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.
    o When either spaceship collides with asteroid, the explosion displays and a life is lost.
- Press the key (spacebar, shift) corresponding to shooting.
    o Make sure when a shot from either spaceship hits an asteroid, the asteroid either splits or disappears (depending on which type it is).
    o 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.
    o 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