CS426 Game project proposal

Team name: Interchaotic Studios
Team members: Sam (+people not in the class)
Game name: One Step Backward
Proposed work:

1. **Provide an overview of your game (give a short description about the game, i.e., game plot, objective, etc.):**
   You are of an alien race that desires to explore and enforce peace within the galaxy, and have spatial manipulation abilities that generally has given you the edge over your foes. Recently, an unknown force from a different universe has sensed your growing power and has decided to lock you away in a foreign world to prevent you from potentially exceeding and destroying it. Inside the foreign world, your skills are inhibited by numerous creatures and entities, and each defeat of a major "boss" or discovery of a secret area could net you additional abilities or bonuses.

2. **What are the characters and their resources (e.g., health points, number of characters, weapons, etc.) in the game? What are the behaviors of the characters and how do they interact with each other and their resources?**
   There is only a single character that you play as (the protagonist).
   There are health points and energy, which is consumed when using abilities, and gained as pickups sometimes after defeating enemies.
   There are varying types of mentally-constructed "beam weapons" that can be upgraded through the game – the major source of killing enemies.
   There are types of bombs (mental blasts of varying strength).
   There are various abilities, not listed above, most critically an ability that lets you perform an action, go back in time, and then simultaneously perform another action, which will allow for very unique bossfights and mechanics not present in some of the existing Metroidvania genre.

3. **What types of conflicts do you have in the game?**
   Player vs. Environment
   Player vs. Enemies
   Puzzles

4. **Provide sketches/drawings to show how your game will be played. (Attach to this page)**
   If you've ever played or heard of "Super Metroid," then the gameplay will be in a similar style.

5. **What is the main language you will use to implement the game?**
   C++

6. **What tools/libraries you will use?**
   OpenGL/GLUT

7. **What types of user interface will you provide/use?**
   There will be a HUD and a menu that allows you to customize the abilities that you currently have equipped.

8. **What are the milestones you plan to have? Please give a short description and an expected finish time each for milestone.**
   - Basic planning (areas/challenges/abilities/etc): 2-3 weeks (parallel with other programming tasks)
   - OpenGL Window / Basic Pixel Drawing: 1 week
   - Sprite layers and custom properties: 1 week
   - Pixel Operations and dynamic, per-pixel light sources: 1 week
   - Pixel sprites and animation keying support: 1 week
   - Keyboard/Mouse interface: 1 week
   - Core gameplay engine and camera settings: 3-6 weeks
   - Demoing/Testing/Revisions/Extra features: All Time Remaning
   - Graphics: Parallel with Development of game as possible, done after game mechanics work otherwise.

9. **What are the difficulties/challenges do you foresee? How do you plan to address them?**
   Given all of the classes I am taking, there also is the potential for unexpected delays popping up that push the project back. Due to this, I've tried to be very conservative on time spent for some of the sections, and consider the milestones to be more of a fluid target than a set-in-stone goal. My vested interest in making this project and seeing it through to the end is very high, as I've been wanting to make this game for over a year and a half now.

10. **How would you divide the tasks among your team members (if more than one)?**
    I'm going to work on the core programming for the entire game.
    Graphics will likely be done by friends of mine outside of the class, and if necessary, graphics can be taken from free-to-use packs online.
    If more people join in, tasks can be deliberated as I see fit.

11. **Why do you think your game is interesting/exciting?**
    People still enjoy these types of games today, so I think that the concept and execution will be interesting and exciting, plus it offers a different approach to what has already been done in that genre.

12. Do you model your game after an existing game? If so, what is it?

The main source of inspiration would be from Super Metroid and various 2D spinoffs (Fusion/Zero Mission).