GameFrame

Purpose: Initialize the game, holding and controlling the panels and menu bar. Also handles the sizing of the frame.

Inputs: No inputs. Accepts menu bar operations.

Outputs: What shows in frame.

Dependent: Creates

LevelSelectPanel and

GamePanel

J L GamePanel

Purpose: Holds the game grid, the powerup buttons, the powerup objects, and the game timer. Handles all timer functionality and letting the GameState know if powerups are activated. Loads from properties files the level specifications including number of mines, size of grid, and level high score.

Inputs: The level to launch, the properties filename associated with that, and the scoreLabel.

Outputs: Shows the Powerup buttons and timer.

Dependent: Called by
GameFrame. Calls Powerup,
GameState, and GridPanel. Calls

Powerup

Purpose: Sets up different powerups that can be used with specified price.

Inputs: The amount and name of Powerup

Outputs: The given name and price

of the Powerup.

Dependent: Called by GamePanel

LevelSelectPanel

Purpose: Display the different levels available to the user through GridUnits and handles user selections, sending the command to the frame to launch launch the gamePanel. Loads from properties file the furthest completed level of the user.

Inputs: Takes in GameFrame. Takes in mouse actions.

Outputs: The Level Select Panel, tells Frame when to launch GamePanel.

Dependent: Called by GameFrame and calls GridUnits. Calls function in Utility.

GridUnit

Purpose: Is one unit that can be empty, a mine, or a number of mines surrounding it. Contains the images it can look like and keeps track of the adjacent mines it has around it.

Inputs: None.

Outputs: The state of the GridUnit and it's adjacent

mine count.

Dependent: Created by GameState and LevelSelectPanel. Calls function in Utility.

GameState

Purpose: Creates the grid units and handles all Game Logic. Tells the user if the game is won or lost, saves the user progress and high scores to properties files, manipulate the score, can set or remove the mines, checks what happens when GridUnit is selected, sets the flags, processes the powerups, and sets the different images for the gridunits.

Inputs: The level, the time limit, the number of mines, the size of the level, the score bonus, and the score label.

Outputs: Saves the high scores. Tells when game is over, the score increases, how many flags are set, what the GridUnit should display, and if it is a valid GridUnit on the grid.

Dependent: Called by GamePanel. Calls GridUnits. Calls function in Utility.

SuperSweeper Design

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Purpose: Handles the grid, including its drawing and mouse interactions with it.

Make sure that mouse selections are valid for each part of the game.

GridPanel

Inputs: GameState and GamePanel in order to pass things back to them.

Outputs: Mouse actions of the user sent to the specified logic in GameState and GamePanel.

Dependent: Called by GamePanel.. Calls functions in GameState. Calls function in Utility.

Utility

Purpose: Validates the various properties files used by the GameState, LevelSelectPanel, and GamePanel. Also creates an infobox popup and resources for loading images from files. Also allows for flattening of GridUnits.

Inputs: Filename to verify, grid of GridUnits to flatten, and Properties files to validate.

Outputs: Gives a bufferedImage for image and an array of GridUnits for flattening.

Dependent: Can be called by anyone. Currently called by GamePanel, GameState, GridUnit, LevelSelectPane