Group Members: Jack, Nathaniel, Koen, Austin, Han

June 7th, 2025 Time: 4:30pm

Present: Jack, Nathaniel, Koen, Austin

Location: Discord

Name for Game, “Heat Death The end of Civilization”

Discussion Post:

Nathaniel Butler

May 24, 2025May 24 at 2:14pm
Manage Discussion Entry

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HeatDeath.png

(ai art)

Heat Death

The end of Civilization

Heat Death is themed around the heat death of the universe. Player race against each other trying to build their civilization to survive the longest. Players will gather and manage resources that can be used to build their civilization larger, traded with other players or go to war. As player generate energy, a global resource called entropy goes up. As entropy increases the game gets harder and eventually all civilization ends.

Resources

The main recourses are energy, minerals, population, and food.

Energy is required to do most things in the game. (build, move, mine, produce food, attack)

Minerals are used to build infrastructure to generate more resources, defences, weapons, and ships to explore.

Population is required to build and run things. (a person may be in the cost of a space ship, to build then run it) If your population becomes 0, you loss.

Food is required to maintain population.

Objective

Be the last civilization.

Set up/ Game pieces

Each player starts with a set amount of recourses.

Resources would be pieces; some pieces would represent more.

Building things would give you that card with the information on it of what it does.

The map is placed out.

Map

There are 2 scales of maps the larger map of the galaxy and smaller maps of solar systems.

Each player starts in a solar system as these are places where you can build civilization.

The galaxy map starts off as an array of hexagons face down. As payers move around the tiles get flipped over. Some tiles are empty, others good for specific resources.

Game loop

At the start of each players turn, they are given the energy they generated and can use it however they like. Entropy is also increased at this time. Then player can do the following with the recourses they have.

Construct

Trade

Attack

Explore

Ideas:

- Potentially Go more Wargame-style,
    - Command Troops, Manage Resources, Claim planets/solarsystems/territory
- Dice Based combat, similar to RISK
- Tileable map with hexagons similar to Catan
- Different Planets/Tiles,
    - Different environments/effects on different planets. Ex a planet where defense is stronger, or energy production is easier….
    - Players decide where to start on a blank map (all tiles upside down, flipping them as they are explored by players)
- Resource Management
- Troops
    - Combat, made with Energy
- Energy
    - Start out with a small means to produce energy,
        - Ex small colony with a powerful forge generating energy each turn. Player aims to increase energy production
- Goal of the game is to be the last one standing
- Building System,
    - Based on energy and potentially other resources
    - Allows creation of armies/ships as well as structures for energy production other resources, population, food?

Team Roles:

- Austin, primary Website Designer

This weeks individual Tasks:

- Jack, Meeting Minutes for Wk1
- Nathaniel, Initial Idea

Goals for Next Week:

- Flesh out ideas more,
- Decide on everyone's roles for the whole project,
- Form a timeline
- Plan design of the board, colours etc
    - Potential for Dune style, darker

Future Meeting Times: Mondays 4:30-5:30pm Online (Starting June 9th)

Group Members: Jack, Nathaniel, Koen, Austin, Han

June 9th, 2025 Time: 4:30pm

Present: Jack, Nathaniel, Koen, Austin, Han

Location: Discord

Agenda:

- Flesh out ideas more,
- Decide on everyone's roles for the whole project,
- **Form a timeline**
- Plan design of the board, colours etc
    - Potential for Dune style, darker

Team Roles:

- Austin, primary Website Designer
- Nathaniel, primary Model Designer

This weeks individual Tasks:

- Jack Meeting Minutes for Wk2
- Everyone has been working together to generate ideas and plan the game

Summary of thoughts discussed:

- Began forming the main game loop, deciding on a combat system with 4–5 unique troop types using dice rolls (d10 to d6, with modifiers). Combat is fast and strategic,
- Players start with a Giant Furnace, producing 5 energy per turn. Energy is used to move troops, build structures, and explore.
- Exploration reveals planets, asteroids, or stars, which can host mines that generate minerals if controlled.
- Buildings include barracks, defenses (turrets, forcefields, mines), and upgrade stations. Units range from basic fighters to heavy ships and a late-game Space Nuke Carrier.
- Every 5 turns, a hazard (like meteor showers or black holes) affects random tiles, adding environmental threats. Hazards persist until replaced.
- Victory is achieved by being the last colony standing. Defeating a player grants their energy, and their buildings become neutral.

Agenda for next Meeting:

- In person at surrey campus, aim to draw and finalize brainstorming and ideas.

Brainstorming Notes

Game Loop

- Start with a Giant Furnace: produces 5 energy/token per turn,
    - Inspired by Frost punk
    - 3d piece, low-poly
    - each player starts with 1
- Energy
    - Costs energy to move a troop
    - Costs energy to make buildings
- Exploration
    - Any troop can explore
    - Can find new planets, asteroids, stars
- Buildings, use Energy + Minerals to build
    - More Energy Generation
    - Mines to get minerals
        - Poor, few minerals generated per turn
        - Rich, more minerals
        - Set Position, Player must control the mine to gain resources
    - Barracks
    - Defensive Buildings
        - Forcefield,
        - Turrets,
        - Space themed Sea Mines
    - Upgrade Building (tokens for upgrades)
- Combat / Troops
    - Single Pilot Spacecraft (roll 10 ^)
    - Single Pilot spacecraft with turret (roll 8 ^)
    - Star Destroyer (roll 6 ^)
    - Spaceship with forcefield (tankier, protects near ships) (enemy roll -2 ex.10 become 8)
    - Space Nuke guy (objective and cost) (middle of map?) (Late Game)
- Hazards (Roll two dice to decide which tiles become hazardous, stays until next hazard)
        - Every 5 turns, draw card to decide on type of hazard, roll dice to decide where it lands.
    - Meteor Shower, Certain tiles become hazardous
    - Black Hole
    - Energy Loss, percentage based? Scaling
- Combat
    - Dice, two dice. Max roll is crit, lower
    - Defensive player rolls a crit gains movement without penalty
- End Game
    - Last colony Standing,
    - When eliminating a player you gain all their energy and all their buildings go unowned

Meeting 3
Group Members: Jack, Nathaniel, Koen, Austin, Han
June 16th, 2025 Time: 2:30-4:30pm
Present: Jack, Nathaniel, Austin, Han
Location: SFU Burnaby Campus

Finalized Main Game Mechanics

- Combat System:
    - Inspired by D&D and Risk.
    - Involves dice rolls to resolve troop and building combat.
    - Physical movement of pieces across the board required for tactical positioning.
    - Units have DC (Difficulty Class), damage dice, range, and energy/movement costs.

- Troop System:
    - Troops categorized into three tiers.
    - Each troop type has distinct stats including DC, dice, movement, range, build cost, and player limit.
    - Tier III units include powerful, limited superweapons with special effects and cooldowns.

- Buildings System:
    - Three types of buildings, each with three tiers:
        1. Dyson Sphere – Generates energy.
        2. Factory – Produces troops.
        3. Drill Sites – Extract minerals.
    - Higher tiers yield more resources or unlock stronger unit production.
    - Buildings also have attack/defense options like turrets, space mines, forcefields, etc.

Component Table Development

- A structured component table was begun collaboratively, covering:
    - Troop Types and Stats
    - Attack/Defense Buildings
    - Production Buildings
    - Tile Types and Effects
    - Starting Assets
    - Hazards and Events
    - Player Abilities

- Table formatting includes columns for:
    - DC, Damage Dice, Range, Movement, Cost, Limit per Player, and Unique Mechanics where applicable.

Delegated Work

- Han and Austin
    - Complete the Troop section of the table.
    - Fill out the Attack/Defense buildings section (Turrets, Railguns, Mines, etc.).
- Jack and Nathaniel
    - Complete the Hazards section (e.g., solar flares, black holes, meteor showers).
    - Fill in the Abilities section (e.g., Lucky Dice, Free Movement).

Additional Notes

- The finalized game system supports strategic trade-offs in resource management, movement, and combat engagement.
- Players must balance between economy (energy/minerals) and military pressure.
- The tile-based board introduces environmental hazards and opportunities (e.g., asteroid bonuses, black holes, planet-building locations).

Meeting 4
Group Members: Jack, Nathaniel, Koen, Austin, Han
June 30th, 2025 Time: 4:30-5:00 pm
Present: Jack, Nathaniel, Koen, Austin, Han
Location: Discord

Progress Overview

- Main mechanics of the game are completed and agreed upon by all group members.
- Group has aligned on the final goal: polishing and finalizing rules via upcoming playtests.
- Scheduled playtesting sessions:
    - Wednesday, July 2nd at 8 PM (online)
    - Thursday, July 3rd at 8 PM (online)

Delegated Tasks and Responsibilities

- Koen
    - Write a statement of the three game pillars (What, How, Why – one sentence each).
    - Create a visual gallery of all game components excluding the main board (cards, dice, player pieces, etc.). Generative AI tools permitted.
- Han
    - Complete the Rule Book (PDF or webpage link).
    - Provide a description of gameplay trade-offs and dilemmas.
    - Write a description of the expected play session length.
- Jack
    - Compile the Group Meeting Log (summaries/minutes of each meeting; first page of each meeting sufficient).
    - Maintain the Playtesting Log (feedback from playtests and any design changes made as a result).
    - Build the playtest model for the upcoming online playtest sessions.
- Nathaniel
    - Design flowcharts outlining the game's primary mechanics using a logical structure tree.
- Austin
    - Responsible for building the website for final submission.

Next Steps

- Continue refining rules during upcoming playtests.
- All delegated tasks to be completed and submitted ahead of final deadline.
- Ensure all documents (PDFs, flowcharts, visuals, logs) are ready for upload or linking on the final website.