Trouble in *CHINA*town!

Trouble in *CHINA*town will be a top down 2D dungeon crawler focussed on combat and stage progression. The game will be centred around a solo character whose mission is it to rescue his friend who has been captured by the Chinese government and held captive.

As mentioned, TCT will have 2D graphics and be viewed from a top down perspective. Each room will fill the whole screen and the character may be moved around using traditional WASD controls. The game will consist of several levels, culminating in a final boss level after which the game ends. Each level will consist of a central room and some number of auxiliary rooms, though only one room will ever be displayed at once. The objective of each level is to collect an object from every room, required to progress to the next level.

The central room, where each level begins contains a monument/chest/door device that accepts the objects found in each room. When all objects are collected the player may progress a level. Each room will contain different, largely if not solely combat based challenges to acquire each object. Combat will be against enemy AI NPCs that will vary in strength, speed and other degrees of complexity to make combat both challenging and interesting. Once clearing a room, the player will a few options for where they want to go next as each room will have at least 2 doors leading to other rooms. A unique feature we want to implement is that the door the player entered through will lead to a different room to the one they came from. This way the player cannot easily move backwards through the rooms and is therefore encouraged to explore.

Combat will involve both melee and ranged attacks and the NPCs will have these types of attacks as well. The player may only fire/attack in the direction they are looking which is controlled by mouse movement. There will be a penalty for dying which will require the player to lose a few lives and perhaps some items. To avoid dying, the player will be able to collect gear in some way (better weapons, armour, powerups etc) either bought with coins dropped by enemies or simply found in rooms. This gear can be kept as long as the player wants but the player's inventory will have a limited capacity so the player must choose what gear to keep and what to discard.

The necessary libraries are as follows:

- Entities: This library will facilitate all dynamic parts of the game such as the player, NPCs and weapons. It will include classes for each type of NPC and an extensive class for the player. These will be designed in a class hierarchy.
- View/UI: This library will take care of the graphical side of the game implementing the game world on screen and the menu functionality.
- AI: This library will implement the various NPC behaviours.
- Game Library: This library will contain the actual game logic, governing the map layout, door behaviour and progression.
- Load/Save/Info: This library implements serialisation or a game state class to enable saving and loading of games. Will write necessary save information to a text file and reload it into the game when needed.