

Assignment 4 Report

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Code Smell #1: GamePanel was directly used in many other classes. Passing GamePanel as a parameter to many classes created high coupling.

Solution: We converted GamePanel into a singleton since we only use one instance of GamePanel. With all classes no longer reliant on passing GamePanel as a parameter, our code is now less coupled.

Commit: cafe77a2ba858786659695ad4ea4dfda7c90f2f5

Code Smell #2: The Entity class had a data clump with the hitbox. The hitbox was stored in the entity class but was a constant.

Solution: We moved this constant into the already existing config class. This improves the organization of our code as now all the necessary constant data is in one place.

Commit: 9abf3f1cd5c96a7c9f6a81223840636a57861a32

Code Smell #3: The Enemy class had a noticeable data clump with the enemy speed, damage, ability duration, and cooldown. These variables are all constants and as such are never changed. This also made the list of method parameters for the enemy constructor very long.

Solution: We moved these constants into the already existing config class. This improves the organization of our code as now all the necessary constant data is in one place. Furthermore, we could remove many method parameters from the enemy constructor.

Commit: 637926084a8aa2ab58f404050e3830d10ec0ccea

Code Smell #4: The Player class had a noticeable data clump with its initial values. These variables are constant and as such are never changed.

Solution: We moved this constant into the already existing config class. This improves the organization of our code as now all the necessary constant data is in one place. Furthermore, we could overload our player constructor to have no method parameters.

Commit: 637926084a8aa2ab58f404050e3830d10ec0ccea

Code Smell #5: The ItemManager class had a noticeable data clump with the maximum pizza frames. This variable is a constant and as such is never changed.

Solution: We moved this constant into the already existing config class. This improves the organization of our code as now all the necessary constant data is in one place.

Commit: 6f2d2f1fc7fc1aa4f7016dc9bda0b6f64f40860f