

TankWars

Test Reports

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| Version | 1.6 |
| Peter Leung | petle728@student.liu.se |
| Simon Hellbe | simhe966@student.liu.se |
| Ludwig Krokstedt | ludkr175@student.liu.se |
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Table of Contents

| | |
|---------------------------|---|
| Game test..... | 3 |
| Server/Client test..... | 4 |
| Implementation test | 5 |
| Project comments..... | 6 |

Game test

| Test | Expected result | Actual result | Comment |
|--|---|---|---|
| gTest 1: Game map and tank entity rendered, including walls | Game prints out the map and entities | As expected | Tested: week 15 Accepted: week 15 |
| gTest 2: Tank moving and shooting correctly | Move with arrow keys and shoot with space. Projectile spawns in front of tank | Movement as expected. Projectile spawns at the same place relative tank. | Tested: week 15 Resolved: week 16 Accepted: week 16 |
| gTest 3: Tank and bullet colliding with other entities properly | Bullets hit an entity and disappear. | Bullets hit an entity but doesn't disappear | Tested: week 16 Resolved: week 17 Accepted: week 17 |
| gTest 4: Health and powerup implemented | Not implemented | Not implemented | |
| gTest 5: Game rules fully implemented | gTest 1-gTest 3. When a tank loses all its HP it disappears from the game | As expected | Tested: week 17 Accepted: week 17 Approved: week 18 |
| gTest 6: Game map rendered from generic TMX file | Load a tmx file without errors | As expected | Test: week 15 Accepted: week 15 |

Server/Client test

| Test | Expected result | Actual result | Comment |
|--|--|--|--|
| scTest 1: Client and Server classes created through Kryonet | Create a client and a server class | As expected | Tested: week 16 Accepted: week 16 |
| scTest 2: Client successfully connecting to Server | Establish a connection | As expected | Tested: week 16 Accepted: week 16 |
| scTest 3: Many Clients can successfully connect to one Server | Many clients establishes a connection to one server | Problem with ports, TCP/UDP | Tested: week 16 Resolved: week 17 Accepted: week 17 |
| scTest 4: Multiple clients communicating through Server | Same as scTest 5 | Same as scTest 5 | Same as scTest 5 |
| scTest 5: Send messages between Client and Server | One client sends a string message, one server receives | As expected | Tested: week 17 Accepted: week 17 |
| scTest 6: Send messages between multiple Clients and one Server | Many clients sends string messages to one server that receives | As expected Approved with more stable methods | Tested: week 17 Accepted: week 17 Approved: week 18 |
| scTest 7: Send key input from Client to Server | Client sends key inputs to one server that receives and register key inputs | As expected | Tested: week 17 Accepted: week 17 |
| scTest 8: Send key input from multiple Clients to one Server | Many clients sends key inputs to one server that receives and register the inputs | As expected | Tested: week 17 Accepted: week 17 |
| scTest 9: Clients receives package containing player statuses from Server | Many clients sends player status (key input, coordinates, rotation, direction) to one server that receives and register the statuses | openGL error, threading problem, null pointers, client sends package before the server is ready, priority order Updated and improved the methods and system | Tested: week 18 Resolved: week 18 Accepted: week 18 Approved: week 18 |

Implementation test

| Test | Expected result | Actual result | Comments |
|---|---|--|--|
| iTest 1: Server running a game locally with clients connected to it | Client connects to server locally | As expected | Tested: week 18 Accepted: week 18 |
| iTest 2: Server Host controls implemented | A game host a server and with working movement controls | As expected | Tested: week 18 Accepted: week 18 |
| iTest 3: Clients controlling their tanks in game | A client controlling it's tank with keyboard arrow keys | As expected | Tested: week 18 Accepted: week 18 |
| iTest 4: Client can see enemy tanks and update positions as the other players controls it's tank | Combined with iTest 1 and iTest 6 | As expected | Tested: week 18 Accepted: week 18 |
| iTest 5: Collision with game objects | Game objects collide with each other when collision appears | Approved the distance and hitboxes | Tested: week 18 Accepted: week 18 Approved: week 18 |
| iTest 6: Clients running on different computers connected to the same Server | Different computers can run the game and connect to another computer that is host | Problems with ip, port, TCP/UDP | Tested: week 19 Resolved: week 19 Accepted: week 19 |
| iTest 7: Frames per second (fps) rate, not lower than 60 fps | The game frames per second rate is not lower than 60 fps | As expected | Tested: week 19 Accepted: week 19 |
| iTest : Game fully implemented with network | A totally working game | A lot of problems, such as null pointers, network and game to sync and work, menu transitions that has been resolved and approved. Too long to specify here. | Tested: week 19 Resolved: week 19 Accepted: week 19 Approved: week 19 |

Project comments

To code a local game was not a problem and we are very fortunate to have found the Slick 2D library for our game. To create a network with client and server was also quite easy with the Kryonet library. The major problems occurred when it was time to merge these two together, many problems that we couldn't foresee. Now in the end of the project we can state that we have basically coded two separate games, one locally and one with network.