Software Engineer – In-class Activity – Test Cases

Battleship Test Cases

- Pre-Condition
- Action
- Post-Condition

Test Cases:

1. Start program
   a) Pre-Condition – Has a start button and there is a program
   b) Action – Start the program
   c) Post-Condition – It starts
2. Missiles
   a) Missile Shoot (1a) - Click
      i. Pre-Condition - Program is running
      ii. Action – Click right mouse button
      iii. Post-Condition – Missile shoots
   b) Missile Shoot (1b) – Press Space
      i. Pre-Condition – Program is running
      ii. Action – Press space
      iii. Post-Condition - Missile shoots
   c) Missile Cap (1c) – Stops missiles after 5 are currently present – Unhappy :(
      i. Pre-Condition – Program is running
      ii. Action – Shoot 6 missiles
      iii. Post-Condition – Does not shoot 6th missile
   d) Missile Deletion (1d) – Delete missile after goes off screen
      i. Pre-Condition – Program is running, Missile shot
      ii. Action – Missile going off screen
      iii. Post-Condition – Missile Count goes down one
   e) Missile speed (1e) – Missiles stay the same speed
      i. Pre-Condition – Program is running, Missile shot
      ii. Action – Missile moves
      iii. Post-Condition – Speed is constant
   f) Missile speed (1f) – Missiles Initiate from the bottom middle of screen
      i. Pre-Condition – Program is running
      ii. Action – Missile is shot
      iii. Post-Condition – Appears from bottom center
   g) Missile Stability (1g) – Missiles move strait
      i. Pre-Condition – Program is running, Missile shot

ii. Action – Missile moves

iii. Post-Condition – Missile's x coordinate does not shift

h) Missile and Ship hit (1h) – Missile hits ship

 i. Pre-Condition – Program is running, Missile shot

 ii. Action – Missile hits ship

 iii. Post-Condition – Program detects the intersection of the Ship and the missile

i) Missile Explosion (1i) – Missile hits ship + Explosion

 i. Pre-Condition – Program is running, Missile shot

 ii. Action – Missile hits ship

 iii. Post-Condition – Program display an explosion

j) Missile and Ship deletion (1j) – Missile hits ship + Deletion

 i. Pre-Condition – Program is running, Missile shot

 ii. Action – Missile hits ship

 iii. Post-Condition – Program removes missile and ship images ***as well as deleting the explosion

k) Counter (1k) – Hit counter

 i. Pre-Condition – Missile Hits ship

 ii. Action – Hit has been detected

 iii. Post-Condition – Hit counter iterates positively by an atomic value

3. Ships

a) Ship Launch (2a) – Launches ships

 i. Pre-Condition – Program is running

 ii. Action – No shippies :(

 iii. Post-Condition – Launches a ship

 iv.

b) Ship Support (2b) – Supports multiple ships

 i. Pre-Condition – Program is running

 ii. Action – Ship is spawned

 iii. Post-Condition – Can be a differing ship

c) Ship Image (2c) – Displays ship's correct image
   i. Pre-Condition – Program is running
   ii. Action – Spawns ship
   iii. Post-Condition – Ship's linked Image is displayed
d) Ship generation (2d) – Spawn Rate 30% default to config value
   i. Pre-Condition – Program is running, config value is 10
   ii. Action – Ships Spawned
   iii. Post-Condition – Amount of Ships on screen is 3
e)