Artificial Intelligence Project

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I created 2 FCL files to get fuzzy risk values for the enemy and player. Depending on their remaining health and their damage, fuzzy values will always be calculated by their risk. (Fuzzy Logic implemented)

When the player comes in close contact with one of the enemies, the player's health gets reduced by taking enemy's damage, and also the player's damage will also be increased.

Upon close proximity the enemy will receive a similar but less level of damage as the player.

When the enemies lose their health, they will die and stop moving.

(I was trying to change the enemy colour when they die, but I haven't figured it out that part yet)

I originally designed the game in a way that the enemies re-spawn position would be random after the player touch's the enemy, but it was quite buggy.

(This is how I coded. I wanted the enemy's new position to be seen upon re-spawn. However, the enemy did appear randomly in another position but also maintained a copy of itself in its original position.)

```
// == Replace the enemy location when the enemy meets the player ==
model.set(row, col, '\u0020');
row = (int) (DEFAULT_SIZE * Math.random());
col = (int) (DEFAULT_SIZE * Math.random());
```

Depth Limited Search Algorithm was used for one of the enemies (Red coloured enemy character with the enemy Id '\u0032') to find the player's location and it followed the player based on that. This seems to work perfect when the player is close to this enemy.

A Neural Network was implemented so the user can get messages whenever the player is near the enemies.

I created a factory class for the enemies so that I could spawn the enemies in the game scene, but I couldn't implement that part yet.

When the player loses its health, it will display the message "Game over" and it should pause the game.