### **[Final Project!!](https://mdc.blackboard.com/webapps/assignment/uploadAssignment?content_id=_3548859_1&course_id=_43201_1&group_id=&mode=view)**

**826 Gauntlet of Doom**

You're to write a basic console game with the following premises:

The Miami Drivers (MD) have been infected with the ignore the traffic rules virus and are now driving the wrong way on 826. They simply don't see you and will flat out run head-on into you!! Your job is to navigate all the way to the exit at the top of the screen!!

The game mechanics work like this:

* **The highway**
  + The highway is a minimum of a 20 row x 10 column playable grid.
  + The highway at it's most basic has no obstacles, just like a flat playing field
  + The highway generates all the oncoming MD from the top several rows of the grid
  + You are spawned in the bottom several rows of the grid
  + You need to find characters from the ASCII character set to represent the MD and you
  + EXTRA CREDIT:
    - Place obstacles or other objects on the grid that you can't drive through
    - Make the game at night, so you can only see the 3 squares around a streetlight placed in the grid
* **The "Stupid" MDs**
* These MD's generally drive straight down the road with occasional turns since hey why not?
* These MD's only have three move actions.
* **The "Smarter" MDs**
  + These MD see you and actively attack. They seriously want you to be killed!!
  + They will attack as soon as they get in range (you define the range)
  + They are smart however, so they sometimes act like "Stupid" MD's to fool you
  + These MD's have four move actions, but may decide to not use them all.
* **The MD's Attacks**
  + **Head On Death (HOD)** - this attack only works if the MD is directly next to you and attempts to ram your car. It has a 65% chance of succeeding. When the attack succeeds you lose.
  + **Sonic Horns of Doom (SHD)** - this attack is valid from two squares away and has a 75% chance of hitting you. If you are hit by the SHD you will spin out and be pushed away from the car up to three squares and end up pointing in a random direction. If you are hit twice in a row, your car will stall and not be able to move for a turn.
* **The Human aka you**
  + You, being a Superior Human, have a fast car that has five move actions.
* **The Human Defense and Attacks**
  + **Turn Signals of Accuracy (TSA)** - the TSA will cause an oncoming MD to shift one square in a random direction and has a 63% chance of hitting.
  + **High Beams of Blinding (HBB)** - the HBB has a 45% chance of hitting. This causes a MD to spin out in one direction for 2 squares. If it hits another MD, the MD is destroyed.
* Movement and turns
  + You and the MDs can move in any of the surrounding directions and squares up, down, left, right, and diagonally. Movement consumes one action per square.
  + Any attack by you or the MD takes one action.
  + You and the MDs may not occupy the same square.

That's the game basics. Please note that some of the code I'll be showing will be windows specific.

Additionally

* Extra credit
  + Any additional attacks for the MDs and you (if and only if you have successfully implemented the base game).
  + The use of direct keyboard input vs a menu
  + Sound
  + Anything cool

Extra credit must be DOCUMENTED at the top of your code in a comment box.

Please note this is your program, using code you find on line without attribution is plagiarism and is not tolerated. This program will use most of what we learned throughout the semester. You must have properly formatted code, proper functions and data types.

This is your proof you learned the material! Have fun - be Logical!!

ALSO NOTE: This project is due by 8:00 AM December 19th. Late submissions as always are not accepted. The code must be loaded to Blackboard here, there is no Mimir drop for this. Please ensure you compress and zip the WHOLE PROJECT FOLDER!!!! This project allows multiple submissions so if you are worried about not getting something in, you have ample opportunities to submit it. Any grade is better than an automatic 0.