Test Case Number OR Id: Test One

Author: Nicole Witter

Related Requirement: game package and movable package

Test Description: Make sure the spaceship is displayed on screen, moves, and shots are displayed when called.

Test Procedure:

* Run these classes.
* Press the keys (arrows up, left, and right) corresponding with movement.
* Press the key (spacebar) corresponding to shooting.
  + See if shots follow correct physics and wrap the screen correctly.
  + Check if shots are generated from correct location.
  + Make sure shots disappear after allotted time.
* Move around the screen while shooting to see if shots follow physics while moving.

Expected Result: The spaceship will move when the correct keys are pressed, and it will shoot when shot is called.

Test Results:

* When up arrow is pressed, spaceship moves forward.
* When left arrow is pressed, spaceshipmoves left.
* When right arrow is pressed, spaceship moves right.
* When spacebar is pressed, spaceship shoots.
  + Shot follows correct physics, wraps, and disappears.
  + Shot continues to work correctly while ship is in motion.
* Test passed.

The same test procedure was followed for Multi-Player with the same results.

Test Case Number OR Id: Test Two

Author: Nicole Witter

Related Requirement: movable package

Test Description: Make sure collisions between spaceship, shots, and asteroids are working.

Test Procedure:

* Run these classes.
* Press the keys (arrows up, left, and right) corresponding with movement.
  + When spaceship collides with asteroid, the explosion displays and a life is lost.
* Press the key (spacebar) corresponding to shooting.
  + Make sure when a shot hits an asteroid, the asteroid either splits or disappears (depending on which type it is).
  + If a shot hits a UFO, the UFO should disappear.
* When hit by a UFO shot, the explosion displays and a life is lost.

Expected Result: The spaceship will explode upon collision with an asteroid or UFO shot and a life will be lost. The asteroid will disappear or split upon collision with a spaceship shot. The UFO will disappear upon collision with a spaceship shot. Asteroids and UFOs will not collide.

Test Results:

* The spaceship explodes upon impact with asteroid and UFO shot, losing a life.
  + This is repeated 3 times and Game Over is displayed.
* The UFO explodes when shot by spaceship.
* The asteroid disappears or splits when hit by a shot.
* The UFO and asteroids do not collide.
* Test passed.

The same test was implemented for Multi-Player and was successful.

Test Case Number OR Id: Test Three

Author: Nicole Witter

Related Requirement: movable package

Test Description: Make sure collisions between spaceship, shots, and asteroids are working for multi-player mode.

Test Procedure:

* Run these classes.
* Press the keys (arrows up, left, and right, W, A, D) corresponding with movement.
  + When either spaceship collides with asteroid, the explosion displays and a life is lost.
* Press the key (spacebar, shift) corresponding to shooting.
  + Make sure when a shot from either spaceship hits an asteroid, the asteroid either splits or disappears (depending on which type it is).
  + If either spaceship shot hits a UFO, the UFO should disappear.
* When hit by a UFO shot, the explosion displays and a life is lost.

Expected Result: The spaceships will explode upon collision with an asteroid or UFO shot and a life will be lost. The asteroid will disappear or split upon collision with a spaceship shot. The UFO will disappear upon collision with a spaceship shot. Asteroids and UFOs will not collide.

Test Results:

* The spaceships explode upon impact with asteroid and UFO shot, losing a life.
  + This is repeated 3 times and Game Over is displayed.
* The UFO explodes when shot by a spaceship.
* The asteroid disappears or splits when hit by a shot.
* The UFO and asteroids do not collide.
* Test passed.

Test Case Number OR Id: Test Five

Author: Nicole Witter

Related Requirement: game package and movable package

Test Description: Make sure all bonus features work.

Test Procedure:

* Run these classes.
* Press the keys (arrows up, left, and right) corresponding with movement.
  + If there is life left in the shield meter, no collision should occur.
* When a bonus drop is displayed on screen, a noise should be made.
  + When the spaceship moves over the image, the image disappears, a noise is made, and the feature is added.

Expected Result: The shield will protect the spaceship as long as it is valid. The drops will add to the potency of the spaceship.

Test Results:

* The keys (arrows up, left, and right) correspond with movement.
  + There is life left in the shield meter, no collision occurs.
* When a bonus drop is displayed on screen, a noise is be made.
  + When the spaceship moves over the image, the image disappears, a noise is made, and the feature is added.
* Test passed.

Unit Testing Include Statistical Testing if applicable

***Test Case: UFO’s***

Test Case Number OR Id: UFO’s Test

Author: Nicolas Guzman

Related Requirement: movable and game packages.

Test Description: Make sure that UFO’ move and wrap around the screen

Test Procedure:

* Start the game.
* Click on single player.
* Pay attention to the behaviour of UFO’s.
* Check is UFO’s are rotating at the same time that they move around the screen.
* Check if UFO’s wrap around the screen when they reach the bounds of the game screen.

Repeat the same procedure in multiplayer.

Expected Result: the UFO’s will move and turn when they move.

***UFO’s Test Results:***

The UFO’s move and turn at the same time

The UFO’s wrap around the screen

The same results were observed in multiplayer

**Test Passed**

Unit Testing Include Statistical Testing if applicable

***Test Case: Game interface***

Test Case Number OR Id: Asteroids Test

Author: Nicolas Guzman

Related Requirement: movable and game packages.

Test Description: Make sure that Asteroids move and wrap around the screen

Test Procedure:

* Start the game.
* Check if the buttons of the main interface are displayed in the following order: Single player, Multiplayer and Help.
* Click on Single player.
* Move the space ship.
* Press “Esc” key.
* Check is pause menu displays.
* Check if the buttons of the pause menu are displayed in the following order: Resume, Quit.
* Press Resume and check if the game start from where it was left before pressing “Esc”.
* Press “Esc” again
* Press quit
* Check if the game returns to the main menu.
* Repeat the same steps in Multiplayer.
* Press Help button.
* Check is help screen displays.
* Press Back button.
* Check if the game returns to the main menu.

Repeat the same procedure in multiplayer.

Expected Result: the asteroids will move and turn when they move.

***Asteroids Test Results:***

The asteroids move and turn at the same time

The asteroids wrap around the screen

The same results were observed in multiplayer

**Test Passed**

Unit Testing Include Statistical Testing if applicable

***Test Case: Interface***

Test Case Number OR Id: UFO’s Test

Author: Nicolas Guzman

Related Requirement: movable and game packages.

Test Description: Make sure that UFO’ move and wrap around the screen

Test Procedure:

* Start the game.
* Click on single player.
* Move the spaceship around the screen
* Press “esc”.
* Press “Resume”.
* Check if the game resumes where it was before pressing “esc”
* Press “esc” again.
* Press “Quit”
* Check if the game returns to the main menu
* Redo the same steps in Multiplayer
* Press on Mouse Aiming button and turn it on.
* Press “Single Player”
* Check if Mouse aiming is activated
* Quite the game and go back to the main menu
* Press “Help” button.
* Check if the game displays the instructions screen.
* Press “Back” button.
* Check if the game return to the main screen. Repeat the same procedure in multiplayer.

Expected Result: The tester will be able to navigate through all the main interfaces of the game.

***Interface Test Results:***

The game changes between all the interfaces without any problem

It takes some time to reset the game after pressing Quit.

**Test Passed**