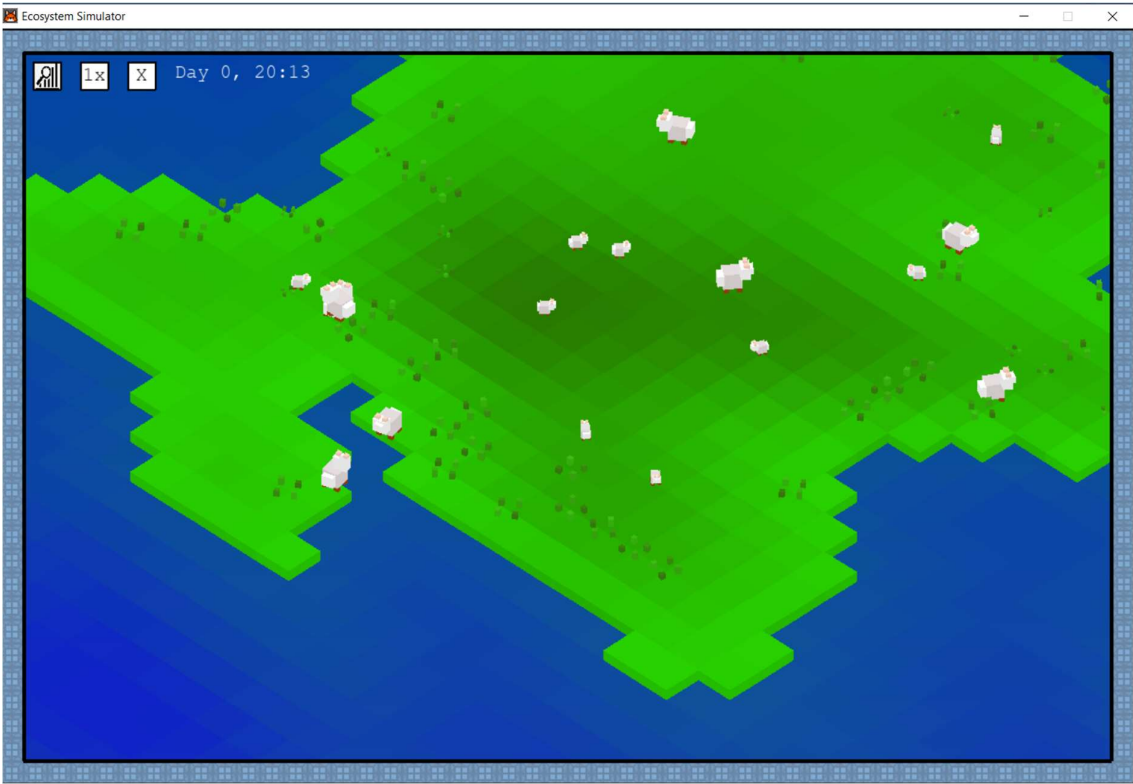


EcoSim, or *Ecosystem Simulator* is a game about simulating ecosystems.

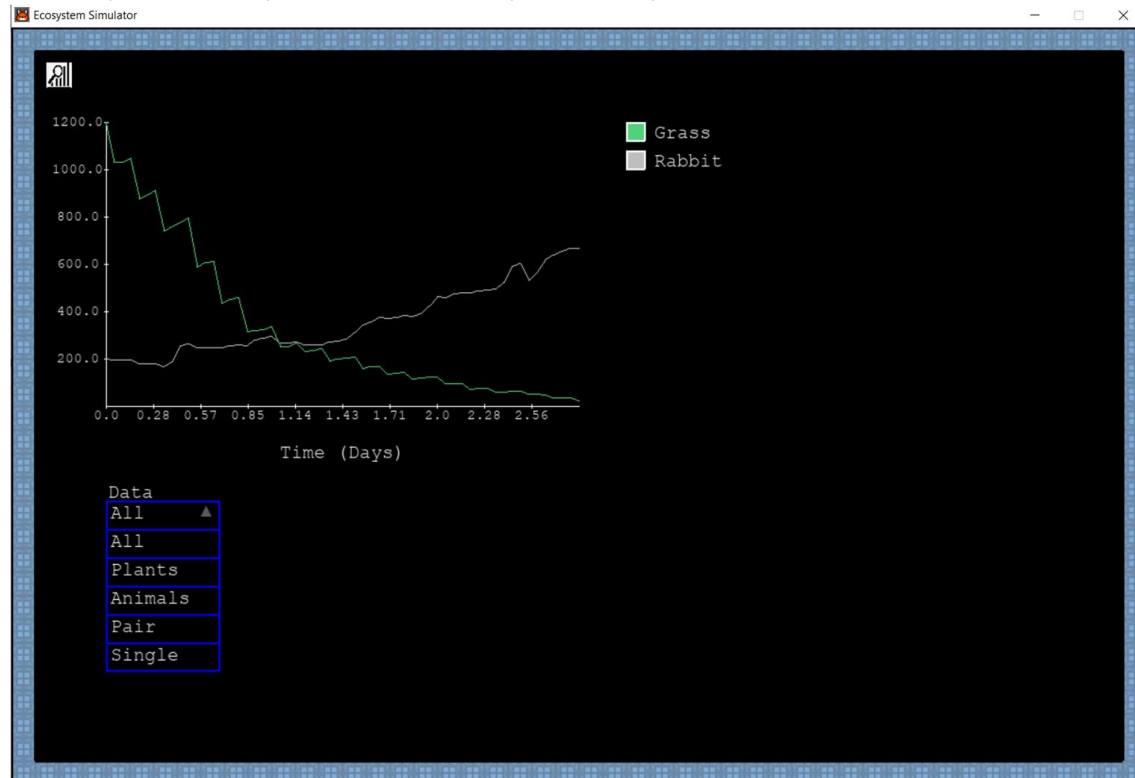


Using the 'New Trial' menu, you can selected a new simulation with custom parameters. You can selected plants and animals with customized parameters and a chosen terrain. You can then select the name and create your simulation!



After it loads, you will see your simulation. You can use WASD to move the camera around, the scroll wheel to zoom, and the alt key to skip through time.

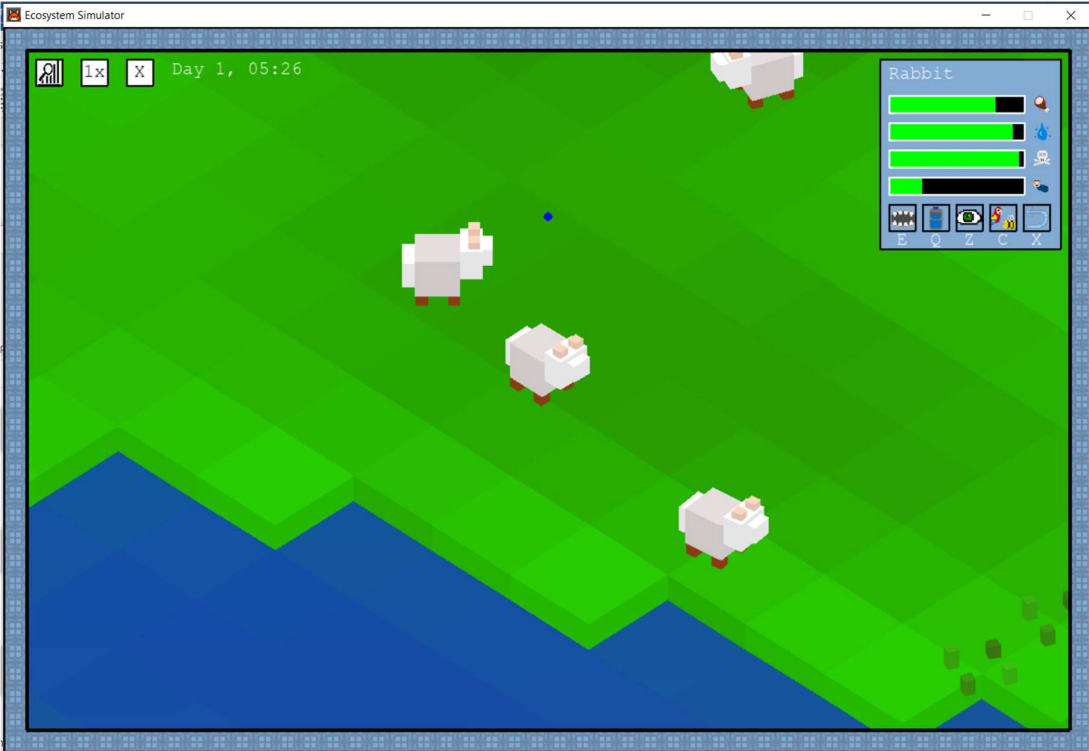
However, there is more to do than simply observe passively. For starters, you can press the time multiplier button (says 1x), to toggle the simulation time between normal and pause (1 and 0). You can also press the analytics button (left) to open the analytics menu!



As you can see, the graph shows the different populations of animals over time. The legend in the top right shows which species each colour represents. The dropdown menu provides the different choices of graphs. They each show the expected graphs, and the 'pair' and 'single' options reveal other dropdown menus, allowing the user to pick out which entities' statistics they would like to view. This menu is only revealed after 12:00pm on the first day, since the data before such a point would not be very interesting.

Another thing you can do rather than just observe is to 'possess' an animal!

After clicking on any animal, this menu will show up:



You will notice a blue dot above the possessed animal, to signify the possession.

The four bars in order are hunger, thirst, lifespan, and gestation (pregnancy). The 5 buttons, with the relevant key underneath, are eating, drinking, toggle view centering, breed, and exit possession.

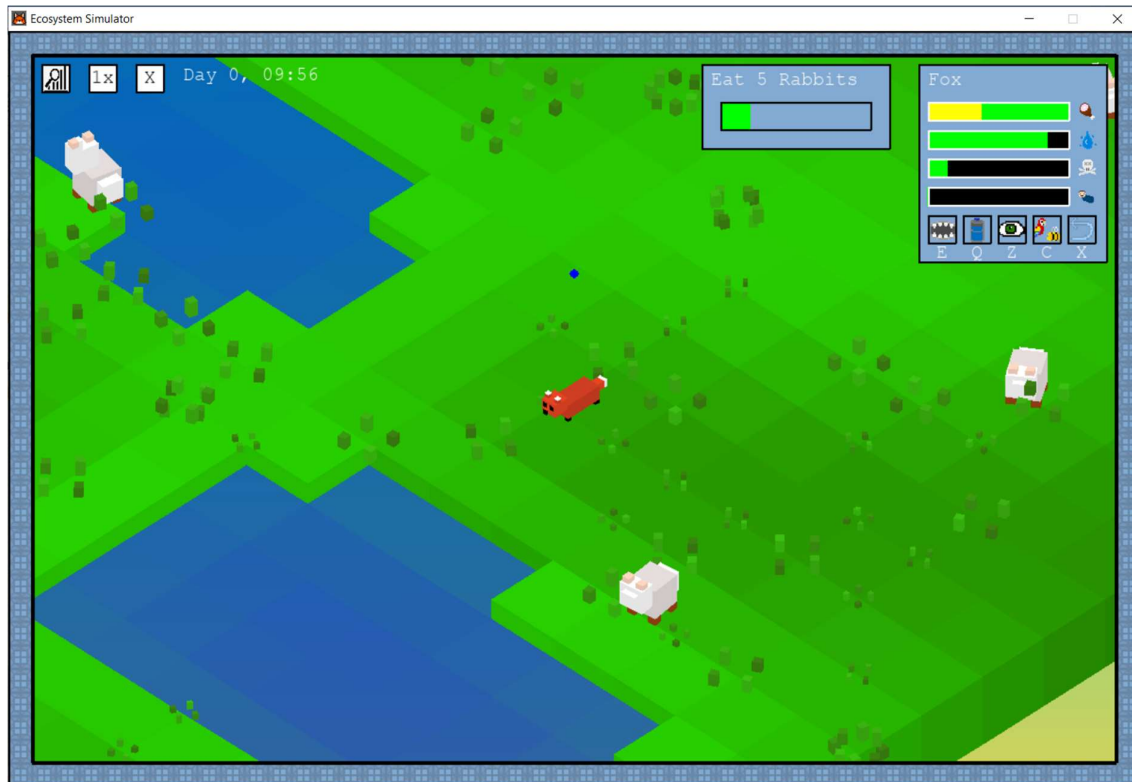
Additionally, you can use the arrow keys to control the movement of the animal.

The last thing you can do in the simulation is to leave. By pressing the 'X' button (third button from the left), you can return to the main menu. The simulation you have created will now be in the 'Past Trials' menu, along with any other previous simulations.



For each of these simulations, you can either load them back up, or delete them by pressing the 'x' button.

The last thing you can do is play one of the preset simulations. These involve some pre-built scenario, involving the user possessing one animal exclusively. In the only preset currently available, you play as a fox in a world of rabbits and grass, and complete quests!



Since you are required to possess only one animal, the exit possession button is not functional in this gamemode. However, after you die you can still spectate and move the camera around.

This game was programmed in python, using the pygame module. If you have any issues with compatability or bugs, feel free to contact the creator sprice21@student.sacs.nsw.edu.au.