

Circe's Island

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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.

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.
- 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, and the return key is pressed, she will be able to access her inventory and workspace. Circe can hold items in her hand, such as food or potions.

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, a menu will pop up showing 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 either be brewed or eaten.

Potion brewing and food:

You can brew potions and make food at your home, where you receive a menu that includes storage and a recipe book. Foods include wine and bread. One of the potions will be 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 adjacent to the visitor, you can click on the potion and then on the visitor in order to turn them into a pig. 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. If a nymph shows up at the island's dock, you have the option to let her onto your island. 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:

[These are features that we agree you will *definitely* have by the project due date. A good final project would have all of these completed. At least 5 are required. Each feature should be fully described (at least a few full sentences for each)]

- Circe as a character that can walk around the island, making interactions available as she nears different locations +
- 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 or home ++
- Visitor feature, where visitors will occasionally sail to her island, falling into two main categories: malicious visitors and nymphs. Circe has the ability to let these visitors onto her island. 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:

[These are features that you would like to have by the project due date, but you're unsure whether you'll hit all of them. A good final project would have perhaps half of these completed. At least 5 are required. Again, fully describe each.]

- 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:

[These are features that we agree a *fully complete version of this program would have, but that you probably will not have time to implement*. A good final project does not necessarily need to have any of these completed at all. At least 3 are required. Again, fully describe each.]

- 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
- DrawingSurface
- Screen: Screen represents screen, it has draw() method.
 - WorkTable: Showing inventory screen. It has holdable classes.
 - Island : This class represents a full size island. It has a grid, an 2D Array of Construction class, and arraylist of creature. It also keeps tracking the time.
 - Information: has instructions for game
 - Screen: parent class
- Elements: It has x and y. It can put itself in the grid.
 - Land
 - Water
 - House: It has a arraylist of holdable. Also it can do alchemy
 - Garden: This class has Plants as a field
 - Pen: can be expanded
 - PigPen
 - Holdable
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- 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, magic. It has an Array of holdable.
- Creature: parent class
- Visitor: comes from the sea.
 - Nymphs
 - MaliciousVisitor
- Pig

Credits:

[Gives credit for project components. This includes both internal credit (your group members) and external credit (other people, websites, libraries). To do this:

- List the group members and describe how each member contributed to the completion of the final program. This could be classes written, art assets created, leadership/organizational skills exercises, or other tasks. Initially, this is *how you plan on splitting the work*.
- Emma Yu: Lead on the elements package
 - Element.java, GardenLand.java, Holdable.java, House.java, Land.java, PigPen.java, River.java, WorkTable.java
- Rittika Saha: Set up repository, create skeletons of classes, lead on the main and screens packages
 - DrawingSurface.java, Main.java, Island.java, Screen.java, Information.java, WorkTable.java
- Jiwoo Kim: Leads on UML, lead on creature package
 - Creature.java, Pig.java, Visitor.java, Circe.java, MaliciousVisitor.java, Nymphs.java
 - Draws: island map, Circe, nymph, malicious visitor, pig, houses, pigpen, gardenLand
- Emily Tumacder: Help with graphics (artistically)
- Give credit to all outside resources used. This includes downloaded images or sounds, external java libraries, parent/tutor/student coding help, etc.]
- Inspired: Circe by Madeline Miller, The Odyssey by Homer
- Code reference :
 - GamePhysicsDemoAP
 - ProcessingWidgetLibrary