1. Introduction: Overview of your project (1 paragraph)
2. Target Population: Who are you directing this software and what are you doing to make it appeal to them? (2 paragraphs)
3. Purpose to the consumer: what makes your program unique? What makes it a better option than other software or is there a lack of software in this field? Is it helpful, how so? (3 paragraphs)
4. Constraints: List possible bugs and what factors you will be considering beforehand to avoid those bugs. (Numbered list and 2 paragraphs)
5. Conclusion: Why you are moving forward with this project. Overview of project strategy. (1 - 2 paragraphs)

**Pyrate**

Capstone project proposal by R. G. Blaine

Introduction:

*Pyrate (Noun): Archaic spelling of “pirate”*

A roguelike game is a subgenre of role-playing video games. Typically, it features a “dungeon crawl” through procedurally generated levels, turn-based gameplay, and ASCII or tile graphics. Such games also frequently feature permanent character death. The term “roguelike” is derived from the 1980 game Rogue which, although not the first game of its type, is considered the forerunner for the genre. Modern action role-playing and survival games such as Diablo and UnReal World were heavily inspired by roguelikes.

Target Population:

Even today, roguelike games still have a degree of popularity. Aside from the action role-playing and survival games inspired by them, there are scores of true roguelike games available for iOS and Android, not to mention the hundreds available on PC and Mac. So why add another one to the pile? The vast majority of them adhere to hackneyed tropes and mechanics popularized by the original such games. This tends to make them more popular with older users who grew up with the original games. By putting a fresh spin on some of those core ideas, I hope to make Pyrate popular with more younger consumers, as well.

Gamers come in all shapes, sizes, genders, ethnicities, and ages. Anyone who enjoys playing computer games is a potential user for Pyrate. It does not require lightning fast reflexes or encyclopedic knowledge of the game’s backstory or characters. All that is required is a desire to take a break from the drudgery of reality and enjoy an adventure. Who hasn’t daydreamed about becoming a fantasy hero or heroine and exploring an ancient dungeon while fighting fantastic monsters for gold and glory?

Purpose to the Consumer:

What is the purpose of any game? The answer, of course, is to entertain… to have fun. Even educational and training “games” are generally designed to be fun. Whether it’s gobbling dots and dodging ghosts or trying to stack suits of cards in order while obeying an arbitrary set of rules, a good game engages the player and challenges them. A great game also stimulates the player’s imagination.

What makes a game fun? As previously mentioned, engaging and challenging the player are important, as is stimulating their imagination. But what do those things entail? Engagement simply means that a player feels a connection to or investment in the game. They *want* to gobble that next dot and avoid the ghost. It feels important to them. Often this simply comes down to a sense of accomplishment and pride at having beaten their own (or another player’s) “score.”

Likewise, challenge is closely related to engagement. If the game is too easy, then there is no sense of accomplishment. If the game is too hard, then it becomes frustrating. Finding the right balance is key. If you can stimulate the player’s imagination at the same time, allowing the player to suspend reality and immerse themselves in the game, then you (the game’s creator) have accomplished something wonderful and your game will likely be successful.

Constraints:

As always, time is the great enemy. Ninety hours will allow for much more detail to put into the project than the 15-hour final projects of individual courses. However, this also can lead to overreaching. I have a lot of great ideas for this project, but I hope to reign in my ambitions enough to be able to complete a functional, elegant, and complete, working program within the allotted time. More, of course, can always be added later. The other primary constraint will be figuring out, writing, and debugging the code. This is fairly new territory for me, so I expect a few stumbling blocks and missteps.

1. Time
2. Coding
3. Debugging

These are the constraints you expect on any programming project. In order to deal with the issue of time, I intend to plan out the program with a limited scope. For example, instead of creating dozens of different enemies and the possibility of hundreds of game levels, I will start out with just two types of enemies and ten game levels. If time permits, then more can be added. Coding is the meat of any programming endeavor and I feel that my skills (with the help of some online advice and tutorials) should be up to the challenge. Debugging will simply be a matter of dedicating the proper amount of time to finish and clean up the code to make sure it does what it is supposed to do. With planned features like line-of-site visibility, enemy AI, procedurally-generated levels, and pathfinding, there are a lot of areas for potential bugs. Time will be the crucial ingredient for stamping them out.

Conclusion:

In conclusion, I am moving ahead with this project because I feel that it will challenge and engage (and thus, entertain) me. I think that it will enhance my skills and provide a good example of them when I am looking for work. On the surface, it seems like a simple project, but there are a lot of complexities hidden beneath that simple facade. I plan to delve deeply into all of them and explore the possibilities in order to increase my experience in the field of programming. And if there’s a bit of gold and glory to be had along the way, so much the better.