Test Document

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| Testing | What to press | 1 Press | Hold Down |
| Accelerate/ Move Forward | w | When you press w, the spaceship should move/accelerate forward(where the spaceship head is pointing to) | When held down you can see the acceleration |
| Turn Right | a | The spaceship will turn right with the origin base at it center. (Note perform this test while the ship is still or it will drift due to different acceleration) | continual rotation |
| Turn Left | d | The spaceship will turn right with the origin base at it center. (Note perform this test while the ship is still or it will drift due to different acceleration) | continual rotation |
| Decelerate / Move backward | s | When you press w, the spaceship should move/accelerate backward(where the spaceship back is pointing to) | negative acceleration |
| Shoot | Enter | The spaceship will shoot. And the amount of bullet will be dependence on its weapons | The spaceship will continuously shoot bullets |
| Pause | Ctrl+Space | The game will pause | N/A |

**Multiplayer:**

* Choose Multiplayer from the menu
  + If player 1 dies, then player 2 is expected to start playing
  + If a player dies 5 times, then the game is over

**Collision**

When asteroids collide with the spaceship, collision will be detected

* During the collision, the explosion sprite must appear, and the spaceship must disappear
* When the spaceship disappears after a collision, it must re-spawn at a set pair of coordinates
* However if there is collision between aliens and spaceship, nothing should happen.

**Asteroids**

* Asteroids appear with a randomly oriented velocity
  + When shot, they are expected to split into three smaller asteroids
  + The smaller asteroids are expected to have a velocity relative to the direction at which the projectile hit them.
  + When spaceship collides with asteroid, explosion and loss of life is expected

**Power Ups**

* Power Ups will appear randomly on the screen.
* When colliding with the shield power up
  + A blue orb must appear around the spaceship.
  + Collisions with asteroids will trigger an explosion, but no loss of life
  + Being shot by alien will not trigger a loss of life
  + The orb will wear off after a set amount of time
* When colliding with the weapon power up
  + A red orb must appear around the spaceship
  + The weapon of the spaceship will now be upgraded
  + It must have a larger projectile spray than it did beforehand
  + The red orb will wear off after a set amount of time
* When colliding with the life power up
  + The “Lives” counter at the top of the screen must increment by 1

**Projectiles**

* Projectiles will shoot straight and when it hits an asteroid or alien, it disappears at the same time as the object (note asteroid will split into smaller pieces).
* Alien projectiles do not affect asteroids but successfully eliminate spaceship
* There is also an explosion after contact with a spaceship or alien

**Aliens**

* Successfully spawn aliens at every 3000 points
* Alien AI follows spaceship even after death/ re-spawn and shoots at a regular rate.

**Save/Load**

* Try to save/load a game.
  + When the game is loaded, all the on-screen elements should be at the right position and contain all of their previous data.

**High-Score**

* Choose single player mode and shoot at least one asteroid and die 3 times.
  + The score should be saved to the high score list.
* View the high scores by returning to the main menu and selecting high scores.
  + The score that was achieved on the most recent game should appear with its corresponding date.
* Restart a new game in multiplayer mode and each player should shoot at least 1 asteroid, but one of the players should achieve a higher score than the other.
  + The higher score should be saved to the high score list and should be verified as detailed above.

**Options**

* Difficulty starts at the setting you set it to be.
  + A second play through of the game will reset the difficulty to 1.

**Difficulties**

* Levels will be complete when all the asteroids are clear.
  + Entering a new level will lead to an upgraded weapon. (Upgrade on weapons will end on level 7)
  + Entering a new level will spawn more asteroids than were present on the previous level