Test Case Number	Corresponding Requirement	Requirement Description	Precondition (Where)	Action (When)	Postcondition (Then)
1	1.a	The solution must initiate a missile launch when the user clicks the right mouse button.	The game is running The active missile count is less than 5	The player presses the right mouse button	A missile is launched from the center of the bottom of the screen
2	1.b	The solution must initiate a missile launch when the user clicks the space bar.	The game is running The active missile count is less than 5	The player presses the space bar	A missile is launched from the center of the bottom of the screen
3	1.c	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)	The game is running The active missile count is equal to 5	The player presses the right mouse button	No missile is launched
4	1.c	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)	The game is running The active missile count is equal to 5	The player presses the space bar	No missile is launched
5	1.d	The solution must remove the missile from being active if it goes off the screen.	The game is running The active missile count is at least 1	The missile goes off the screen	The active missile count is decreased by 1

6	1.e	The solution must maintain the same constant speed for all missiles	The game is running The active missile count is at least 2	Observe the missile speed	Delta y between missiles remains constant
7	1.f	The solution must launch missiles from the center of the bottom of the screen when a launch is initiated	The game is running A missile is instantiated	Observe instantiated location	Location of missile instantiation is at the center of the bottom of the screen
8	1.g	The solution must maintain the same constant direction for all missiles to be vertically straight up from the launched position.	The game is running The active missile count is at least 1	Observe missile direction	Delta x of missile remains constant while Delta y moves only in a positive direction
9	1.h	The solution must detect when a missile “hits” a ship	The game is running The active missile count is at least 1 The active ship count is at least 1	Missile Delta x and Delta y overlaps with ship Delta x and Delta y	A hit is detected and the hit count is increased by 1
10	1.i	The solution must display an explosion at the point where a missile “hits” a ship	The game is running The active missile count is at least 1 The active ship count is at least 1	A hit is detected	An explosion effect is instantiated at the hit location
11	1.j	The solution must remove the missile and ship after the missile “hits” the ship	The game is running The active missile count is at least 1 The active ship count is at least 1	A hit is detected	The missile is removed and the ship is removed
12	1.k	The solution must keep a	The game is running	A hit is detected	Hit count is increased by 1

		count of all "hits"	The active missile count is at least 1 The active ship count is at least 1		
13	2.a	The solution must initiate a ship launch when the system detects there are no active ships.	The game is running	Active ship count is 0	A ship is instantiated
14	2.b	The solution must support multiple types of ships based on a configurable value.	The game is running A configurable value is set	A ship is instantiated	The instantiated ship should be that of the corresponding value
15	2.c	The solution must display the appropriate image based on the type of ship when the ship is active	The game is running A ship type has been set	A ship is instantiated	The ship image should correspond to the ship type
16	2.d.i	The solution must randomly choose from available ship types when a launch is initiated, giving all types equal chance of being launched. (What is determined interval of time between instantiations? I'm not sure how I would verify its adherence without that value)	The game is running A list of ship types is given The launch rate configuration is set to the default value of 30% Ship count is less than 10	A ship is instantiated	The ship type should be chosen using a true random method and the amount of instantiations correlates to roughly: NumberOfPotentialShips * (default value / 100)
17	2.d.ii	The solution must limit the	The game is running	The active ship count	No new ships will be instantiated

		number of active ships on the screen to no more than ten (10) at any given time. (an “active ship ” is any ship currently being displayed on the screen)		is equal to 10	
18	2.d.iii.1	The system must randomly choose to launch the ship from the left side of the screen or the right side of the screen	The game is running	A ship is instantiated	The instantiation location will randomly be at the lower bound of the x range or the upper bound of the x range
19	2.d.iii.2	The system must randomly choose a row in the top two-thirds of the screen to launch the ship from	The game is running Rows are sectioned and identified	A ship is instantiated	The instantiation location is randomly assigned to a row and the y position of the ship is set to that row
20	2.d.iii.3	The system must assign the speed of the ship based on the type of the ship being initiated	The game is running There is at least 2 of the same ship type moving in the same direction	The ships move	The Delta x of the ships remain constant
21	2.d.iii.4	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)	The game is running A ship is instantiated at the lower bound of the x range	The ship moves	The position moves towards the upper bound of the x range

22	2.d.iii.4	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)	The game is running A ship is instantiated at the upper bound of the x range	The ship moves	The position moves towards the lower bound of the x range
23	2.e	The solution must remove the ship from being active if it goes off the screen.	The game is running The active ship count is at least 1	A ship moves off the screen	The active ship count decreases by 1
24	3	The solution must end the game when the “hit” count has reached ten (10)	The game is running	The hit count is less than 10	The game continues running
25	3	The solution must end the game when the “hit” count has reached ten (10)	The game is running	The hit count is equal to 10	The game ends
26	4	The solution must end the game when the user clicks the left mouse button	The game is running	The player presses the left mouse button	The game ends
27	5	The solution must end the game when the user clicks the esc button	The game is running	The player presses the esc button	The game ends
28	6	The solution must end the game if the user has not initiated a missile launch in the last 5 minutes.	The game is running	The player has not launched a missile in 5 minutes	The game ends