

# Project 3

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**Due** Sep 27, 2019 by 11:59pm      **Points** 100      **Submitting** a text entry box or a file upload  
**File Types** txt      **Available** after Sep 19, 2019 at 12am

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In this project, you will apply the concepts of a scrolling tile-map, FSM, and perspectives.

In this and all future projects, use radians for angles, not degrees!

The following are the basic requirements:

- . A block of comments at the beginning of the codes file to serve as the necessary initial documentation (anything you think the reader / grader should know).
- . Create a starting screen that shows game instructions and START button.
- . Create a 1000 x 1000 pixel scrolling tile-map. At any time, only a portion (400 x 400) of the map needs to be shown.
- . Use custom characters (you may use the ones created from the previous project).
- . The tile-map contains the main character, at least two NPC adversary characters and some additional collectible items.
- . At least two kinds of the additional collectible items are required: (1) something to be collected (when all of them are collected, the player wins), and (2) something that helps the main character to defeat the NPC (makes the player character empowered).
- . The NPCs should always be facing the direction that they are moving by using perspectives (PVectors, heading, etc.)
- . Make the NPC smarter than the previous project. For example, when the unempowered main character shows up within a range of the NPC, the NPC chases it; otherwise, the NPC should be wandering randomly, etc. Program this using FSM / state-based design.
- . Add winning and losing effects.

Be creative!

The above are the minimal requirements. You may add additional features to make your game even more enjoyable.

Please upload the code of your program as a text file (\*.txt) to canvas.

Grading: Grading of this exercise will be based on the following:

Artistic and creative effort: 10%

Documentation: 10%

Completeness: 80%

If your program has syntax errors - the grade will be 0. This will be true for all future projects.

Each hour late will cost 2 points; each day late will cost 40 points.

You may discuss among yourselves for this exercise. However, everyone must write his/her own program. You are allowed to exchange ideas, but NO PROGRAM SEGMENTS, PROCEDURES, FUNCTIONS MAY BE EXCHANGED OR COPIED from any source.