Test Record

Test			Result			
Nr	Item	Action	Expected	Actual	Pass /Fail	Comments
1	Menu	Down key	Next menu item selected	Next menu item selected	P	
2	Menu	Down key when on last menu item	First item selected	First item selected	P	
3	Menu	Hit enter when Credits selected	Show Credits screen	Shows Credits screen	P	
4	Menu	Hit enter when the Exit selected	Exit the game	No action is taken	F	Game::updateGame() does not return true
5	Menu	Right key	Next menu item selected	Next menu item selected	P	
6	Menu	Right key when on last menu item	First item selected	First item selected	P	
7	Menu	Left key	Previous menu item selected.	Previous menu item selected.	P	
8	Menu	Up key	Previous menu item selected.	Previous menu item selected.	P	
9	Menu	Left key when on first menu item	Last item selected	Last item selected	P	
10	Menu	Up key when on first menu item	Last item selected	Last item selected	P	
11	Menu	Hit space when Credits selected	Show Credits screen	Shows Credits screen	P	
12	Menu	Hit space when High score selected	Show High Score screen	Show High Score screen	P	
13	Menu	Hit enter when High score selected	Show High Score screen	Show High Score screen	P	
14	Menu	Hit space when the Exit selected	Exit the game	No action is taken	F	Same as 4
15	Menu	Hit space when Play selected	Start Game	Start Game	P	
16	Menu	Hit enter when Play selected	Start Game	Start Game	P	

17	Menu	Hit ESC in menu	Exit the game	Exit the game	P	
18	High Score	Show high score list	High score list of the top 10 results in descending order (best score first).	High score list of the 10 latest results in descending order (Newest first).	F	HighScoreComponent::Submitscore
19	High Score	Show latest score in red	The last achieved score highlighted in red.	The last achieved score highlighted in red.	P	
20	High Score	Played a game with score 0.	Scores of zero should not be added to the list.	Scores of zero is added to the list.	F	same as 18
21	High Score	Hit ESC in High score	Return to menu	Return to menu	P	
22	High Score	Hit Enter in High score	Return to menu	Return to menu	P	
23	High Score	Hit Space in High score	Return to menu	Return to menu	P	
24	Credits	Hit ESC in Credits	Return to menu	Return to menu	P	
25	Credits	Hit Enter in Credits	Return to menu	Return to menu	P	
26	Credits	Hit Space in Credits	Return to menu	Return to menu	P	
27	Game Play	Hit ESC in Game play	Return to High score as if the player died	Return to High score as if the player died	P	
28	Game Play	Hit Space in Game play	Fires a shot	Fires a shot	P	
29	Game Play	Hit F in Game play	Fires a shot	Fires a shot	P	
30	Game Play	Hit Left Arrow in Game play	Move hovercraft to the left relative to the global coordinates.	Move hovercraft to the left relative to the global coordinates.	P	
31	Game Play	Hit Right Arrow in Game play	Move hovercraft to the right relative to the global coordinates.	Move hovercraft to the left relative to the global coordinates.	F	PlayerAI::tick if m_input->right
32	Game Play	Hit Up Arrow in Game play	Move hovercraft forward relative to the global coordinates.	Move hovercraft forward relative to the global coordinates.	P	
33	Game Play	Hit Down Arrow in Game play	Move hovercraft back relative to the global coordinates.	No action is taken	F	PlayerAI::tick if m_input->down
34	Game Play	Hit Q in Game play	Rotate the hovercraft to left.	Rotate the hovercraft to left.	P	

35	Game Play	Hit E in Game play	Rotate the hovercraft to right.	Rotate the hovercraft to right.	P	
36	Game Play	Hit W in Game play	Move the hovercraft forward relative to rotation.	Move the hovercraft forward relative to rotation.	P	
37	Game Play	Hit S in Game play	Move the hovercraft back relative to rotation.	Move the hovercraft back relative to rotation.	P	
38	Game Play	Hit A in Game play	Move the hovercraft left relative to rotation.	Move the hovercraft left relative to rotation.	P	
39	Game Play	Hit D in Game play	Move the hovercraft right relative to rotation.	Move the hovercraft right relative to rotation.	P	
40	Game Play	Hit P in running Game play	Pause the game.	Pause the game.	P	
41	Game Play	Hit P in paused Game play	Un-pause the game.	Un-pause the game.	P	
42	Game Play	Starting a new game session.	Score: 0	Score: Previous score,	F	ScoreComponent::reset
43	Game Play	Starting a new game session.	Money: 100	Money: 100	P	
44	Game Play	Starting a new game session.	Ammo: 100	Ammo: 100	P	
45	Game Play	Starting a new game session.	Health: 100	Health: 100	P	
46	Game Play	Starting a new game session.	Time: 00:00:00	Time: 00:00:00	P	
47	Game Play	Starting a new game session.	Kills: 0	Kills: 0	P	
48	Game Play	Killing small boat	Require 3 shots to be killed.	Require 4 shots to be killed.	F	GameObject::isDead <= instead
49	Game Play	Killing gun boat	Require 8 shots to be killed.	Require 9 shots to be killed.	F	same as above
50	Game Play	Killing small gun turrets	Require 5 shots to be killed.	Require 6 shots to be killed.	F	same as above
51	Game Play	Killing large gun turrets	Require 10 shots to be killed.	Require 11 shots to be killed.	F	same as above
52	Game Play	The players health reaches zero.	Player dies.	Game continues with negative health	F	GameWorld::physicsSimulation
53	Game Play	Being aimed at by gun turrets.	Gun turrets should track the player the shortest path in all directions.	When passing on the right they spin around clockwise, thus not the shortest path.	F	GunTurretAI::tick

54	Game Play	Hitting a health package.	Increase player's health by 25.	Increase player's health by 25.	P	
55	Game Play	Hitting a money package.	Increase player's money by 100.	Increase player's money by 100.	P	
56	Game Play	Hitting a ammo package.	Increase player's ammo by 20.	Increase player's ammo by 20.	P	
57	Game Play	Firing a shot.	Decrease player's ammo by 1	No action is taken	F	Player::fire
58	Game Play	Hitting enemy vessels.	Collision damage on enemy.	Collision damage on enemy.	P	
59	Game Play	Hitting enemy vessels.	Collision damage on player.	No action is taken	F	GameWorld::checkCollisionVSPlayer
60	Game Play	Hitting the bank of the river on right hand side.	Collision damage on player.	Collision damage on player.	P	
61	Game Play	Hitting the bank of the river on left hand side.	Collision damage on player.	Collision damage on player. But only when the hovercraft is all the way up on land	F	Rectangle.h Rectangle<T>::Overlap doesnt check correctly
62	Game Play	Hitting the bank of the river going forward.	Collision damage on player.	Collision damage on player.	P	
63	Game Play	Hitting the bank of the river going backward.	Collision damage on player.	Collision damage on player.	P	
64	Game Play	Hitting enemy vessels.	Collision occurs when the outer boundaries of ships overlap.	Collision occurs only on the right side of enemy. Thus making it possible to go partly through an enemy ship on the left side from players point of view.	F	same as 61
65	Game Play	Killing an enemy.	Increase the number of kills on the scoreboard by one.	Increase the number of kills on the scoreboard by one.	P	

66	Game Play	Killing an enemy.	Increase the score on the scoreboard by 10 points.	Increase the score on the scoreboard by 10 points.	P	
67	Game Play	Hitting the red mark	Ends level	Ends level	P	
68	Game Play	Ends first level	Next level loaded.	Next level loaded.	P	
69	Game Play	Ends last level	Game ends and the High Score screen is shown	Game ends and the High Score screen is shown	P	
70	Game Play	Hitting a package.	Collision occurs when the outer boundaries of ships overlap with the package.	Collision occurs only on the right side of the package. Thus making it possible to go partly through an package ship on the left side, without picking it up, from players point of view.	F	same as 61

Test Plan

Defect Nr: 1	Class/Function: HighScoreComponent.cpp, HighScoreComponent::submitScore	Test Nr: 18.1 20.1
Defect Description (symptom): The game does not check the High Score list and just writes every new score at the top of the list.		
Code, state and context description that triggered the defect: m_scores.insert(m_scores.begin(), score) line 35, should check that the score is not 0 and what place in the list to use instead of m_scores.begin().		
Input to trigger defect: HighScoreComponent::submitScore(score) with an score that’s 0 or a score that shouldn’t be in top.		
Expected output from working system: A correct highscore.txt		

Defect Nr: 2	Class/Function: PlayerAI.cpp, PlayerAI::tick	Test Nr: 31.1 33.1
Defect Description (symptom): The right arrow makes the hoover craft go left and the down arrow does nothing.		
Code, state and context description that triggered the defect: For the down arrow go->setVelocity(go->getVelocity() + hgeVector(0, 0)) line 27 For the right arrow go->setVelocity(go->getVelocity() + hgeVector(-PLAYER_ACCELERATION,0)) line 39		
Input to trigger defect: Pressing the down arrow makes the m_input->down() return true and the statement go->setVelocity(go->getVelocity() + hgeVector(0, 0)) is runned, it should be go->setVelocity(go->getVelocity() + hgeVector(0, PLAYER_ACCELERATION)). Same principle for rigth arrow.		
Expected output from working system: A positive PLAYER_ACCELERATION on the y-axis when m_input->down() is true and the same on the x-axis when m_input->right() is true.		

Defect Nr: 3	Class/Function: ScoreComponent.cpp, ScoreComponent::reset	Test Nr: 42.1
Defect Description (symptom): The score isn’t reset between runs.		
Code, state and context description that triggered the defect: ScoreComponent::reset() line 65 should set m_score = 0, but it doesn’t.		
Input to trigger defect: ScoreComponent::reset() with score from previous run in memory.		
Expected output from working system: m_score to be 0 on start of new game.		

Defect Nr: 4	Class/Function: GameObject.cpp, GameObject::isDead	Test Nr: 48.1 49.1 50.1 51.1
Defect Description (symptom): Killing an enemy takes one hit more than it should.		
Code, state and context description that triggered the defect: GameObject::isDead() returns false “(this->Health < 0)” line 41 but it should return true “(this->Health <= 0)”.		
Input to trigger defect: GameObject::isDead() with this->Health = 0.		
Expected output from working system: GameObject::isDead() should return true.		