Topic and Group Selection Template

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Group name: The Rogue-lackeys
CCIS GitHub location: https://github.ccs.neu.edu/derekc/CS3520-2017FA-PROJ

Provide a high-level prose description of your project.

A basic rogue-like dungeon crawler with procedurally generated levels, enemy placement, and items placement. Combat will be turn-based and death will be permanent.

Describe the major features of your project. Provide this in a "checklist" format. Be as specific as possible, and provide at least five distinct features.

- Procedural dungeon generation
- Fog of war system
- Combat
- Items/inventory system
- Grid-based movement
- Turn-based movement and combat
- Have a floor or level systems with progressing difficulty

Describe the advanced feature(s) of your project, and the library/SDK/API you plan to use.

- AI/Algorithms (OpenSteer)
- Audio (OpenAL)
- Possibly 2D Graphics (Simple DirectMedia Layer, OpenGL)

Describe plans for what kind of user input your program will take and how it will affect the state of the program.

Our program will take inputs to control a character and guide them throughout the dungeon and defeat enemies.

Briefly describe plans for dynamic memory management and class inheritance structure.

Memory would be allocated and freed every floor. Room layout, enemies, and items would be allocated before every floor, and be freed after every floor. Possibly free memory of objects when they are finished being used (defeated enemies, opened doors, picked up items). Player object will only be freed after death.

Enemies will likely all be of the same enemy class, and each one will inherit some distinct features, but their sub-class will contain the properties. Every tile will likely be of the same class, and sub-class will determine the properties such as permeability. Rooms could also have a designated class to determine their properties such as enemies present, whether the player is present, and visible tiles.