Storage Design Plan for Saving and Preferences Features in HugLife

Overview

- `savedStates/quickSave.ser`: contains the most recent state of the previous HugLife run.
- `savedStates/XXX.ser`: contains a HugLife `Grid` saved using the s command
- `savedStates/XXX.png`: contains a screenshot of the world grid contained in `XXX.ser`
- `./preferences.cfg`: contains the execution speed preferences for HugLife.

Sequential Example

The following part of this design plan shows how the files on this computer change in response to each of the given commands. We'll assume that when the code begins execution that the `savedStates` folder and `./preferences.cfg` do not exist (because HugLife has never been run).

$ `java huglife.HugLife strugggz` is executed and allowed to run for 5 seconds before the letter q is pressed.

- The directory `savedStates` is created.
- After the first frame is drawn to the screen, the file `savedstates/quickSave.ser` is created, and the contents of the `HugLife Grid` including the energy levels of all creatures are written to the file.
- After every subsequent frame is drawn to the screen, the file `savedstates/quickSave.ser` is overwritten with the new corresponding `HugLife Grid`.

$ `java huglife.HugLife strugggz` is executed and run for 5 more seconds before q is pressed.

- After every frame is drawn to the screen, the file `savedstates/quickSave.ser` is overwritten with the new corresponding `HugLife Grid`.

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$ java huglife.HugLife is executed and run for 3 seconds before s is pressed, and 2 more seconds elapse before q is pressed.

- After every frame is drawn to the screen, the file savedstates/quickSave.ser is overwritten with the new corresponding HugLife Grid.
- At the 3 second mark, a random filename is generated. Let's suppose this filename is wetFish. The state of the HugLife Grid at that time is written to savedStates/wetFish.ser and a picture is created and stored in savedStates/wetFish.png.

$ java huglife.HugLife wetFish is executed and the following events occur at the indicated times:

- **At t=3: s is pressed**
- **At t=4: + is pressed 3 times**
- **At t=6: – is pressed 2 times**
- **At t=7: q is pressed**

- After every frame is drawn to the screen, the file savedstates/quickSave.ser is overwritten with the new corresponding HugLife Grid.
- At t=3: A random filename is generated. Let's say hugeLeg. The state of the grid is written to savedstates/hugeLeg.ser, and a picture is created and stored in savedStates/hugeLeg.ser.
- At t=4: Since ./preferences.cfg does not yet exist, it is created and the value 45 is written. It is soon overwritten with the values 40, and then 35.
- At t=6, the ./preferences.cfg file is overwritten with the values 40, 45.