

Code Review

Ridham Sharma & Colton Blackwell

1. Duplicate Code

(Commit ID: b1f79b12ab23f49e8b4079f6ae847fd2982ebfd0)

- Streamlined CollisionHandler.java by replacing repetitive if/else statements with a dedicated function. This function assesses player-object collisions based on specified parameters.

```
240+ public void checkPlayerInteraction(int cellNum1,int cellNum2,int cx,int cy,int cx2,int cy2){
241+     if (entity.player == true) {
242+         if(cellNum1 == 3 || cellNum1 == 4 || cellNum1 == 5 || cellNum1 == 6) {
243+             checkInteraction(cellNum1, cy, cy);
244+             if(cellNum1 != 6){
245+                 entity.colliding = false;
246+             }
247+         } else if (cellNum2 == 3 || cellNum2 == 4 || cellNum2 == 5 || cellNum2 == 6) {
248+             checkInteraction(cellNum2, cx2, cy);
249+             if(cellNum2 != 6){
250+                 entity.colliding = false;
251+             }
252+         }
253+         if((cellNum1 == 6 && cellNum2 == 6) || (cellNum1 == 6 && cellNum2 == 0) || (cellNum1 == 0
254+             entity.colliding = false;
255+         }
256+     } else {
257+         // If the entity is not a player, check if the cell is a reward, penalty cell and let the
258+         if ((cellNum1 == 3 || cellNum1 == 4 || cellNum1 == 5 || cellNum2 == 3 || cellNum2 == 4 ||
259+             && (cellNum1 != 1 && cellNum2 != 1 && cellNum1 != 2 && cellNum2 != 2)) {
260+                 entity.colliding = false;
261+             }
262+         }
263+     }
264+ }
240 265
241 266
```

2. Bug Fix / Level Skipping Error

(Commit ID: 5f4c12d443eebe373ebdb23b8989274c47844f87)

- Identified a code issue allowing users to bypass levels by repeatedly pausing and starting a new game.
- Addressed by implementing a condition in nextLevel() to verify completion of the previous level before progressing. Additionally, adjusted the starting level from 0 to 1.

```
@@ -33,7 +33,7 @@
33 33 public Board gameBoard = new Board(this, level);
34 34 KeyHandler keyHandle = new KeyHandler(gameBoard, this);
35 35 public PopUp UI = new PopUp(this);
36 - public int levelN = 0;
36+ public int levelN = 1;
37
38 /**
39 39 * Constructor for the game.
@@ -218,15 +218,17 @@
218 218 this.pl.resetTime();
219 219 this.level = "/title.txt";
220 220 this.gameBoard.loadMap(level);
221 - this.levelN = 0;
221+ this.levelN = 1;
222 222 keyHandle.gameState = 2;
223 223 }
224
225 /**
226 226 * Starts the next level.
227 227 */
228 228 public void nextLevel(){
229+ if(keyHandle.gameState == 5){
229 - this.levelN++;
230+ this.levelN++;
231+ }
230 232 if(levelN == 4){
231 233 keyHandle.gameState = 6;
232 234 return;

```

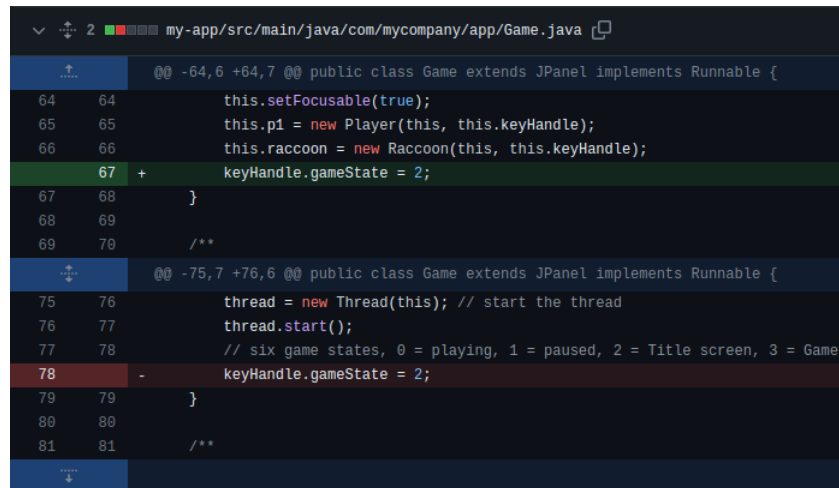
3. Poorly Structured Code

(Commit ID: 897efe07a7dd2d23109ca4877cdd33ef8e907c49)

- Transferred the assignment of 'gameState' to 2 within the Game constructor, insuring that the game initiates on the title screen upon invoking the Game class.

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```
my-app/src/main/java/com/mycompany/app/Game.java
@@ -64,6 +64,7 @@ public class Game extends JPanel implements Runnable {
64 64      this.setFocusable(true);
65 65      this.p1 = new Player(this, this.keyHandle);
66 66      this.raccoon = new Raccoon(this, this.keyHandle);
67 67      keyHandle.gameState = 2;
68 68  }
69 69  /**
@@ -75,7 +76,6 @@ public class Game extends JPanel implements Runnable {
75 76      thread = new Thread(this); // start the thread
76 77      thread.start();
77 78      // six game states, 0 = playing, 1 = paused, 2 = Title screen, 3 = Game
78 78      keyHandle.gameState = 2;
79 79  }
80 80
81 81  /**
```

4. Unused/outdated Comments

(Commit ID: 96ea7ed7813dc45e6993b23e41d8b72f8a157ba8)

- Removed numerous unnecessary comments that were affecting the code formatting, enhancing clarity for new readers.

5. Lack of documentation on Test Cases

(Commit ID: 2fe3944210975a3f426e445897ad8b12f308b66f)

- Added documentation for test cases to aid users in understanding the specific responsibilities for each test.

6. Redundant Code

(Commit ID: 503602c149c5b6e2450415c31ac8809f59ad5150)

- Regardless of the result, condition flow will set the game state to pause state.

(Commit ID: 6d423eb4ab85e2d7e7103011119313be2244c267)

- resetTime() function was not needed as the variable was public and accessible by other classes.

7. Confusing Variable Naming

(Commit ID: 5c1f224f55973f8630716efb19248e8c087c30e3)

- The designation "levelN" may cause confusion among new viewers, as it could be misconstrued as referring to the game state level.

8. Confusing Class Hierarchy

(Commit ID: 703e8c15ef014714ab81de6841a0c9a2cbe5a48c)

- Introduced a new directory named "raccoon" within the "enemies" folder. This modification aims to provide clarity regarding the specific type of enemies loaded as PNGs and allows for the potential inclusion of various enemy types in the future.

```
upImages.add(ImageIO.read(getClass().getResource("/enemies/up/" + i + ".png"))));
downImages.add(ImageIO.read(getClass().getResource("/enemies/down/" + i + ".png"))));
leftImages.add(ImageIO.read(getClass().getResource("/enemies/left/" + i + ".png"))));
rightImages.add(ImageIO.read(getClass().getResource("/enemies/right/" + i + ".png"))));
upImages.add(ImageIO.read(getClass().getResource("/enemies/raccoon/up/" + i + ".png"))));
downImages.add(ImageIO.read(getClass().getResource("/enemies/raccoon/down/" + i + ".png"))));
leftImages.add(ImageIO.read(getClass().getResource("/enemies/raccoon/left/" + i + ".png"))));
rightImages.add(ImageIO.read(getClass().getResource("/enemies/raccoon/right/" + i + ".png"))));
```