PongX

Team 12 - Design Inspection, Code Inspection and Unit Testing

Tomasz Parzadka, Michael Quade, Ashwin Prasad, Kyle Bentain, Nathanael Monaghan

Design Inspection Defects

Product	Game Launch Design Inspection		
Date	09/20/2017		
Author	Tomasz Parzadka		
Moderator	Ashwin Prasad		
Inspectors	Kyle Bentain, Ashwin Prasad, Michael Quade, Nathanael Monaghan		
Recorder	Tomasz Parzadka		
Defect #	**Description**	**Severity**	**How Corrected**
1	Game would not run	1	Had to create a new game and set the content pane.
2	"Two player" option was not available	1	Created a state to allow a new game which allowed two players to play.
3	Two frames open when game is launched	3	Removed additional new JFrame from constructor
4	Ball's previous location was not erased from board	3	Made one ball object made only when it's the first run of the game
5	Score's did not appear	1	Correctly placed the location of the score texts.

Product	Pause Screen Design Inspection
Date	09/20/2017

Author	Kyle Bentain
Moderator	Tomasz Parzadka
Inspectors	Tomasz Parzadka, Ashwin Prasad, Michael Quade, Nathanael Monaghan
Recorder	Kyle Bentain, Tomasz Parzadka

Defect #	Description	Severity	How Corrected
1	'Go to Menu' button didn't perform its function	2	Created functionality to return game to the menu.
2	Resume button didn't perform its function	2	Added functionality that pauses game when KeyListener detects 'P'.
3	Pressing 'P' key did not open the pause screen	2	Added a keyboard listener to ensure that pause screen opens when 'P' key pressed.
4	Paddle was still visible when paused	3	Created a new frame for when game is in pause state.

Product	Power-Up Design Inspection
Date	09/20/2017
Author	Tomasz Parzadka
Moderator	Ashwin Prasad
Inspectors	Tomasz Parzadka, Ashwin Prasad, Michael Quade, Nathanael Monaghan
Recorder	Tomasz Parzadka

Defect #	Description	Severity	How Corrected
1	Power-ups would not spawn	1	Updated the power ups spawn in the Game class.
2	Power-ups spawned too frequently	2	Reduced the spawn rate.
3	Too many power-ups	2	Only allowed a maximum of 2

	could be used at once		powers per paddle to be collected.

Code Inspection Defects

Product	Single Player Game Inspection
Date	09/20/2017
Author	Ashwin Prasad
Moderator	Nathanael Monaghan
Inspectors	Kyle Bentain, Tomasz Parzadka, Michael Quade, Nathanael Monaghan
Recorder	Ashwin Prasad

Defect #	Description	Severity	How Corrected
2	Ball left a trail of the path it took	2	Initialized the board under an if statement and boolean (firstRun), so multiple unnecessary balls weren't created
3	Ball didn't bounce off right side of wall	2	Changed if (balls.get(i).getBallX() < 0 || balls.get(i).getBallX() > width - balls.get(i).getBallX()) to if (balls.get(i).getBallX() < 0 || balls.get(i).getBallX() > width - balls.get(i).getBallSize())
4	Score wasn't properly updated after first run	2	Added String ScoreB and ScoreT and drew them when the game wasn't on its firstRun (else statement under if STATE = State.GAME)
5	Power ups stack up too much	3	**TODO:** Make a set number of power ups being able to effect the user

Product	Paddle Code Inspection
Date	9/20/2017

Author	Ashwin Prasad		
Moderator	Tomasz Parzadka		
Inspectors	Kyle Bentain, Tomasz Parzadka, Michael Quade, Nathanael Monaghan		
Recorder	Ashwin Prasad		
Defect #	Description	Severity	How Corrected
1	Paddles were not moving properly	1	Initialized the board under an if statement and boolean (firstRun), so multiple unnecessary paddles weren't created
2	Paddle didn't hit left wall/went past right wall	2	Changed if (padX >= (0+this.padWidth/2) && padX <= (640-this.padWidth/2)) this.padX = padX; To if (padX >= (0) && padX <= (640-this.padWidth)) this.padX = padX; to comply with how java coordinates work (origin in top left corner)
3	Paddle does not always work	1	We need to figure out why it works on some systems or instances and not others.
4	Balls went through paddle even though there was an apparent collision	1	Changed X and Y coordinate checks for the paddles (balls.get(i).getBallY() + balls.get(i).getBallSize()) and (balls.get(i).getBallX() + balls.get(i).getBallSize())
5	Balls rolled on the paddle when making a collision with the paddle	1	Added check for the ball's Y velocity in y coordinate check for collision (balls.get(i).getBallSpeedY())
6	Paddles reset when the ball scored	3	Removed all the paddles except the first paddle for the top and bottom paddles in their corresponding arraylist

			(Top - for (int i = 1 ; i < topPaddles.size(); i++) {
			  topPaddles.remove(i);
			})

Product	Power-up Code Inspection		
Date	9/22/2017		
Author	Ashwin Prasad		
Moderator	Nathanael Monaghan		
Inspectors	Kyle Bentain, Tomasz Parzadka, Michael Quade, Nathanael Monaghan		
Recorder	Ashwin Prasad		
Defect #	**Description**	**Severity**	**How Corrected**
1	Power-ups spawned too frequently	3	Used r.nextInt() to create a number from 0 to 999 and if it equals 50 then create a new random powerup
2	Power-ups are too large	1	Changed int upgSize from 20 to 10
3	Power-ups were too fast	2	Changed upgSpeedY and upgX to doubles and changed the value of upgSpeedY from 2 to 1.5

Product	AI Code Inspection
Date	9/22/2017
Author	Tomasz Parzadka
Moderator	Nathanael Monaghan
Inspectors	Kyle Bentain, Tomasz Parzadka, Michael Quade, Nathanael Monaghan
Recorder	Tomasz Parzadka

Defect #	Description	Severity	How Corrected
1	AI paddle would not move correctly	1	Changed pad.setSpeed(pad.getSpeed() * -1); To g.moveTop(pad.getSpeed() * -1);
2	Had to access the correct paddle to set AI to	2	We needed to set the top paddle so we used Paddles pad =paddles.get(0); To find the top paddle that the AI needed

Unit Testing Defects

Product	Game Launch Unit Testing		
Date	09/21/2017		
Author	Tomasz Parzadka		
Moderator	Kyle Bentain		
Inspectors	Kyle Bentain, Ashwin Prasad, Michael Quade, Nathanael Monaghan		
Recorder	Tomasz Parzadka, Michael Quade		
Defect #	Description	Severity	How Corrected
1	"Single player" button did not launch game vs AI	1	Added functionality to the single player button that started up our Game class against an AI.
2	"Two player" button did not start any game	1	Added functionality to the two player button that started up a two player game allowing multiple keys to be pressed.
3	"High score" button does not appear in menu	3	Added High score button to Menu class. Created a rectangle and drew the string.
4	"Tutorial" button does not display tutorial	2	Added functionality to the tutorial that explains how-to-play.
5	No way to return from "Tutorial" to "Main	1	Created a new "Back" button to send users to main menu.

	Menu"		
6	"Quit" button does not exit the game	2	Added functionality to our JFrame to allow users to exit.

Product	Paddle and Ball Movement Unit Testing		
Date	09/21/2017		
Author	Tomasz Parzadka		
Moderator	Ashwin Prasad		
Inspectors	Kyle Bentain, Ashwin Prasad, Michael Quade, Nathanael Monaghan		
Recorder	Tomasz Parzadka		
Defect #	**Description**	**Severity**	**How Corrected**
1	Failure to move paddle left and right using arrow keys	1	Added KeyEvent and ActionEvent to support arrow key functionality.
2	Failure to move paddle left and right using 'A' and 'D'	1	Added KeyEvent and ActionEvent to support 'A' and 'D' key functionality.
3	After moving paddles, game doesn't remove old paddles location	2	Made object only when it's the first run of the game.
4	After ball moves, old location is not erased	2	Made one ball object made only when it's the first run of the game.
5	Ball does not properly collide with walls	1	Tracked the ball's location and calculated when it would hit the wall to change its velocity.
6	Ball does not properly collide with paddle	1	Tracked the ball and paddles to calculate when it would hit a paddle and change its velocity.

Product	Easy AI Unit Testing

Date	9/22/2017
Author	Nathanael Monagan
Moderator	Tomasz Parzadka
Inspectors	Kyle Bentain, Ashwin Prasad, Michael Quade, Tomasz Parzadka
Recorder	Nathanael Monaghan

Defect #	Description	Severity	How Corrected
1	Failure to recognize starting ball	1	Initialized the first ball
2	The AI was unresponsive when game first started	1	Correctly initialized the AI in the Game class
3	The AI would go to the opposite direction from the ball	1	Would not multiple the paddle setter by -1 and vice versa
4	The ball would go through the AI's paddle	1	Corrected the mathematical formula to find if the ball has hit the paddle in the Game class
5	Would occasionally change User's paddle direction when the AI was active	2	Instead of changing the paddle's speed, we changed the paddle's location