

## Test c Test Cases

Test ID	Test Type	Description	Relevant Requirements	Input Data	Expected Outcome	Actual Outcome	Status
T.U.001	Manual	Test firetrucks can accelerate/decelerate	CONTROL_TRUCK	Arrow keys	Truck correctly moves forwards or backwards when the relevant button is pressed	The truck can accelerate and decelerate	Pass
T.U.002	Manual	Test firetrucks can turn left/right	CONTROL_TRUCK	Arrow keys	Truck correctly rotates left or right when the relevant button is pressed	The truck can turn correctly	Pass
T.U.003	Manual	Test enabling/disabling water spray, and choosing direction with the mouse	CONTROL_SPRAY	E key, mouse	Water spray enables when E is pressed, and disables itself when E is pressed a second time. Mouse chooses direction.	Water spray controls work correctly	Pass
T.U.004	Manual	Test spray moves when the fire truck moves	CONTROL_TRUCK, CONTROL_SPRAY	Arrow keys, E key	The water spray moves when the firetruck moves after the spray is enabled.	The spray moves with the fire truck correctly	Pass
T.U.005	Manual	Test firetruck can return to and be repaired at fire station	CONTROL_TRUCK, RETURN_HOME	Arrow keys, fire truck must not be at full health prior	Fire truck is repaired once it enters the fire station	Fire truck repairs when near the fire station	Pass
T.U.006	Manual	Test firetruck can return to and be refilled at fire station	CONTROL_TRUCK, RETURN_HOME	Arrow keys, fire truck must not be at full water capacity prior	Fire truck is refilled once it enters the fire station	Fire truck refills when near the fire station	Pass
T.U.007	Manual	Test whether the user can switch between the available fire trucks	VARIED_TRUCKS	TAB	The fire trucks in the game get switched to in order	The firetrucks can be switched between correctly	Pass
T.U.008	Manual	Test whether points increase when destroying aliens	GAIN_INCOME, DESTROY_ENTITIES	Destroy aliens using water cannons	Aliens are destroyed and points increase	Points increase for damaging and destroying aliens	Pass
T.U.009	Manual	Test whether points increase when destroying fortresses	GAIN_INCOME, DESTROY_ENTITIES	Destroy fortresses using water cannons	Fortresses are destroyed and points increase	Points increase for damaging and destroying fortresses	Pass
T.U.010	Manual	Test game can be won when all fortresses are destroyed	WIN_GAME, DESTROY_ENTITIES	Destroy all fortresses using water cannons	The game ends with a win	The game ends with a win	Pass
T.U.011	Manual	Test game can be lost when all fire trucks are destroyed	LOSE_GAME	Have all fire trucks be destroyed by aliens/fortresses	The game ends with a loss	The game ends with a loss	Pass
T.U.012	Manual	Test user can move the fire truck around the map	CONTROL_TRUCK, CREATE_MAP	Arrow keys to move around the map	The camera follows the fire truck as it moves around the map	The camera follows the selected fire truck	Pass
T.U.013	Manual	Test user encounters alien patrols throughout the map	CONTROL_TRUCK, CREATE_ENTITIES	Arrow keys to move around the map	Alien patrols are encountered around the map	Alien patrols are encountered.	Pass
T.U.014	Manual	Test there is no violence found within the game	NO_VIOLENCE	Arrow keys, E key	Destroying aliens and fortresses is not in a violent way	Aliens fade away when destroyed in a non-violent way.	Pass
T.U.015	Manual	Test there is a main menu	MENU	Run the game	The game loads to a menu where various options can be picked	There is a working menu	Pass
T.U.016	Manual	Test there is a functional leaderboard	LEADERBOARD, MENU	Select 'leaderboard' from menu	The leaderboard is loaded	The leaderboard is loaded	Pass
T.U.017	Manual	Test that fortresses become harder to destroy	FORTRESS_IMPROVEMENT, DESTROY_ENTITIES	Destroy multiple fortresses	Each fortress becomes harder to destroy than the previous one	Each fortress becomes harder to destroy than the previous one	Pass
T.U.018	Manual	Test whether fire stations can be destroyed	DESTROY_STATION, DESTROY_ENTITIES	Destroy first alien fortress, then wait until aliens destroy the fire station	Aliens will destroy the fire station	Fire stations can be damaged and destroyed	Pass
T.U.019	Manual	Test whether the minigame can be accessed from the main menu	MENU, MINIGAME	Select 'minigame' from menu	The minigame is loaded	The minigame is loaded	Pass
T.U.020	Manual	Test that the minigame can be won	MINIGAME	Play and win the minigame	The minigame can be won	The minigame can be won	Pass
T.U.021	Manual	Test that the minigame is randomised each time	MINIGAME	Run the minigame multiple times, check whether it is different each time	The minigame is randomised each time	The minigame is randomised each time	Pass

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Test ID	Test Type	Description	Relevant Requirements	Input Data	Expected Outcome	Actual Outcome	Status
T.F.001	Manual	Test the movement using arrow keys is correct	CONTROL_TRUCK_FUNC	Arrow keys	The fire truck moves correctly according to the pressed key	The fire truck moves correctly according to the pressed key	Pass
T.F.002	Manual	Test the spray direction can be controlled by the mouse	CONTROL_SPRAY_FUNC	Mouse	The fire truck sprays water in the direction the spray is pointing	The fire truck sprays water in the direction the spray is pointing	Pass
T.F.003	Manual	Test the firetruck can be repaired at fire station over time	RETURN_HOME_FUNC	Use arrow keys to move damaged fire truck to fire station	The fire truck is repaired over time	The fire truck is repaired over time	Pass
T.F.004	Manual	Test the firetruck can be refilled at fire station over time	RETURN_HOME_FUNC	Use arrow keys to move fire truck that is low on water to fire station	The fire truck is refilled over time	The fire truck is refilled over time	Pass
T.F.005	Manual	Test whether the firetruck cannot be repaired after the game has passed a certain time threshold	FIXED_TIME	Try to repair a damaged fire truck at a fire station after 3 minutes have passed	The firetruck will not be repaired after 3 minutes have passed	The game ends after 3 minutes, meaning that it can't be tested whether it will repair or not	Fail
T.F.006	Manual	Test that aliens do not heal themselves	NO_HEAL	Attack an alien, wait 10 seconds, then attack it again	The alien should not have healed itself between the two attacks	The aliens do not heal themselves	Pass
T.F.007	Manual	Test that fortresses do heal themselves	FORTRESSES_HEAL	Attack a fortress, wait 10 seconds, then attack it again	The fortress should have healed itself slightly between the two attacks	The fortresses repair themselves	Pass
T.F.008	Manual	Test that destroyed aliens disappear	DESTROY_ENTITIES_FUNC	Destroy an alien	The destroyed alien will disappear	The destroyed alien disappears	Pass
T.F.009	Manual	Test that destroyed fortresses disappear	DESTROY_ENTITIES_FUNC	Destroy a fortress	The destroyed fortress will disappear	Fortresses change appearance when destroyed correctly	Pass
T.F.010	Manual	Test that a button can switch between the fire trucks	VARIED_TRUCKS_FUNC	TAB	The firetrucks in the game get switched to in order	The firetrucks in the game get switched to in order	Pass
T.F.011	Manual	Test that the map appears when the game is run	CREATE_MAP_FUNC	Run the game	The map appears when the game is run	The map appears when the game is run	Pass
T.F.012	Manual	Test the player gains points when shooting an alien	GAIN_INCOME_FUNC	Shoot an alien	The player's points increase	The player's points increase	Pass
T.F.013	Manual	Test the player gains points when shooting a fortress	GAIN_INCOME_FUNC	Shoot a fortress	The player's points increase	The player's points increase	Pass
T.F.014	Manual	Test the game ends with a win when all fortresses are destroyed	WIN_GAME_FUNC, DESTROY_ENTITIES_FUNC	Destroy all fortresses	The player wins and the game ends	The player wins and the game ends	Pass
T.F.015	Manual	Test alien patrols appear over time randomly	CREATE_ENTITIES_FUNC	Destroy all alien patrols, wait and see if more appear	Alien patrols are spawned randomly over time	Alien patrols can randomly spawn	Pass
T.N.001	Manual	Test gameplay duration	TIME_ACCESSIBILITY, FIXED_TIME	Play the game	After 5 minutes the game will end	The game returns to the menu after 5 minutes have passed	Pass
T.N.002	Manual	Test understanding of the game and the controls	GAME_DOCUMENTATION	Play the game	User is able to understand the game	User can understand the game	Pass
T.N.003	Manual	Test the game is won when all 6 fortresses are destroyed	RESILIENCE, WIN_GAME	Win the game	The game is won	The game is won	Pass
T.N.004	Manual	Test aliens disappear when destroyed	AUDIENCE_ACCESSIBILITY, NO_VIOLENCE	Destroy enemies	Aliens disappear when destroyed	Aliens disappear when destroyed	Pass
T.N.005	Manual	Test if menu accessible.	GAME_ACCESSIBILITY, MENU_FUNC	Run the game	The menu appears when before starting the game, and after the game ends	The menu appears when before starting the game, and after the game ends	Pass