

1. Enemy.java, problem in commit 1113f32  
unnecessary parameters playerX, playerY, as they are each used only once after being retrieved.
  - Solved by replacing the variables, lines 79,80, with the retrieving function in commit e7e8cd8
2. Enemy.java, problem in commit 1113f32  
long method update(), where the section of deciding the moving direction can be extracted into a helper method
  - Extract lines 81,82,86-106, which were responsible for comparing the player position with the position of the self, to determine the direction, into a separate method moveToPlayer() in commit e7e8cd8
3. Enemy.java, problem in commit 1113f32  
long method move(), where the section of deciding whether or not the next position will be blocked can be extracted into a helper method
  - Lines 123-131, 137,138, are extracted into method checkMovable() in commit e7e8cd8
4. Enemy.java, problem in commit 1113f32  
move method, unnecessary parameter intX, intY, each used only once and can easily be replaced by a rounding retrieving function.
  - deleted lines 133,134, replacing the use of variables with integer retrieving function in commit e7e8cd8.
5. Enemy.java, Player.java, class, problem in commit e7e8cd8  
duplicate function and long function, where Player.java is essentially performing the same function as checkMovable() in Enemy.java
  - Moving the function into Movable.java(parent class of player and enemy) as a protected function, having player and enemy call on this function. Implemented in commit 7d4d454.
6. Player.java, problem in commit 7d4d454  
long function update(), the function responsible for detecting keystrokes and calculating the next position can be extracted
  - Extract lines 116 - 132, into separate function keyDetect, detecting the key pressed and returning the next position. Implemented in commit 97565ff.
7. Movable.java, problem in commit 7d4d454  
data clumps that better belong in their own data collection class
  - Implementing class directionImg.java holding four BufferedImage variables, one for each direction of a movable class. Commit 7d5851e
  - Extracted 4 BufferedImage variables from line 27, replacing it with an instance of directionImg. Commit 7d5851e

- Implementing the use of directionImg in place of the four separate BufferedImg variables in Player.java and Enemy.java. Commit 166b919
8. Player.java, Enemy.java, Movable.java, problem in commit 166b919, duplicate code found in the update method where the direction is set and the new position is calculated. Fusing the two lines into moveInDirection method in Movable, setting the direction, and returning the new position by passing in the direction.
- Replace statements between lines 89 to 101 of Enemy.java(excluding if statements) with calls to MoveInDirection. Commit 8591c9c
  - Replace statements between lines 185 to 200 of Player.java, reforming it with calls to MoveInDirection. Commit 8591c9c
9. Player.java, Enemy.java, Movable.java, problem in commit 6149bda, Confusing method naming with CheckMovable() in Movable.java, confusing as to whether it checks if a cell is movable(unblocked) or checks if something is an instance of movable
- Replace name checkMovable with checkUnblocked. Commit 784f11b