New changes in milestone 3

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1.   More plants and zombies

New plants (Freezshooter and Walnut) and zombies (zombie runner and zombie cone) are introduced in the game. Players will encounter different types of zombies from now on. Implementation for new plants remains the same with tweaks to the plant attack logic to account for the new abilities. A few changes were made for adding new zombies. Initially, a list of zombies is used to add and keep track of the zombies. Now we decided to a list of EntityType (enum) is used instead. Therefore, types of zombie can be recognized by the corresponding defined enum.

2.   Undo/Redo

Undo and redo functions are now featured in the game. This is achieved by implementing two stacks in the model (Game Class) to keep track of every game state. When the player ends a turn, the game state will store to the stack before moving to the next game state.

3.   Test

More JUnit tests included in milestone3. Tests for negative cases/edge cases are added to ensure the model is well tested. Two new test classes, ViewTest and ControlTest, are also included to ensure view and control function properly. Hence, the MVC of the game is all been tested. The code has also refactored to reduce coupling.

4.   Addition Feature

A UI overhaul of the view was done and a Menubar was added to the game. Now users can restart, quit and use cheat codes from the menu bar or by pressing the hotkeys.

5.   What could be done better / future plans

In the future, we are planning to add save/load functions, additional cheat codes and grids in the game and a game level builder to enhance a better experience throughout the game. If time allows, we will try to create a real-time version of the game as well.