PRODUCT FOR FULL RELEASE**

- For the final product, we want to have the movement and functions, camera, technical systems, art and animation, user interface and front-end, HUD, and finally audio done.

- We designed the schedule to be done 1-2 weeks before the final submission deadline. This will give us time to do playtesting. Also if we're running out of time on our schedule we have a nice cushion to be able to implement all necessary things before finally submitting.

- In case we run short on time even with our 1 to 2 week cushion, maybe we should consider cutting back on the spinach idea. The spinach gives the marmot super powers. It makes him immune to traps, he destroys his enemies, and he's basically immune from all danger for a timed period. Cutting back on this would save us time with animations, artwork, level management, and programming.

TESTING DOCUMENTATION DETAILS: <mark>Testing Assignments (group) and (individual) and Presentation Review #2: 3/13/26 Friday</mark>

Recorded Data
- FPS
- Number of crashes
- Memory usage
- Playtime
- Score

Quantitative Questions (Scaled Responses)

Players will rate the following on a 1–5 scale:

1 = Strongly Disagree / Very Poor
5 = Strongly Agree / Excellent

- The objective of the game was clear.
- The controls felt responsive.
- The mechanics were easy to understand.
- The difficulty felt appropriate.
- The UI was readable and helpful.
- I felt engaged while playing.
- I would play this game again in its current state.

Qualitative Questions (Open Response)

- What did you think the goal of the game was?
- What was the most enjoyable part?
- What was the most confusing part?
- Were there any moments of frustration?
- Did anything feel unfair?
- Did you encounter any bugs? If yes, describe them in the Bug Reporting Plan.
- Additional comments or suggestions?

Bug Reporting Plan

All game sessions will be screen-recorded.
If testers encounter bugs, they may:

1. Report them directly in the survey form.
2. Include:
    - What happened
    - What they expected to happen
    - Steps to reproduce

Severity levels:

- Minor (visual/UI glitch)
- Moderate (mechanic malfunction)
- Critical (crash or soft lock)

8. Rough Schedule/Roadmap/Deadlines

Prototype Deadline and Presentation: 3/9/26 Monday

Testing Assignments (group) and (individual) and Presentation Review #2: 3/13/26 Friday

Level Design Assignment: 3/27/26 Friday

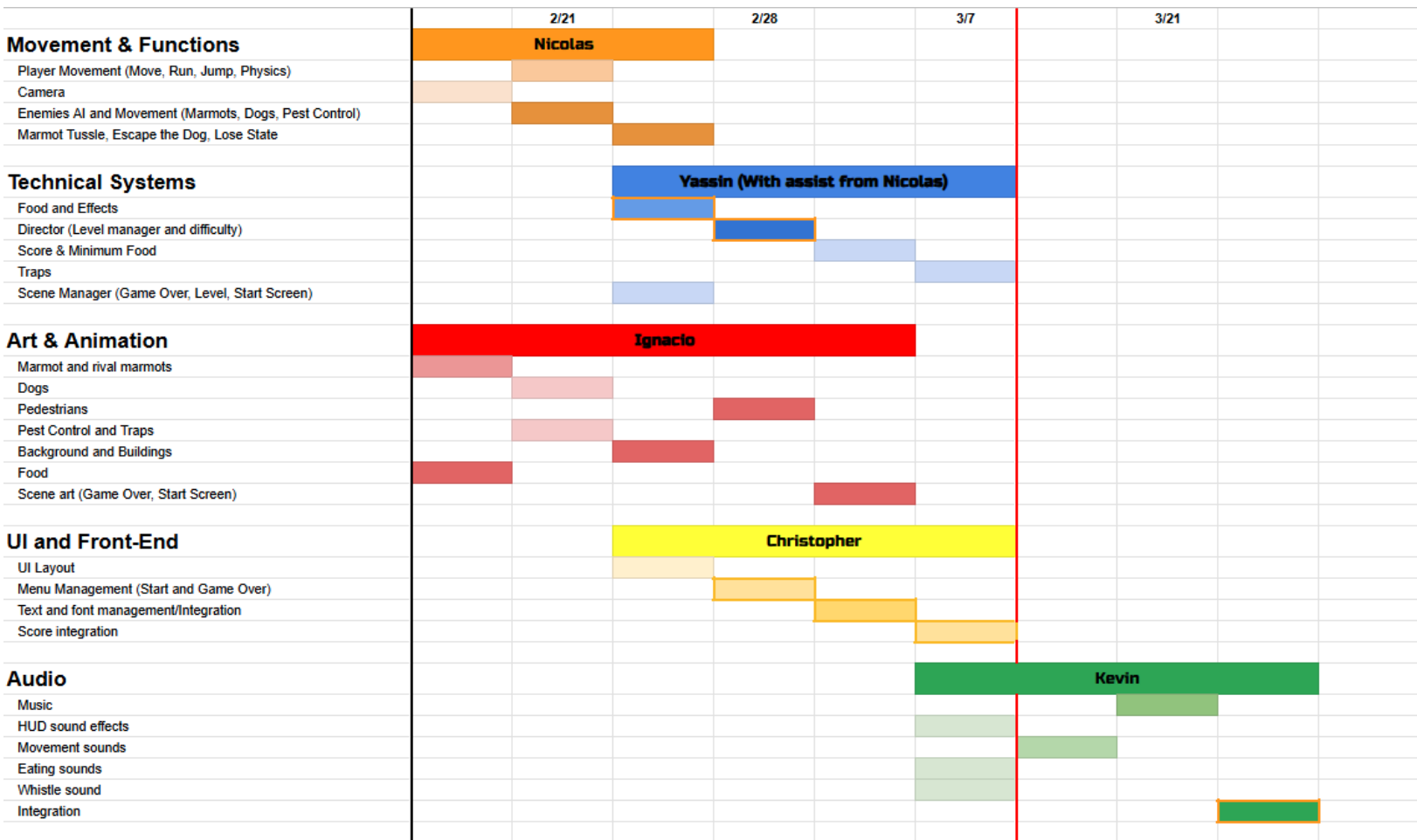Technical Documentation: 4/17/26 Friday ???? not on webcourses anymore

Final/AI Presentation, Virtual Presentation/Recording: 4/29/26 Wednesday

Analysis of playtesting results: 4/29/26 Wednesday

Final Binaries/Source: 5/1/26 Friday

Presentation Review #3: 5/4/26 Monday

Gantt Chart

	2/21	2/28	3/7	3/21

Movement & Functions — Nicolas
- Player Movement (Move, Run, Jump, Physics)
- Camera
- Enemies AI and Movement (Marmots, Dogs, Pest Control)
- Marmot Tussle, Escape the Dog, Lose State

Technical Systems — Yassin (With assist from Nicolas)
- Food and Effects
- Director (Level manager and difficulty)
- Score & Minimum Food
- Traps
- Scene Manager (Game Over, Level, Start Screen)

Art & Animation — Ignacio
- Marmot and rival marmots
- Dogs
- Pedestrians
- Pest Control and Traps
- Background and Buildings
- Food
- Scene art (Game Over, Start Screen)

UI and Front-End — Christopher
- UI Layout
- Menu Management (Start and Game Over)
- Text and font management/Integration
- Score integration

Audio — Kevin
- Music
- HUD sound effects
- Movement sounds
- Eating sounds
- Whistle sound
- Integration

Feb 20 — Movement and Functions

- Player Movement/Actions (Move, Run, Jump, Physics)

  - Player Actions during enemy interactions: marmot tussle, dog attack, pest control capture and traps

- Camera
- AI Enemies

  - Tussle with the marmots, escape the dog attack, pest control attacks.

- GitHub organized

Feb 27 — Technical Systems and Win/Lose States

- Food and Consumables + Effects (Technical System #1)
- The Director (Technical System #2) (level difficulty, spawning of enemies/food/consumables/traps)
- Level Management
- Save/Load Scores
- Scene Manager
  - Game Over, Level, Start Screen
- Win/Lose states:
  - Score & Minimum Food Requirements outcomes
  - Trap outcomes
  - Enemy interactions: outcomes

Mar 6 — Art and Animation

- Marmot and Rival Marmots
- Dogs
- Pedestrians
- Pest Control and Traps
- Background and Buildings + Street Tiles
- Food and Consumables (Energy Drinks, Weight Loss Pill)
- Scene Art (Game Over and Start Screen)

<mark>Mar 8 — UI/Front-End, and Playtesting</mark>

- UI Layout
- Text and Font management/integration
- HUD: 90-second timer, current food counter, food objective
- Menu Management (Start and Game Over)
- Playtesting goals: Figure out if the movement is fun? Is the difficulty fair? Is it difficult to understand the effects of food or consumables? How does enemy interaction feel? Does the game feel rewarding after completing an objective?
- Refer to **"TESTING DOCUMENTATION DETAILS"** above

<mark>Mar 9th Monday — **PRESENTATION for PROTOTYPE DUE at 3pm**</mark>
<mark>March 13th three assignments DUE: Testing(group), Testing(Individual), Presentation 2 Review.</mark>

- Prototype Ready
- Game feels almost complete.

<mark>Mar 13 — Audio</mark>

- Music

    - In-game Music

    - Startup and Menu Music

- Sound Effects

    - For Food and Consumables

    - Steps (walking)

    - Enemies

Mar 20 — Playtesting

- Refer to: "**TESTING DOCUMENTATION DETAILS"** above

Mar 27 — Level Design Document DUE 3/27/26 Friday

Apr 10 — Fixing Bugs + Playtesting

- Fixing bugs
- Controller testing
- Edge cases
- Playtesting, Refer to: "**TESTING DOCUMENTATION DETAILS"** above

Apr 17 — FINAL GAME READY

- Final build
- **Technical Documentation DUE 4/17/26**
- Presentation materials
- Game DONE.

Apr 24 —Final/AI Presentation and Analysis of Playtesting Results DUE 4/29/26 Wednesday

- Record Virtual Presentation
- Work on Analysis of Playtesting Assignment

May 1 —Final Binaries/Source DUE 5/1/26 Friday and Presentation Review #3 DUE 5/4/26 Monday

- Submit final product