

# Surface-To-Air Saviors: Tower Defense Requirements and Test Document

Milan Haruyama

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Embry-Riddle Aeronautical University

Daytona Beach campus

1 Aerospace Boulevard

Daytona Beach, FL 32114

## **INTRODUCTION:**

This document provides requirement and test cases for the game “Surface-To-Air Saviors: Tower Defense”. Refer to the Software Design Document for a description of the game.

## **BACKGROUND INFORMATION:**

Refer to the Software Design Document for all of the terms used in this program.

## **REQUIREMENTS:**

This section contains requirements for Surface-To-Air Saviors: Tower Defense. Each requirement defines one piece of functionality the program is required to have. All requirements are tested in the test cases section.

R1: The leftmost Missile Silo shall shoot a P-Missile when the Player presses the “1” key during the game. This requirement is associated with User Story 11.

R2: The middlemost Missile Silo shall shoot a P-Missile when the Player presses the “2” key during the game. This requirement is associated with User Story 12.

R3: The rightmost Missile Silo shall shoot a P-Missile when the Player presses the “3” key during the game. This requirement is associated with User Story 13.

R4: The leftmost Missile Silo shall shoot a P-Missile aimed towards the Player’s crosshair. This requirement is associated with User Story 14.

R5: The middlemost Missile Silo shall shoot a P-Missile aimed towards the Player’s crosshair.

This requirement is associated with User Story 14.

R6: The rightmost Missile Silo shall shoot a P-Missile aimed towards the Player’s crosshair.

This requirement is associated with User Story 14.

R7: P-Missiles shall travel at a speed of 2400 pixels per second.

This requirement is associated with User Story 19.

**TEST CASES:**

<b>Req't ID</b>	<b>Test Case ID</b>	<b>Initial Conditions And Input</b>	<b>Expected Behavior Or Output</b>	<b>Actual Behavior Or Output</b>	<b>Pass Fail</b>
1	1a	User presses the "1" key during the game.	The leftmost Missile Silo shall shoot a P-Missile.	The leftmost Missile Silo shall shoot a P-Missile.	
	1b	User presses the "H" key during the game.	Nothing happens.	Nothing happens.	
	1b	User presses the "D" key during the game.	Nothing happens.	Nothing happens.	
2	2a	User presses the "2" key during the game.	The middlemost Missile Silo shall shoot a P-Missile.	The middlemost Missile Silo shall shoot a P-Missile.	
	2b	User presses the "H" key during the game.	Nothing happens.	Nothing happens.	
	2c	User presses the "D" key during the game.	Nothing happens.	Nothing happens.	
3	3a	User presses the "3" key during the game.	The rightmost Missile Silo shall shoot a P-Missile.	The rightmost Missile Silo shall shoot a P-Missile.	
	3b	User presses the "H" key during the game.	Nothing happens.	Nothing happens.	
	3c	User presses the "D" key during the game.	Nothing happens.	Nothing happens.	

4	4a	User places their crosshair at X = 0, Y = 150.	The leftmost Missile Silo shall shoot a P-Missile aimed towards the crosshair at (X = 0, Y = 150).	The leftmost Missile Silo shall shoot a P-Missile aimed towards the crosshair at (X = 0, Y = 150).	
	4b	User places their crosshair at X = 75, Y = 150.	The leftmost Missile Silo shall shoot a P-Missile aimed towards the crosshair at (X = 75, Y = 150).	The leftmost Missile Silo shall shoot a P-Missile aimed towards the crosshair at (X = 75, Y = 150).	
	4c	User places their crosshair at X = 150, Y = 150.	The leftmost Missile Silo shall shoot a P-Missile aimed towards the crosshair at (X = 150, Y = 150).	The leftmost Missile Silo shall shoot a P-Missile aimed towards the crosshair at (X = 150, Y = 150).	
5	5a	User places their crosshair at X = 0, Y = 150.	The middlemost Missile Silo shall shoot a P-Missile aimed towards the crosshair at (X = 0, Y = 150).	The middlemost Missile Silo shall shoot a P-Missile aimed towards the crosshair at (X = 0, Y = 150).	
	5b	User places their crosshair at X = 75, Y = 150.	The middlemost Missile Silo shall shoot a P-Missile aimed towards the crosshair at (X = 75, Y = 150).	The middlemost Missile Silo shall shoot a P-Missile aimed towards the crosshair at (X = 75, Y = 150).	
	5c	User places their crosshair at X = 150, Y = 150.	The middlemost Missile Silo shall shoot a P-Missile aimed towards the crosshair at (X = 150, Y = 150).	The middlemost Missile Silo shall shoot a P-Missile aimed towards the crosshair at (X = 150, Y = 150).	

6	6a	User places their crosshair at X = 0, Y = 150.	The rightmost Missile Silo shall shoot a P-Missile aimed towards the crosshair at (X = 0, Y = 150).	The rightmost Missile Silo shall shoot a P-Missile aimed towards the crosshair at (X = 0, Y = 150).	
	6b	User places their crosshair at X = 75, Y = 150.	The rightmost Missile Silo shall shoot a P-Missile aimed towards the crosshair at (X = 75, Y = 150).	The rightmost Missile Silo shall shoot a P-Missile aimed towards the crosshair at (X = 75, Y = 150).	
	6c	User places their crosshair at X = 150, Y = 150.	The rightmost Missile Silo shall shoot a P-Missile aimed towards the crosshair at (X = 150, Y = 150).	The rightmost Missile Silo shall shoot a P-Missile aimed towards the crosshair at (X = 150, Y = 150).	
7	7a	P-Missile is at X = 150, Y = 150, travelling at a 90-degree angle.	P-Missiles shall move to Y = 600 in a quarter of a second.	P-Missiles shall move to Y = 600 in a quarter of a second.	
	7b	P-Missile is at X = 300, Y = 150, travelling upward at a 90-degree angle.	P-Missiles shall move to Y = 600 in a quarter of a second.	P-Missiles shall move to Y = 600 in a quarter of a second.	
	7c	P-Missile is at X = 450, Y = 150, travelling at upward at a 90-degree angle.	P-Missiles shall move to Y = 600 in a quarter of a second.	P-Missiles shall move to Y = 600 in a quarter of a second.	

#### REFERENCES:

#### APPENDICES: