For my senior project I am designing a First Person Shooter video game with 3-D elements. Within this project I plan to learn more about Textures, Lighting and visual effects, and also an AI. I will be writing this program in C++ with using OpenGL and SDL libraries. Last semester I barely covered textures in my programs, so I want to blend in the surrounding and make the game feel more drawn together. Also I did not touch any lighting in any of my games, within this game there will be many lights, this will cause shadows on the objects and monsters. With visual effects, I want to make a user interface (UI) where the player will see their health, ammo, armor, items, lives, and weapons. This UI will be stationary and continuously show those items I mentioned before. I want this game to have some AI in it, that way you are not just shooting objects that don’t move, so the AI will work like this: With each monster they will have a radius about them that they continuously check to see if the player is inside of and if the player is they will then proceed to the player. Also if 2 monsters are close by, they will know by keeping track if the other monster is inside their circle, and if the player moves into one monsters circle, that monster will tell the other that the player is within his circle. I would also like to implement a Menu one where the player could pause the game, and within that the player could save their game, and when they want to come back to the game they could then load into where they last saved. Controls will be simple, they will have WASD movement (i.e. moving forward is W, strafing left is A, backward is S, and strafing right is D), they will look around with the mouse and shoot with the left mouse button. Also the number keys will change which weapons the player is using, along with using health potions. A scoring system in the game will give it a fun time, and plus keeping a Highscore will give this game some competition.

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| Points | |
| Lightning Effects | 20 |
| Controls   * Movement keys * Mouse keys * Number keys | 15   * 5 * 5 * 5 |
| AI | 15 |
| Textures | 20 |
| Visual Effects   * UI * Menu Screen | 15   * 5 * 10 |
| 3-D objects | 10 |
| Sound | 5 |
| Saving/Loading   * Saving * Loading | 10   * 5 * 5 |
| Scoring System   * Keeping track during the game * Highscore list | 10   * 5 * 5 |
| Total | 120 |

I feel that this point system is good since my main focus will be on lighting effects, visual effects, and textures. These points will give me a better understand about how games look and feel. The sound, 3-D, and controls are items that I have worked with before and will are going to points that are going to be simpler than the other main focus. The AI will be another challenging point, but not my main focus. An A for this project would be 105-120 points, a B would be 90-104 points, a C would be 75-89, and D would be 55-74, and F is below that.