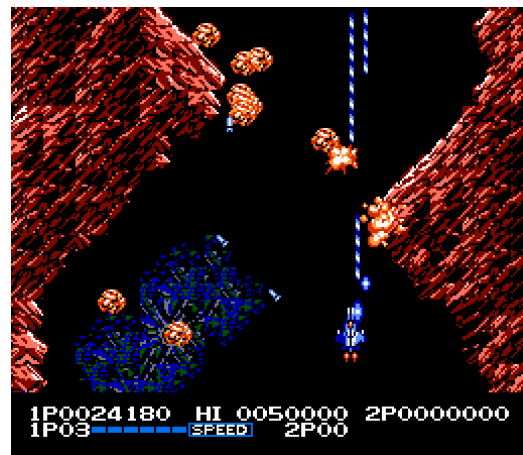


Top-Down Space Shooter

This project will be a top down space shooter. It should function similar to the Life Force video game for NES. You can take a look online if you are not familiar with this type of game. I provided you with a number of assets that you can use for this project. Some of the assets were free and if the assets required payment I purchased them from the asset store and asked the creator if I could distribute them to my class. I only provided the assets that I was given permission to distribute. You may not release your game online in any way unless you purchase the assets for yourself. This was the only way that I could get permission to use the assets for 50 students.



There are several different issues that we need to deal with in order to make a playable demo. When you press a key on the gamepad your ship will move left and right. You also need to make sure that the ship tilts. This game will be a top down shooter but when you press left and right there is no reason that we cannot tilt the ship accordingly. At this point I think that we should be able to tilt the ship over some period of time.

The next issue will be shooting. Your ship should be able to fire some type of missile.

You should have some enemy ships that some come towards the user, and some should run in a formation.

When the missile hits the enemy it should explode.

You will also need to be able to display the score.

The background will need to scroll to keep up with everything. There is no need to do anything fancy. A few lines of code should be able to help you accomplish this with the assets I provided to you.

Since this a simple game demo you will not need to have upgrades or multiple levels.

Rubric

Tilt

- Can your ship tilt when you press left or right?
- Does the ship return to normal position when you release it?
- Is the tilt based on time and has some maximum value?
- For example, 45 degree tilt over half a second (not over based on number of calls to update).



15 points

Movement

- The ship moves correctly when you press left or right.
- Movement should be based on time.

10 points

Changing Direction

- The ship transitions well from moving right to left.
- When you release the right arrow and press the left arrow the ship will tilt over time to the left maximum.

10 points

Camera

- The camera has been changed from a perspective camera to an orthographic camera. If you leave the camera as the standard style the images will look odd as they get to the edges of the board. I made my demo as a top down game, but you could do yours as a side view as long as it works the same way.

10 points

Background

- Apply a nice skybox and basic directional light to make your ship look nice.



2 points

Enemies

- You should generate enemies off the screen and they will fly in the direction of your ship.

10 points

Enemies - Flight Pattern

- You should make the ships move in some sort of flight pattern. A basic example of this is flying in a straight line and then there is a pause and it launches a new wave in a different spot.

10 points



Shooting

- You should be able to fire a missile that moves in the direction fired until it is off the screen

5 points

- When you missile hits the enemy it will remove itself and the enemy from the screen.

5 points



Special Effects

There are lots of explosion animations that you can download from the asset store. Feel free to download any and play an animation when the missile hits the target.

5 points

