Internal Mid Project Testing

ID	Item	Test Input	Expected Result	Actual Result	Pass/Fail	Solution
A.1	Main Menu	Clicking "Start Game"	The "Main" scene is loaded, game begins	The "Main" scene is loaded, game begins		
A.2	Main Menu	Clicking "Encyclopaedia"	"Encyclopaedia" scene is instanced	Nothing - not implemented		
A.3	Main Menu	Clicking "Exit"	Program closes	Program closes		
A.4	Pause Menu	Pressing the Escape key	"Menu" scene is loaded, game is paused	"Menu" scene is loaded, game is paused		
A.5	Pause Menu	Clicking "Resume"	Game is unpaused, menu disappears	Game is unpaused, menu disappears		
A.6	Pause Menu	Clicking "Encyclopaedia"	"Encyclopaedia" scene is instanced	Nothing - not implemented		
A.7	Pause Menu	Clicking "Exit"	Program closes	Program closes		
A.8	Gameplay	Doing nothing	Lander will hit the ground and "Destroyed" menu will be displayed. Lander acceleration will slow down – drag	Lander hits ground "Sucessful landing" is instanced - heatshield is causing this (most likely), and also during descent lander rotates as if left key pressed	*Unexpected behaviour	
A.9	Gameplay	Pressing the X key	Heatshield will be ejected	Heatshield is ejected - falls faster than lander		
A.10	Gameplay	Pressing Spacebar	Parachute will be deployed	Parachute is deployed		
A.11	Gameplay	Parachute is deployed	Parachute slows the lander	Parachute slows the lander - not dramatically, by touchdown the lander is going only 20pps slower	*Unexpected behaviour	
A.12	Gameplay	Pressing Spacebar a second time	Parachute is cut, lander speeds up again	Parachute is cut, lander speeds up again, lander pulls away from parachute proving it is picking up speed		
A.13	Gameplay	Pressing up arrow key	Increases throttle slider, lander slows down	have to click on throttle slider (give it focus), lander slows down, but the lander rotation in Test 8, causes lander to fly horizontally, and miss the surface object, need constraints/ moving surface		
A.14	Gameplay	Pressing down arrow key	Decreases throttle slider, lander speeds up - gravity	Decreases throttle slider, lander speeds up - gravity		
A.15	Gameplay	Hitting surface with speed above 40 pixels per second with heatshield still attached	"Destroyed" menu will be displayed	Lander hits ground "Sucessful landing" is instanced - heatshield is causing this (most likely)		
A.16	Gameplay	Hitting surface with speed above 40 pixels per second with heatshield jettisoned	"Destroyed" menu will be displayed	"Destroyed" menu is displayed		
A.17	Gameplay	Hitting surface with speed above 40 pixels per second with heatshield attached and parachute deployed	"Destroyed" menu will be displayed	Lander hits ground "Sucessful landing" is instanced - heatshield is causing this (most likely)		
A.18	Gameplay	Hitting surface with speed above 40 pixels per second with heatshield attached and parachute cut	"Destroyed" menu will be displayed	Lander hits ground "Sucessful landing" is instanced - heatshield is causing this (most likely)		
A.19	Gameplay	Hitting surface with speed above 40 pixels per second with heatshield jettisoned and parachute cut	"Destroyed" menu will be displayed	"Destroyed" menu is displayed - however when heatshield is jettisoned and parachute is cut following this, lander and parachute fall at same rate	*Unexpected behaviour	
A.20	Gameplay	Hitting surface with speed above 40 pixels per second with heatshield jettisoned and parachute deployed	"Destroyed" menu will be displayed	"Destroyed" menu is displayed		
A.21	Gameplay	Hitting surface with speed above 40 pixels per second with heatshield jettisoned and parachute deployed and thruster on	"Destroyed" menu will be displayed	"Destroyed" menu is displayed		
A.22	Gameplay	Hitting surface with speed above 40 pixels per second with heatshield jettisoned and parachute cut and thruster on	"Destroyed" menu will be displayed	"Destroyed" menu is displayed		
A.23	Gameplay	Hitting surface with speed above 40 pixels per second with heatshield attached and parachute cut and thruster on	"Destroyed" menu will be displayed	Lander hits ground "Sucessful landing" is instanced - heatshield is causing this (most likely)		
A.24	Gameplay	Hitting surface with speed above 40 pixels per second with heatshield attached and parachute deployed and thruster on	"Destroyed" menu will be displayed	Lander hits ground "Sucessful landing" is instanced - heatshield is causing this (most likely)		
A.25	Gameplay	Hitting surface with speed above 40 pixels per second with heatshield jettisoned and thruster on	"Destroyed" menu will be displayed	"Destroyed" menu is displayed		
A.26	Gameplay	Hitting surface with speed above 40 pixels per second with heatshield still attached and thruster on	"Destroyed" menu will be displayed	Lander hits ground "Sucessful landing" is instanced - heatshield is causing this (most likely)		
A.27	Gameplay	Pressing up arrow key whilst parachute is deployed	Increases throttle slider, lander slows down, parachute interaction(?)	Increases throttle slider, lander slows down, parachute interaction - when lander starts travelling upwards, parachute drags behind, generating drag on craft		
A.28	Gameplay	Pressing up arrow key whilst heatshield is still attached	Thruster does not activate	Thruster activates	*Unexpected behaviour	
A.29	Gameplay	Pressing up arrow key whilst parachute has been cut	Increases throttle slider, lander slows down	Increases throttle slider, lander slows down - if parachute hits ground before lander does, "Destroyed" menu gets displayed	*Unexpected behaviour	
A.30	Gameplay	Pressing Left arrow key	Lander rotates left	Lander rotates right		
A.31	Gameplay	Pressing Right arrow key	Lander rotates right	Lander rotates left		
A.32	Gameplay	Hitting surface with speed below 40 pixels per second with heatshield still attached	"Success" menu will be displayed	"Success" menu is displayed		
A.33	Gameplay	Hitting surface with speed below 40 pixels per second with heatshield jettisoned	"Success" menu will be displayed	"Success" menu is displayed, however if lander lands directly on heatshield the game goes into stalemate until a pixel of the Landers collision shape collides with the surface, which results in success	*Unexpected behaviour	
A.34	Gameplay	Hitting surface with speed below 40 pixels per second with parachute deployed	"Success" menu will be displayed	"Success" menu is displayed		

Total Passes 39

Total Fails 16

Total Tests 55

A.35	Gameplay	Hitting surface with speed below 40 pixels per second with parachute cut	"Success" menu will be displayed	"Success" menu is displayed		
A.36	Gameplay	Hitting surface with speed below 40 pixels per second with heatshield attached and parachute deployed	"Success" menu will be displayed	"Success" menu is displayed		
A.37	Gameplay	Hitting surface with speed below 40 pixels per second with heatshield attached and parachute cut	"Success" menu will be displayed	"Success" menu is displayed		
A.38	Gameplay	Hitting surface with speed below 40 pixels per second with heatshield jettisoned and parachute cut	"Success" menu will be displayed	"Success" menu is displayed - Same issue as #33	*Unexpected behaviour	
A.39	Gameplay	Hitting surface with speed below 40 pixels per second with heatshield jettisoned and parachute deployed	"Success" menu will be displayed	"Success" menu is displayed - Same issue as #33	*Unexpected behaviour	
A.40	Gameplay	Hitting surface with speed below 40 pixels per second with heatshield jettisoned and parachute deployed and thruster on	"Success" menu will be displayed	"Success" menu is displayed		
A.41	Gameplay	Hitting surface with speed below 40 pixels per second with heatshield jettisoned and parachute cut and thruster on	"Success" menu will be displayed	"Success" menu is displayed		
A.42	Gameplay	Hitting surface with speed below 40 pixels per second with heatshield attached and parachute cut and thruster on	"Success" menu will be displayed	"Success" menu is displayed		
A.43	Gameplay	Hitting surface with speed below 40 pixels per second with heatshield attached and parachute deployed and thruster on	"Success" menu will be displayed	"Success" menu is displayed		
A.44	Gameplay	Hitting surface with speed below 40 pixels per second with heatshield jettisoned and thruster on	"Success" menu will be displayed	"Success" menu is displayed - Same issue as #33	*Unexpected behaviour	
A.45	Gameplay	Hitting surface with speed below 40 pixels per second with heatshield still attached and thruster on	"Success" menu will be displayed	"Success" menu is displayed		
A.46	Gameplay	Hitting surface with speed below 40 pixels per second with thruster on	"Success" menu will be displayed	"Success" menu will be displayed		
A.47	Gameplay	Pressing spacebar whilst lander is going slower than 250 pixels per second	Parachute is deployed	Parachute is deployed		
A.48	Gameplay	Pressing spacebar whilst lander is going faster than 250 pixels per second	Parachute is detached (sheers off)	Parachute is detached (sheers off)		
A.49	Game Over	Clicking "Restart" on "Destroyed" menu	Game is restarted	Game is restarted		
A.50	Game Over	Clicking "Encyclopaedia" on "Destroyed" menu	"Encyclopaedia" scene is instanced	Nothing - not implemented		
A.51	Game Over	Clicking "Exit" on "Destroyed" menu	Program closes	Program closes		
A.52	Game Over	Clicking "Restart" on "Success" menu	Game is restarted	Requires investigation - when changing the scene back to main, the game is frozen and nothing is moving, seems to have some interaction between the heatshield, parachute, and thruster, could be a value is sticking around somewhere and causing the game to crash *sometimes works	*REQUIRES INVESTIGATION	
A.53	Game Over	Clicking "Encyclopaedia" on "Success" menu	"Encyclopaedia" scene is instanced	Nothing - not implemented		
A.54	Game Over	Clicking "Restart" on "Success" menu	Program closes	Program closes		

Pre-Alpha Testing

ID	Item	Test Input	Expected Result	Actual Result	Pass/Fail	Solution
B.1	Main Menu	Clicking "Start Game"	The "Main" scene is loaded, game begins	The "Main" scene is loaded, game begins		
B.2	Main Menu	Clicking "Encyclopaedia"	"Encyclopaedia" scene is instanced	"Encyclopaedia" scene is instanced		Scene added
B.3	Main Menu	Clicking "Exit"	Program closes	Program closes		
B.4	Pause Menu	Pressing the Escape key	"Menu" scene is loaded, game is paused	"Menu" scene is loaded, game is paused		
B.5	Pause Menu	Clicking "Resume"	Game is unpaused, menu disappears	Game is unpaused, menu disappears		
B.6	Pause Menu	Clicking "Encyclopaedia"	"Encyclopaedia" scene is instanced	"Encyclopaedia" scene is instanced		Scene added
B.7	Pause Menu	Clicking "Exit"	Program closes	Program closes		
B.8	Gameplay	Doing nothing	Lander will hit the ground and "Destroyed" menu will be displayed. Lander acceleration will slow down – drag	Lander will hit the ground and "Destroyed" menu will be displayed. Lander acceleration will slow down – drag		Collision was reworked, collision detection is only executed on the lander object.
B.9	Gameplay	Doing nothing	Lander should only move with player input	Lander rotates slightly to left		
B.10	Gameplay	Pressing the X key	Heatshield will be ejected	Heatshield is ejected - falls faster than lander		
B.11	Gameplay	Pressing Spacebar	Parachute will be deployed	Parachute is deployed		
B.12	Gameplay	Parachute is deployed	Parachute slows the lander	Parachute slows the lander		Area of parachute changed
B.13	Gameplay	Pressing Spacebar a second time	Parachute is cut, lander speeds up again	Parachute is cut, lander speeds up again, lander pulls away from parachute proving it is picking up speed		
B.14	Gameplay	Pressing up arrow key	Increases throttle slider, lander slows down	Increases throttle slider, lander slows down		Thruster slider takes focus and surface, and background follow the lander until the surface is on screen
B.15	Gameplay	Pressing down arrow key	Decreases throttle slider, lander speeds up - gravity	Decreases throttle slider, lander speeds up - gravity		
B.16	Gameplay	Hitting surface with speed above 40 pixels per second with heatshield still attached	"Destroyed" menu will be displayed	"Destroyed" menu will be displayed		
B.17	Gameplay	Hitting surface with speed above 40 pixels per second with heatshield jettisoned	"Destroyed" menu will be displayed	"Destroyed" menu is displayed		
B.18	Gameplay	Hitting surface with speed above 40 pixels per second with heatshield attached and parachute deployed	"Destroyed" menu will be displayed	"Destroyed" menu is displayed		
B.19	Gameplay	Hitting surface with speed above 40 pixels per second with heatshield attached and parachute cut	"Destroyed" menu will be displayed	"Destroyed" menu is displayed		
B.20	Gameplay	Hitting surface with speed above 40 pixels per second with heatshield jettisoned and parachute cut	"Destroyed" menu will be displayed	"Destroyed" menu is displayed		Area of parachute changed, effect is more drastic
B.21	Gameplay	Hitting surface with speed above 40 pixels per second with heatshield jettisoned and parachute deployed	"Destroyed" menu will be displayed	"Destroyed" menu is displayed		
B.22	Gameplay	Hitting surface with speed above 40 pixels per second with heatshield jettisoned and parachute deployed and thruster on	"Destroyed" menu will be displayed	"Destroyed" menu is displayed		
B.23	Gameplay	Hitting surface with speed above 40 pixels per second with heatshield jettisoned and parachute cut and thruster on	"Destroyed" menu will be displayed	"Destroyed" menu is displayed		
B.24	Gameplay	Hitting surface with speed above 40 pixels per second with heatshield attached and parachute cut and thruster on	"Destroyed" menu will be displayed	"Destroyed" menu will be displayed		Collision was reworked, collision detection is only executed on the lander object.
B.25	Gameplay	Hitting surface with speed above 40 pixels per second with heatshield attached and parachute deployed and thruster on	"Destroyed" menu will be displayed	"Destroyed" menu will be displayed		Collision was reworked, collision detection is only executed on the lander object.
B.26	Gameplay	Hitting surface with speed above 40 pixels per second with heatshield jettisoned and thruster on	"Destroyed" menu will be displayed	"Destroyed" menu is displayed		
B.27	Gameplay	Hitting surface with speed above 40 pixels per second with heatshield still attached and thruster on	"Destroyed" menu will be displayed	Lander hits ground "Sucessful landing" is instanced - heatshield is causing this (most likely)		
B.28	Gameplay	Pressing up arrow key whilst parachute is deployed	Increases throttle slider, lander slows down, parachute interaction(?)	Increases throttle slider, lander slows down, parachute interaction - when lander starts travelling upwards, parachute drags behind, generating drag on craft		
B.29	Gameplay	Pressing up arrow key whilst heatshield is still attached	Thruster does not activate	Thruster does not activate		A check is made when running the thrust function, whether or not the heatshield is still connected
B.30	Gameplay	Pressing up arrow key whilst parachute has been cut	Increases throttle slider, lander slows down	Increases throttle slider, lander slows down - if parachute hits ground before lander does, "Destroyed" menu gets displayed		Collision was reworked, collision detection is only executed on the lander object.
B.31	Gameplay	Pressing Left arrow key	Lander rotates left	Lander rotates left		Input was switched
B.32	Gameplay	Pressing Right arrow key	Lander rotates right	Lander rotates right		Input was switched
B.33	Gameplay	Hitting surface with speed below 40 pixels per second with heatshield still attached	"Success" menu will be displayed	"Success" menu is displayed		
B.34	Gameplay	Hitting surface with speed below 40 pixels per second with heatshield jettisoned	"Success" menu will be displayed	"Success" menu is displayed		Heatshield no longer collides with the surface, to avoid this scenario

Total Passes 53

Total Fails 3

Total Tests 56

B.35	Gameplay	Hitting surface with speed below 40 pixels per second with parachute deployed	"Success" menu will be displayed	"Success" menu is displayed		
B.36	Gameplay	Hitting surface with speed below 40 pixels per second with parachute cut	"Success" menu will be displayed	"Success" menu is displayed		
B.37	Gameplay	Hitting surface with speed below 40 pixels per second with heatshield attached and parachute deployed	"Success" menu will be displayed	"Success" menu is displayed		
B.38	Gameplay	Hitting surface with speed below 40 pixels per second with heatshield attached and parachute cut	"Success" menu will be displayed	"Success" menu is displayed		
B.39	Gameplay	Hitting surface with speed below 40 pixels per second with heatshield jettisoned and parachute cut	"Success" menu will be displayed	"Success" menu is displayed		Heatshield no longer collides with the surface, to avoid this scenario
B.40	Gameplay	Hitting surface with speed below 40 pixels per second with heatshield jettisoned and parachute deployed	"Success" menu will be displayed	"Success" menu is displayed		Heatshield no longer collides with the surface, to avoid this scenario
B.41	Gameplay	Hitting surface with speed below 40 pixels per second with heatshield jettisoned and parachute deployed and thruster on	"Success" menu will be displayed	"Success" menu is displayed		
B.42	Gameplay	Hitting surface with speed below 40 pixels per second with heatshield jettisoned and parachute cut and thruster on	"Success" menu will be displayed	"Success" menu is displayed		
B.43	Gameplay	Hitting surface with speed below 40 pixels per second with heatshield attached and parachute cut and thruster on	"Success" menu will be displayed	"Success" menu is displayed		
B.44	Gameplay	Hitting surface with speed below 40 pixels per second with heatshield attached and parachute deployed and thruster on	"Success" menu will be displayed	"Success" menu is displayed		
B.45	Gameplay	Hitting surface with speed below 40 pixels per second with heatshield jettisoned and thruster on	"Success" menu will be displayed	"Success" menu is displayed	*Unexpected behaviour	Heatshield no longer collides with the surface, to avoid this scenario
B.46	Gameplay	Hitting surface with speed below 40 pixels per second with heatshield still attached and thruster on	"Success" menu will be displayed	"Success" menu is displayed		
B.47	Gameplay	Hitting surface with speed below 40 pixels per second with thruster on	"Success" menu will be displayed	"Success" menu will be displayed		
B.48	Gameplay	Pressing spacebar whilst lander is going slower than 250 pixels per second	Parachute is deployed	Parachute is deployed		
B.49	Gameplay	Pressing spacebar whilst lander is going faster than 250 pixels per second	Parachute is detached (sheers off)	Parachute is detached (sheers off)		
B.50	Game Over	Clicking "Restart" on "Destroyed" menu	Game is restarted	Game is restarted		
B.51	Game Over	Clicking "Encyclopaedia" on "Destroyed" menu	"Encyclopaedia" scene is instanced	"Encyclopaedia" scene is instanced		Scene added
B.52	Game Over	Clicking "Exit" on "Destroyed" menu	Program closes	Program closes		
B.53	Game Over	Clicking "Restart" on "Success" menu	Game is restarted	Requires investigation - when changing the scene back to main, the game is frozen and nothing is moving, seems to have some interaction between the heatshield, parachute, and thruster, could be a value is sticking around somewhere and causing the game to crash *sometimes works	*REQUIRES INVESTIGATION	
B.54	Game Over	Clicking "Encyclopaedia" on "Success" menu	"Encyclopaedia" scene is instanced	"Encyclopaedia" scene is instanced		Scene added
B.55	Game Over	Clicking "Restart" on "Success" menu	Program closes	Program closes		
B.56	Encyclopedia	Clicking through the encyclopedia	Text is displayed properly	Text is overflowing causing the encylopedia scene to extend past viewport		Horizontal Fill wasn't enabled on the text. Have to add newlines to format correctly.
B.57						
B.58						
B.59						
B.60						
B.61						

Alpha Testing

ID	Item	Test Input	Expected Result	Actual Result	Pass/Fail	Solution
C.1	Main Menu	Clicking "Start Game"	The "Main" scene is loaded, game begins	The "Main" scene is loaded, game begins		
C.2	Main Menu	Clicking "Encyclopaedia"	"Encyclopaedia" scene is instanced	"Encyclopaedia" scene is instanced		Scene added
C.3	Main Menu	Clicking "Exit"	Program closes	Program closes		
C.4	Pause Menu	Pressing the Escape key	"Menu" scene is loaded, game is paused	"Menu" scene is loaded, game is paused		
C.5	Pause Menu	Clicking "Resume"	Game is unpaused, menu disappears	Game is unpaused, menu disappears		
C.6	Pause Menu	Clicking "Encyclopaedia"	"Encyclopaedia" scene is instanced	"Encyclopaedia" scene is instanced		Scene added
C.7	Pause Menu	Clicking "Exit"	Program closes	Program closes		
C.8	Gameplay	Doing nothing	Lander will hit the ground and "Destroyed" menu will be displayed. Lander acceleration will slow down – drag	Lander will hit the ground and "Destroyed" menu will be displayed. Lander acceleration will slow down – drag		Collision was reworked, collision detection is only executed on the lander object.
C.9	Gameplay	Doing nothing	Lander should only move with player input	Lander rotates slightly to left		
C.10	Gameplay	Pressing the X key	Heatshield will be ejected	Heatshield is ejected - falls faster than lander		
C.11	Gameplay	Pressing Spacebar	Parachute will be deployed	Parachute is deployed		
C.12	Gameplay	Parachute is deployed	Parachute slows the lander	Parachute slows the lander		Area of parachute changed
C.13	Gameplay	Pressing Spacebar a second time	Parachute is cut, lander speeds up again	Parachute is cut, lander speeds up again, lander pulls away from parachute proving it is picking up speed		
C.14	Gameplay	Pressing up arrow key	Increases throttle slider, lander slows down	Increases throttle slider, lander slows down		Thruster slider takes focus and surface, and background follow the lander until the surface is on screen
C.15	Gameplay	Pressing down arrow key	Decreases throttle slider, lander speeds up - gravity	Decreases throttle slider, lander speeds up - gravity		
C.16	Gameplay	Hitting surface with speed above 40 pixels per second with heatshield still attached	"Destroyed" menu will be displayed	"Destroyed" menu will be displayed		
C.17	Gameplay	Hitting surface with speed above 40 pixels per second with heatshield jettisoned	"Destroyed" menu will be displayed	"Destroyed" menu is displayed		
C.18	Gameplay	Hitting surface with speed above 40 pixels per second with heatshield attached and parachute deployed	"Destroyed" menu will be displayed	"Destroyed" menu is displayed		
C.19	Gameplay	Hitting surface with speed above 40 pixels per second with heatshield attached and parachute cut	"Destroyed" menu will be displayed	"Destroyed" menu is displayed		
C.20	Gameplay	Hitting surface with speed above 40 pixels per second with heatshield jettisoned and parachute cut	"Destroyed" menu will be displayed	"Destroyed" menu is displayed		Area of parachute changed, effect is more drastic
C.21	Gameplay	Hitting surface with speed above 40 pixels per second with heatshield jettisoned and parachute deployed	"Destroyed" menu will be displayed	"Destroyed" menu is displayed		
C.22	Gameplay	Hitting surface with speed above 40 pixels per second with heatshield jettisoned and parachute deployed and thruster on	"Destroyed" menu will be displayed	"Destroyed" menu is displayed		
C.23	Gameplay	Hitting surface with speed above 40 pixels per second with heatshield jettisoned and parachute cut and thruster on	"Destroyed" menu will be displayed	"Destroyed" menu is displayed		
C.24	Gameplay	Hitting surface with speed above 40 pixels per second with heatshield attached and parachute cut and thruster on	"Destroyed" menu will be displayed	"Destroyed" menu will be displayed		Collision was reworked, collision detection is only executed on the lander object.
C.25	Gameplay	Hitting surface with speed above 40 pixels per second with heatshield attached and parachute deployed and thruster on	"Destroyed" menu will be displayed	"Destroyed" menu will be displayed		Collision was reworked, collision detection is only executed on the lander object.
C.26	Gameplay	Hitting surface with speed above 40 pixels per second with heatshield jettisoned and thruster on	"Destroyed" menu will be displayed	"Destroyed" menu is displayed		
C.27	Gameplay	Hitting surface with speed above 40 pixels per second with heatshield still attached and thruster on	"Destroyed" menu will be displayed	Lander hits ground "Sucessful landing" is instanced - heatshield is causing this (most likely)		
C.28	Gameplay	Pressing up arrow key whilst parachute is deployed	Increases throttle slider, lander slows down, parachute interaction(?)	Increases throttle slider, lander slows down, parachute interaction - when lander starts travelling upwards, parachute drags behind, generating drag on craft		
C.29	Gameplay	Pressing up arrow key whilst heatshield is still attached	Thruster does not activate	Thruster does not activate		A check is made when running the thrust function, whether or not the heatshield is still connected
C.30	Gameplay	Pressing up arrow key whilst parachute has been cut	Increases throttle slider, lander slows down	Increases throttle slider, lander slows down - if parachute hits ground before lander does, "Destroyed" menu gets displayed		Collision was reworked, collision detection is only executed on the lander object.
C.31	Gameplay	Pressing Left arrow key	Lander rotates left	Lander rotates left		Input was switched
C.32	Gameplay	Pressing Right arrow key	Lander rotates right	Lander rotates right		Input was switched
C.33	Gameplay	Hitting surface with speed below 40 pixels per second with heatshield still attached	"Success" menu will be displayed	"Success" menu is displayed		
C.34	Gameplay	Hitting surface with speed below 40 pixels per second with heatshield jettisoned	"Success" menu will be displayed	"Success" menu is displayed		Heatshield no longer collides with the surface, to avoid this scenario

Total Passes 55

Total Fails 6

Total Tests 61

ID	Category	Description	Expected	Actual	Status	Notes
C.35	Gameplay	Hitting surface with speed below 40 pixels per second with parachute deployed	"Success" menu will be displayed	"Success" menu is displayed		
C.36	Gameplay	Hitting surface with speed below 40 pixels per second with parachute cut	"Success" menu will be displayed	"Success" menu is displayed		
C.37	Gameplay	Hitting surface with speed below 40 pixels per second with heatshield attached and parachute deployed	"Success" menu will be displayed	"Success" menu is displayed		
C.38	Gameplay	Hitting surface with speed below 40 pixels per second with heatshield attached and parachute cut	"Success" menu will be displayed	"Success" menu is displayed		
C.39	Gameplay	Hitting surface with speed below 40 pixels per second with heatshield jettisoned and parachute cut	"Success" menu will be displayed	"Success" menu is displayed		Heatshield no longer collides with the surface, to avoid this scenario
C.40	Gameplay	Hitting surface with speed below 40 pixels per second with heatshield jettisoned and parachute deployed	"Success" menu will be displayed	"Success" menu is displayed		Heatshield no longer collides with the surface, to avoid this scenario
C.41	Gameplay	Hitting surface with speed below 40 pixels per second with heatshield jettisoned and parachute deployed and thruster on	"Success" menu will be displayed	"Success" menu is displayed		
C.42	Gameplay	Hitting surface with speed below 40 pixels per second with heatshield jettisoned and parachute cut and thruster on	"Success" menu will be displayed	"Success" menu is displayed		
C.43	Gameplay	Hitting surface with speed below 40 pixels per second with heatshield attached and parachute cut and thruster on	"Success" menu will be displayed	"Success" menu is displayed		
C.44	Gameplay	Hitting surface with speed below 40 pixels per second with heatshield attached and parachute deployed and thruster on	"Success" menu will be displayed	"Success" menu is displayed		
C.45	Gameplay	Hitting surface with speed below 40 pixels per second with heatshield jettisoned and thruster on	"Success" menu will be displayed	"Success" menu is displayed	*Unexpected behaviour	Heatshield no longer collides with the surface, to avoid this scenario
C.46	Gameplay	Hitting surface with speed below 40 pixels per second with heatshield still attached and thruster on	"Success" menu will be displayed	"Success" menu is displayed		
C.47	Gameplay	Hitting surface with speed below 40 pixels per second with thruster on	"Success" menu will be displayed	"Success" menu will be displayed		
C.48	Gameplay	Pressing spacebar whilst lander is going slower than 250 pixels per second	Parachute is deployed	Parachute is deployed		
C.49	Gameplay	Pressing spacebar whilst lander is going faster than 250 pixels per second	Parachute is detached (sheers off)	Parachute is detached (sheers off)		
C.50	Game Over	Clicking "Restart" on "Destroyed" menu	Game is restarted	Game is restarted		
C.51	Game Over	Clicking "Encyclopaedia" on "Destroyed" menu	"Encyclopaedia" scene is instanced	"Encyclopaedia" scene is instanced		Scene added
C.52	Game Over	Clicking "Exit" on "Destroyed" menu	Program closes	Program closes		
C.53	Game Over	Clicking "Restart" on "Success" menu	Game is restarted	Game is restarted		Destroyed state was evaluated before Success in the match statement inside of the pausemenu, this difference meant that destroyed evaluated before the pause process command was given, success evaluated after, leaving main paused indefinetly
C.54	Game Over	Clicking "Encyclopaedia" on "Success" menu	"Encyclopaedia" scene is instanced	"Encyclopaedia" scene is instanced		Scene added
C.55	Game Over	Clicking "Restart" on "Success" menu	Program closes	Program closes		
C.56	Encyclopedia	Clicking through the encyclopedia	Text is displayed properly	Text is displayed properly		Horizontal Fill wasn't enabled on the text. Have to add newlines to format correctly.
C.57	Time Control	Using time control whilst using the thin heatshield	Heatshield will be compromised	Utilising time control when descending causes the thin heatshield to withstand entry.		
C.58	Physics	Parachute is deployed	Lander should be suspended from the lander, stably	When deploying the parachute, the rope sections can move erratically and shake both and parachute and lander around		
C.59	Time Control	Using time control whilst lander object is disconnected from backshell	Velocity remains the same	Utilising time control whilst lander is disconnected from backshell and heatshield speeds it up past terminal velocity		
C.60	Time Control	Using time control for the whole game	All behaviour should be unchanged, just everything sped up	If time control is left on and never taken off, lander never goes slow enough to deploy parachute		
C.61	Physics	Lander collides with parachute	Nothing adverse happens.	Parachute moves around eratically.		

Final Release Testing

ID	Item	Test Input	Expected Result	Actual Result	Pass/Fail	Solution
D.1	**Main Menu**	Clicking "Start Game"	The "Main" scene is loaded, game begins	The "Main" scene is loaded, game begins		
D.2	**Main Menu**	Clicking "Encyclopaedia"	"Encyclopaedia" scene is instanced	"Encyclopaedia" scene is instanced		Scene added
D.3	**Main Menu**	Clicking "Exit"	Program closes	Program closes		
D.4	**Pause Menu**	Pressing the Escape key	"Menu" scene is loaded, game is paused	"Menu" scene is loaded, game is paused		
D.5	**Pause Menu**	Clicking "Resume"	Game is unpaused, menu disappears	Game is unpaused, menu disappears		
D.6	**Pause Menu**	Clicking "Encyclopaedia"	"Encyclopaedia" scene is instanced	"Encyclopaedia" scene is instanced		Scene added
D.7	**Pause Menu**	Clicking "Exit"	Program closes	Program closes		
D.8	Gameplay	Doing nothing	Lander will hit the ground and "Destroyed" menu will be displayed. Lander acceleration will slow down – drag	Lander will hit the ground and "Destroyed" menu will be displayed. Lander acceleration will slow down – drag		Collision was reworked, collision detection is only executed on the lander object.
D.9	Gameplay	Doing nothing	Lander should only move with player input	Lander rotates slightly to left		
D.10	Gameplay	Pressing the X key	Heatshield will be ejected	Heatshield is ejected - falls faster than lander		
D.11	Gameplay	Pressing Spacebar	Parachute will be deployed	Parachute is deployed		
D.12	Gameplay	Parachute is deployed	Parachute slows the lander	Parachute slows the lander		Area of parachute changed
D.13	Gameplay	Pressing Spacebar a second time	Parachute is cut, lander speeds up again	Parachute is cut, lander speeds up again, lander pulls away from parachute proving it is picking up speed		
D.14	Gameplay	Pressing up arrow key	Increases throttle slider, lander slows down	Increases throttle slider, lander slows down		Thruster slider takes focus and surface, and background follow the lander until the surface is on screen
D.15	Gameplay	Pressing down arrow key	Decreases throttle slider, lander speeds up - gravity	Decreases throttle slider, lander speeds up - gravity		
D.16	Gameplay	Hitting surface with speed above 40 pixels per second with heatshield still attached	"Destroyed" menu will be displayed	"Destroyed" menu will be displayed		
D.17	Gameplay	Hitting surface with speed above 40 pixels per second with heatshield jettisoned	"Destroyed" menu will be displayed	"Destroyed" menu is displayed		
D.18	Gameplay	Hitting surface with speed above 40 pixels per second with heatshield attached and parachute deployed	"Destroyed" menu will be displayed	"Destroyed" menu is displayed		
D.19	Gameplay	Hitting surface with speed above 40 pixels per second with heatshield attached and parachute cut	"Destroyed" menu will be displayed	"Destroyed" menu is displayed		
D.20	Gameplay	Hitting surface with speed above 40 pixels per second with heatshield jettisoned and parachute cut	"Destroyed" menu will be displayed	"Destroyed" menu is displayed		Area of parachute changed, effect is more drastic
D.21	Gameplay	Hitting surface with speed above 40 pixels per second with heatshield jettisoned and parachute deployed	"Destroyed" menu will be displayed	"Destroyed" menu is displayed		
D.22	Gameplay	Hitting surface with speed above 40 pixels per second with heatshield jettisoned and parachute deployed and thruster on	"Destroyed" menu will be displayed	"Destroyed" menu is displayed		
D.23	Gameplay	Hitting surface with speed above 40 pixels per second with heatshield jettisoned and parachute cut and thruster on	"Destroyed" menu will be displayed	"Destroyed" menu is displayed		
D.24	Gameplay	Hitting surface with speed above 40 pixels per second with heatshield attached and parachute cut and thruster on	"Destroyed" menu will be displayed	"Destroyed" menu will be displayed		Collision was reworked, collision detection is only executed on the lander object.
D.25	Gameplay	Hitting surface with speed above 40 pixels per second with heatshield attached and parachute deployed and thruster on	"Destroyed" menu will be displayed	"Destroyed" menu will be displayed		Collision was reworked, collision detection is only executed on the lander object.
D.26	Gameplay	Hitting surface with speed above 40 pixels per second with heatshield jettisoned and thruster on	"Destroyed" menu will be displayed	"Destroyed" menu is displayed		
D.27	Gameplay	Hitting surface with speed above 40 pixels per second with heatshield still attached and thruster on	"Destroyed" menu will be displayed	Lander hits ground "Sucessful landing" is instanced - heatshield is causing this (most likely)		
D.28	Gameplay	Pressing up arrow key whilst parachute is deployed	Increases throttle slider, lander slows down, parachute interaction(?)	Increases throttle slider, lander slows down, parachute interaction - when lander starts travelling upwards, parachute drags behind, generating drag on craft		
D.29	Gameplay	Pressing up arrow key whilst heatshield is still attached	Thruster does not activate	Thruster does not activate		A check is made when running the thrust function, whether or not the heatshield is still connected
D.30	Gameplay	Pressing up arrow key whilst parachute has been cut	Increases throttle slider, lander slows down	Increases throttle slider, lander slows down - if parachute hits ground before lander does, "Destroyed" menu gets displayed		Collision was reworked, collision detection is only executed on the lander object.
D.31	Gameplay	Pressing Left arrow key	Lander rotates left	Lander rotates left		Input was switched
D.32	Gameplay	Pressing Right arrow key	Lander rotates right	Lander rotates right		Input was switched

Total Passes 58

Total Fails 3

Total Tests 61

D.33	Gameplay	Hitting surface with speed below 40 pixels per second with heatshield still attached	"Success" menu will be displayed	"Success" menu is displayed		
D.34	Gameplay	Hitting surface with speed below 40 pixels per second with heatshield jettisoned	"Success" menu will be displayed	"Success" menu is displayed		Heatshield no longer collides with the surface, to avoid this scenario
D.35	Gameplay	Hitting surface with speed below 40 pixels per second with parachute deployed	"Success" menu will be displayed	"Success" menu is displayed		
D.36	Gameplay	Hitting surface with speed below 40 pixels per second with parachute cut	"Success" menu will be displayed	"Success" menu is displayed		
D.37	Gameplay	Hitting surface with speed below 40 pixels per second with heatshield attached and parachute deployed	"Success" menu will be displayed	"Success" menu is displayed		
D.38	Gameplay	Hitting surface with speed below 40 pixels per second with heatshield attached and parachute cut	"Success" menu will be displayed	"Success" menu is displayed		
D.39	Gameplay	Hitting surface with speed below 40 pixels per second with heatshield jettisoned and parachute cut	"Success" menu will be displayed	"Success" menu is displayed		Heatshield no longer collides with the surface, to avoid this scenario
D.40	Gameplay	Hitting surface with speed below 40 pixels per second with heatshield jettisoned and parachute deployed	"Success" menu will be displayed	"Success" menu is displayed		Heatshield no longer collides with the surface, to avoid this scenario
D.41	Gameplay	Hitting surface with speed below 40 pixels per second with heatshield jettisoned and parachute deployed and thruster on	"Success" menu will be displayed	"Success" menu is displayed		
D.42	Gameplay	Hitting surface with speed below 40 pixels per second with heatshield jettisoned and parachute cut and thruster on	"Success" menu will be displayed	"Success" menu is displayed		
D.43	Gameplay	Hitting surface with speed below 40 pixels per second with heatshield attached and parachute cut and thruster on	"Success" menu will be displayed	"Success" menu is displayed		
D.44	Gameplay	Hitting surface with speed below 40 pixels per second with heatshield attached and parachute deployed and thruster on	"Success" menu will be displayed	"Success" menu is displayed		
D.45	Gameplay	Hitting surface with speed below 40 pixels per second with heatshield jettisoned and thruster on	"Success" menu will be displayed	"Success" menu is displayed	*Unexpected behaviour	Heatshield no longer collides with the surface, to avoid this scenario
D.46	Gameplay	Hitting surface with speed below 40 pixels per second with heatshield still attached and thruster on	"Success" menu will be displayed	"Success" menu is displayed		
D.47	Gameplay	Hitting surface with speed below 40 pixels per second with thruster on	"Success" menu will be displayed	"Success" menu will be displayed		
D.48	Gameplay	Pressing spacebar whilst lander is going slower than 250 pixels per second	Parachute is deployed	Parachute is deployed		
D.49	Gameplay	Pressing spacebar whilst lander is going faster than 250 pixels per second	Parachute is detached (sheers off)	Parachute is detached (sheers off)		
D.50	Game Over	Clicking "Restart" on "Destroyed" menu	Game is restarted	Game is restarted		
D.51	Game Over	Clicking "Encyclopaedia" on "Destroyed" menu	"Encyclopaedia" scene is instanced	"Encyclopaedia" scene is instanced		Scene added
D.52	Game Over	Clicking "Exit" on "Destroyed" menu	Program closes	Program closes		
D.53	Game Over	Clicking "Restart" on "Success" menu	Game is restarted	Game is restarted		Destroyed state was evaluated before Success in the match statement inside of the pausemenu, this difference meant that destroyed evaluated before the pause process command was given, success evaluated after, leaving main paused indefinetly
D.54	Game Over	Clicking "Encyclopaedia" on "Success" menu	"Encyclopaedia" scene is instanced	"Encyclopaedia" scene is instanced		Scene added
D.55	Game Over	Clicking "Restart" on "Success" menu	Program closes	Program closes		
D.56	Encyclopedia	Clicking through the encyclopedia	Text is displayed properly	Text is displayed properly		Horizontal Fill wasn't enabled on the text. Have to add newlines to format correctly.
D.57	Time Control	Using time control whilst using the thin heatshield	Heatshield will be compromised	Heatshield will be compromised		Added condtional behaviour that disables time control and resets the engine speed back to 1 when the lander object hits the upper atmopshere
D.58	Physics	Parachute is deployed	Lander should be suspended from the lander, stably	When deploying the parachute, the rope sections can move eratically and shake both and parachute and lander around		

D.59	Time Control	Using time control whilst lander object is disconnected from backshell	Velocity remains the same	Utilising time control whilst lander is disconnected from backshell and heatshield speeds it up past terminal velocity		Added condtional behaviour that disables time control and resets the engine speed back to 1 when the lander object hits the upper atmopshere
D.60	Time Control	Using time control for the whole game	All behaviour should be unchanged, just everything sped up	If time control is left on and never taken off, lander never goes slow enough to deploy parachute		Added condtional behaviour that disables time control and resets the engine speed back to 1 when the lander object hits the upper atmopshere
D.61	Physics	Lander collides with parachute	Nothing adverse happens.	Parachute moves around eratically.		