

Circe's Island

Authors: Rittika Saha, Emma Yu, Jiwoo Kim

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Introduction:

You are Circe, an enchantress from Greek mythology, and you have just arrived on your island Aiaia after being banished for using magic. Your goal in this adventure is to transform your island into a habitable haven for other banished nymphs by cultivating your garden, building homes, and turning malicious visitors into pigs!

This game is an idle simulation game. The island is divided into grid squares, and in each square, you have the option to garden or build new homes and pig pens.

As each day passes, you will garden and harvest plants, brew potions, and respond to any events that may occur on your island! Malicious visitors may show up to Circe's island, whom you must turn into pigs. Banished nymphs also show up to Circe's island, whom you can take in and nurture.

Our game is primarily targeted for people who are interested in Greek mythology and enjoy playing peaceful games.

How To Play Circe's Island

- Use WASD to move Circe around the island
- Click the land to add more elements to the grid, and interact with these elements
- As you near Circe's house, click enter to enter her house and access her workspace, where you can brew items and manage your inventory.

Instructions:

Circe:

Circe is the character that the user controls. She can move through the island using WASD, and interacts with her environment by clicking on nearby items. When Circe is at her home (next to the large house), and the 'return' key is pressed, she will be able to access her worktable, which shows her storage. Circe can hold a total of 6 items (food, potion, seeds, etc.), and has a current hold which represents the item currently in her hand. Click on the inventory in the bottom left to change what is in her hand.

Home:

Circe's home is a fixed spot on the island. Circe can enter her home (or rather step in front of it) to access her storage, brew potions, and make food. When you enter your home, the screen shows the inventory of all cultivated plants and herbs, as well as a recipe book containing recipes for potions and food. Circe can put items from her current inventory into storage for later access.

Gardening:

There are four types of plants that you can plant: grapes, barley, maratho, and anithos. The player starts with a few seeds of each plant type. Plants can be planted in gardening land by moving Circe to the garden plot and clicking on it while holding the wanted seed type. You must water the plants with water from the nearby stream in order to keep their water level above a certain threshold,

or else the plants will die. After a certain amount of time has passed, the plants can be harvested by clicking on them, and they will go to the Circe's inventory where they can be brewed.

Potion brewing and food:

You can brew potions and make food at your worktable (accessed as described above), where you receive a menu that includes storage and a recipe book. Foods include wine and bread. The potion is the swine potion, which can be used to transform the bad visitors into pigs.

Pigs:

When an unsavory character shows up on the island, you will have to chase them down while holding food. If you are not holding food (made from the garden produce), the unsavory visitors will run away. If you're holding food and are near the visitor, you must click on the visitor to feed them the food and make them compliant. Then, click on the potion to hold it and click on the visitor to feed them the potion. This will turn them into pigs. Pigs will be taken to the pig pen, where you can feed them with barley. Otherwise, the unsavory visitors will ruin Circe's island by taking things from her storage.

Nymphs:

Circe's island is known to be a sanctuary for spurned nymphs around Greece. Nymphs will periodically show up at the island's dock. You will have to build a home for her so that she doesn't die of cold during the night. Additionally, you must provide the nymphs with food once a day, which is done by holding food then clicking on the nymph.

Features List (THE ONLY SECTION THAT CANNOT CHANGE LATER):

Must-have Features:

- Circe as a character that can walk around the island, making interactions available as she nears different locations or creatures.
- Time progression on the island, with changes to night and day. Plants and herbs grow as time goes on, which can be harvested once they are ripe.
- Each grid square on the island can be clicked to provide the option of creating a garden plot, pig pen, or house.
- Visitor feature, where visitors will occasionally sail to her island, falling into two main categories: malicious visitors and nymphs. Malicious visitors can be turned into swine, while nymphs can be given a haven, where Circe provides them with food and shelter.
- Feature with malicious visitors turning into swine (detailed above).
- An inventory where all harvested herbs/crops are stored. Malicious visitors who are on the island can also steal from this inventory periodically.
- Alchemy system that allows Circe to create different potions and food.

Want-to-have Features:

- Odysseus and Medea can be unique visitors as an easter-egg (different form of the visitors that show up to her island)
- More types of potions that give different benefits, such as increased garden growth or cosmetic changes.
- Pet lions that roam the island. Circe can tame these lions with food.

- Nymphs can help Circe with gardening.
- Different weather conditions for the island: rain, sunny, cloudy, etc.
- Sheep/cow pen so that Circe can make milk and cheese, as well as clothing
- Characters move freely (not by grid)

Stretch Features:

- Easter egg that other Greek's gods attack Circe's island.
- Fleshed out story with Odysseus, following the original story in the Odyssey
- Fully functional house building feature, where Circe can expand her home and cultivate it with tools and materials.

Class List:

- Main: Contains the main() method.
- DrawingSurface (extends PApplet): Contains all the screens. It has a currentScreen which determines which screen is drawn to the PApplet. This also keeps track of time.
- Screen: Screen represents screen, it has a draw() method.
 - WorkTable: Showing inventory screen. It has holdable classes.
 - Island : This class represents a full size island. It has a grid, a 2D Array of Construction class, and an arraylist of Creatures.
 - Information: This class displays the instructions for the game.
 - WelcomeScreen : This class is first displayed when the program is run. The user can either see the instructions or directly start playing the game.
 - Screen: parent class
- Elements: It has x and y. It can put itself in the grid.
 - Land: the island starts out with land on it.
 - Water: the pond
 - House: can be either circe's house (2x2 dimension) or nymph's houses
 - Garden: This class has Plants as a field. Depending on whether it is planted, the graphics change.
 - PigPen: Used to keep the pigs
 - Holdable: objects that Circe can hold (examples: seeds, water, wine, food).
- Creatures: It has x and y coordinates. It can move around.
 - Circe: This class represents Circe or a player. It can brew, garden, move, hold, and turn malicious visitors to pigs. It has an Array of 6 holdables, and a current hold.
 - Creature: parent class. Has the act() and draw() methods
 - Visitor: comes from the sea.
 - Nymphs: Walk around idly. Eat food and go to houses at night. Leave if needs are not met.
 - MaliciousVisitor: Steals from Circe's house unless fed and turned to a pig. Runs away from circe when not fed.
 - Pig: moves idly, and goes to a pigpen if there is one. Dies if not fed with barley.

Credits:

- Emma Yu: Lead on the elements package, video editing
 - Element.java, GardenLand.java, Holdable.java, House.java, Land.java, PigPen.java, River.java, WorkTable.java
 - Drawings: holdables, worktable, welcome screen background
- Rittika Saha: Set up repository, create skeletons of classes, lead on the main and screens packages, graphics for some elements and some parts of worktable, UML, slides
 - DrawingSurface.java, Main.java, Island.java, Screen.java, Information.java, WorkTable.java, gardenLand.java.
- Jiwoo Kim: Leads on UML, lead on creature package
 - Creature.java, Pig.java, Visitor.java, Circe.java, MaliciousVisitor.java, Nymphs.java
 - Drawings: island map, Circe, nymph, malicious visitor, pig, houses, pigpen, gardenLand
- Emily Tumacder: Help with graphics (artistically)
- Inspired by
 - *Circe* by Madeline Miller
 - *The Odyssey* by Homer
- Code reference :
 - GamePhysicsDemoAP
 - ProcessingWidgetLibrary