

**Module Code**  
COM00008I



**BSc, BEng and MEng Degree Examinations 2019–20**  
**DEPARTMENT OF COMPUTER SCIENCE**

**Software Engineering Project (SEPR)**

Open Group Assessment

<b>Module</b>	Software Engineering Project (SEPR)
<b>Year</b>	2019/20
<b>Assessment</b>	2
<b>Team</b>	The Dicy Cat
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<b>Deliverable</b>	Testing Report

## TESTING REPORT

The inability to produce unit tests for the game did not stop the team from coming up with alternative ways of testing the correctness of our code. On the other hand, using various types of testing methods provided a comprehensive analysis of the system and examined the functionality in multiple areas.

Unexpected errors started to rise early in the project, which the team managed to quickly rectify by implementing useful and straightforward debugging tools. Because of this direct approach, the team is confident that the testing is sufficient to prove that the code meets the requirements specifications in most areas.

The biggest factor that conditioned the whole testing process, however, was time: towards the late stages of the development, features did not work as intended, and the team decided that given the limited time left it was not possible to safely make changes to the code without having the risk of upsetting the whole structure and functioning of the game. The team therefore decided to stick with the testing material that was produced so far and use this as a lesson for the next assessments.

Below there is a table with the functionality tests designed, and their results:

Test ID	Description	Requirement ID	Description	Logic Test Result
1	GameShouldRunTest	SCR_RUNNABLE	The game should run without crashes	Pass
2	FireTruckShouldAttackIfInRangeTest	N.A.	Detecting an ET fortress in the firetruck's range should trigger the firetruck to start attacking it with a water jet	Pass
3	FortressShouldGetDestroyedTest	N.A.	After fatally damaging an ET fortress, it should be marked as 'destroyed'	Pass
4	FortressShouldAttackIfInRangeTest	N.A.	Entering the range of an ET fortress should trigger the fortress to start attacking	Pass
5	FireTrucksShouldHaveDifferentStatsTest	UR_FIRETRUCKS_UNIQUE_SPEC	Each firetruck of the four should each have a specific statistic that differs it from the other three	Pass
6	ETShouldHaveUniqueSpecsTest	UR_ET_UNIQUE_SPEC	Each ET fortress should have unique statistics that make it different from other fortresses	Fail
7	TruckWaterTankShouldRefill	UR_FIRETRUCKS_REFILL, SFR_ALLOWED_TO_REFILL, SFR_CANCEL_REFILL, SFR_REFILL_OVER_TIME, SFR_REFILL_CONSTANT	Entering the range of the fire station should trigger the water refilling, assuming the water tank is not full	Pass
8	TruckHealthShouldRepairTest	UR_FIRETRUCK_REPAIR, SFR_ALLOWED_TO_REPAIR, SFR_CANCEL_REPAIR	Entering the range of the fire station should trigger the repairing, assuming the	Pass

			health bar is not full	
9	ETPatrolsShouldDestroyFireStationTest	UR_ET_DESTROYES_STATION, UR_GAME_TIMER	After 15 minutes of gameplay, the ET patrols should destroy the fire station	Fail - Not Implemented
10	GameShouldGetToGameOverScreenTest	UR_WIN_CONDITION, UR_LOSS_CONDITION	After destroying all ET fortresses or losing all four lives, the game should automatically reach the Game Over screen	Pass
11	FireTruckShouldMoveWhileDamagedTest	SFR_MOVE_WHILE_DAMAGED	Getting hit by a bullet should not impair the truck's movement abilities	Pass
12	FireTruckShouldMoveWhileWaterTankEmptyTest	SFR_MOVE_WHILE_EMPTY	The fire truck should be able to move even when the water tank is empty	Pass
13	FireTruckShouldBeSelectedBeforeGameTest	SFR_FIRETRUCKS_STATS, SFR_FIRETRUCKS_SELECTION	Before a new game is initiated, the user should be prompted with a fire truck selection screen	Pass
14	ScreenShouldSwitchTest	UR_MINIGAME, UR_DIFFICULTY_LEVEL, UR_CONTROLLER, UR_INSTRUCTIONS, UR_COLOUR_ACCESSIBILITY	The user should be able to move between different screens without system bugs or crashes	Pass
15	FireTruckShouldNotDriveOnBuildingsTest	N.A.	The firetruck should not be able to drive over buildings tiles	Pass
16	FireTruckShouldNotDriveOnRiversTest	N.A.	The firetruck should not be able to drive over rivers tiles	Pass
17	HealthBarShouldAlwaysBeVisibleTest	SFR_HEALTH_BAR	The health bar should be visible at all points in time during gameplay	Pass
18	WaterBarShouldAlwaysBeVisibleTest	SFR_WATER_SUPPLY_BAR	The water bar should be visible at all points in time during gameplay	Pass