PrintOptionWindow.java

Overview

The PrintOptionWindow adapts the inherited PyrWindow class. The PrintOptionWindow represents the option window the user sees after selecting an option in the main option window (see MaterialOptionWindow). A PrintOptionWindow objects allow the user to set all variables pertaining to the geometry of the final printed solid, the materials used, the specifics of cooking as well as the output file's name.

Please note that past implementation of this class, PyrWindow, allows the program to save all input values and configurations into a .food file so that whenever the user wants to retrieve previous specifications of a print, he or she can load a .food file into the GUI. Hence, every time, the user clicks the "generate" button to output the final Gcode file, an associated .food file will also be generated in the same local directory. Throughout the Spring2018 semester, neither the software team nor the food team utilized this .food loading option, but the software team decided to keep the functionality nonetheless.

The PrintOptionWindow class contains an inner class called Entry. The inner Entry class represents an entry corresponding to one user-input value and an input field.

Variables	Description
private static final long serialVersionUID	defined to be a long constant of 1L
private ArrayList<PrintOptionWindow.Entry> entries	A list of entries (of inner Entry class)
HashMap<String, String> settings	Key = name of entry, Value = the actual numerical value string the user inputs for an entry. eg. print_speed is an entry.
HashMap<String, JPanel> panels	Key = name of panels, Value = JPanel. Entries are categorized into different tabs or panels. Current implementation display 4 such tabs: Basic Settings, Cooking Settings, Size Setting, and Multimaterial Settings.
JButton generate	A button for Generating Gcode file. When the user clicks on this object, GcodeWriter will call various methods to write strings of Gcode commands to the final output file.
JButton load	A button used to load .food configuration file.
JTabbedPane tabbedPane	A tabbed panel. Similar to JPanel.
public int fileNumber	The current option number selected in Material Option Window. eg. fileNumber = 1 means the user has selected single material print.

Methods	Descriptions
public PrintOptionWindow(String title, int fileNumber)	Constructs a Print Option Window named *title* and set fileNumber to a corresponding option selected in MaterialOptionWindow(the first window user sees)
public void init(int fileNumber)	Depending on fileNumber—the option selected in MaterialOptionWindow—add various entries and buttons to be displayed. Some entries like "output_name"—which is the name of the output Gcode file is displayed for every option selected.
public void actionPerformed(ActionEvent e)	When the user clicks on the "generate" button: 1. GcodeWriter object is created. 2. initialize variables in gcodewriter with values from entries; call GcodeWriter.initFromGUI( ) 3. Setup the output Gcode file; call GcodeWriter.initFile() 4. Write strings of Gcode commands to the output Gcode file; call GcodeWriter.buildSolid( ) 5. close file and get path to the output Gcode file
public void saveConfig(HashMap<String, String> settings)	Save user-input configuration to .food file
public void loadConfig(File f)	Load configurations from a .food file f into GUI entries