

User Guide

Basics

The user is to collect in a recycling bin icons falling from the sky representing unwanted files in an effort to clean up their computer. Unfortunately, system files also fall from the sky, and junking them will harm the computer. To complicate this further, as a testament to the filthy state of the user's computer, pop-up windows with questions appear and obscure the screen.

Mechanics

The game keeps track of the following statistics:

- CPU usage: A number which rises steadily in response to the presence of junk files, and is also increased when pop-up windows appear. If it exceeds 100%, the game ends.
- Number of files collected: Both types of files are counted. As more items are collected, the recycling bin has more momentum and becomes more difficult to control
- Time elapsed: In nanoseconds

The competitive player should strive to last as long as possible, since not collecting items in an effort to retain control of the recycling bin will still hasten the end of the game.

Controls

<Left> Move the recycling bin left
<Right> Move the recycling bin right
<Left Mouse> Use this to click things
<Space> Pause the game
<Esc> Immediately end the game

Supported Features

- Addition or removal of custom questions through editing of `QuestionBank.txt`
- Difficulty adjustment by adjusting the sizes of the sprites of e.g. the recycling bin
- Pausing the game

Non-supported Features

- Leaderboard
- Control customization

Developer Guide

Possible Improvements

- A separate Engine class, which BackgroundGame would extend, could have been made to facilitate code reuse.
- The collision mechanisms could be reworked since most if not all reactions to collisions are handled by only one of the colliders anyway.
- The redrawing could probably be optimized as to use less CPU.
- A more sophisticated implementation of velocity decay could be worked into GameObject.
- The sprites and object lists should probably be static members of GameObject rather than BackgroundGame.
- The QuestionsBank.txt format could be more flexible to permit e.g. variable numbers of choices, different kinds of questions
- The text in the pop-ups should be aligned to the left or centred
- Include more questions

Javadoc follows.