Team Placeholder -

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Test Cases

Lines 1 – 9 (Iasare Imangaliyeva)

***Solution: a game where the player shoots a missile at ships passing across the screen (like the one I showed you using raptor).***

***The solution must support missiles launched by the user***

***The solution must initiate a missile launch when the user clicks the right mouse button.***

***The solution must initiate a missile launch when the user clicks the space bar.***

* Launch a missile by pressing the right mouse button
* Launch a missile by pressing the space bar

***The solution must limit the number of active missiles on the screen to no more than five (5) at any given time. (an “active missile” is any missile currently being displayed on the screen)***

* Launch 6 missiles
* Verify if it works

***The solution must remove the missile from being active if it goes off the screen.***

* Launch 1 missile
* Verify if it is removed from being active when it goes off the screen
* Launch multiple missiles
* Verify if all missiles are removed from being active when they go off the screen

***The solution must maintain the same constant speed for all missiles***

* Launch 2 missiles and verify if they have the same speed
* Launch missiles in spam speed and verify if they have the same speed
* Launch missiles in a lower speed and verify if they have the same speed

***The solution must maintain the same constant direction for all missiles to be vertically straight up from the launched position.***

***The solution must launch missiles from the center of the bottom of the screen when a launch is initiated***

* Launch multiple missiles
* Verify if launch missiles from the center of the bottom of the screen
* Verify if all missiles maintain the same constant direction
* Verify if all missiles go vertically straight up from the launched position

Lines 11-14 (Tanner Collins)

* Start game and use either right mouse button or space bar to launch missile.
  + **Requirement – The solution must detect when a missile “hits” a ship + The solution must display an explosion at the point where a missile “hits” a ship.**
    - See if ship detects the hit by displaying an explosion where the hit landed.
    - Launch missile close to ship and see if ship detects hit or recognizes it as a miss.
    - Launch two missiles simultaneously and see if ship detects 2 hits and displays 2 explosions, or if it is recognized as just 1.
  + **Requirement – The solution must remove the missile and ship after the missile “hits” the ship.**
    - Verify if missile and ship then disappear after explosion.
  + **Requirement – The solution must keep a count of all “hits”.**
    - Counter on screen should keep track of number of hits
      * **Requirement – The solution must end the game when the “hit” count has reached ten**
        + once hit count equals 10, game should end

Lines 16 – 22 (Stephen Maurer)

17# With an empty screen verify a Ship spawns in the spawn window.

19# + 26# Spawn one of every ship type and verify visuals and speed match the correct type.

20# Tie the ships spawn window to a second and run 100 tests over 10 seconds periods verifying an average of 3 ships spawn, use a ships type counter and verify that each ship type gets a mostly equal number of spawns.

22# Try to spawn 11 ships at once and verify it only allows 10 on screen.

Lines 23 – 28 (Dylan Shaffer)

1. The solution must randomly choose a location to launch a ship from when initiated
2. Whenever a ship is initiated, it launches from a random location on the map.
3. The system must randomly choose to launch the ship from the left side of the screen or the right side of the screen
4. When the ship launches, it comes from either the left or right side of the screen.
5. The system must randomly choose a row in the top two-thirds of the screen to launch the ship from
6. When the game starts, the ship launches on a row on the top two-thirds of the screen to a random location.
7. The system must assign the speed of the ship based on the type of the ship being initiated
8. Every different ship type that is launched has a different speed, but ships of the same type move at the same set speed.
9. The system must assign the direction of the ship based on which side of the screen it is being launched from (if from the left, direction goes left to right; if from the right, direction goes right to left)
   1. If coming from the left side of the screen, ensure the ships move left to right.
   2. If coming from the right side of the screen, ensure the ships move right to left.
10. The solution must remove the ship from being active if it goes off the screen.
    1. When a ship goes off the screen, it is no longer active.

Lines 30 – 33 (Jackson Coffey)

* The solution must end the game when the user clicks the left mouse button

1. Start Game
2. Click the Left mouse button
3. Did the game end?

* The solution must end the game when the user clicks the ESC button

1. Start game
2. Click the ESC button
3. Did the game end?

* The solution must end the game if the user has not initiated a missile launch in the last 5 minutes.

1. Start game
2. Wait 5 minutes without initiating a missile launch
3. Did the game end?