Cart253: Exercise 7 – Early Design Concepts and Ideas for Project 3 (GDD)
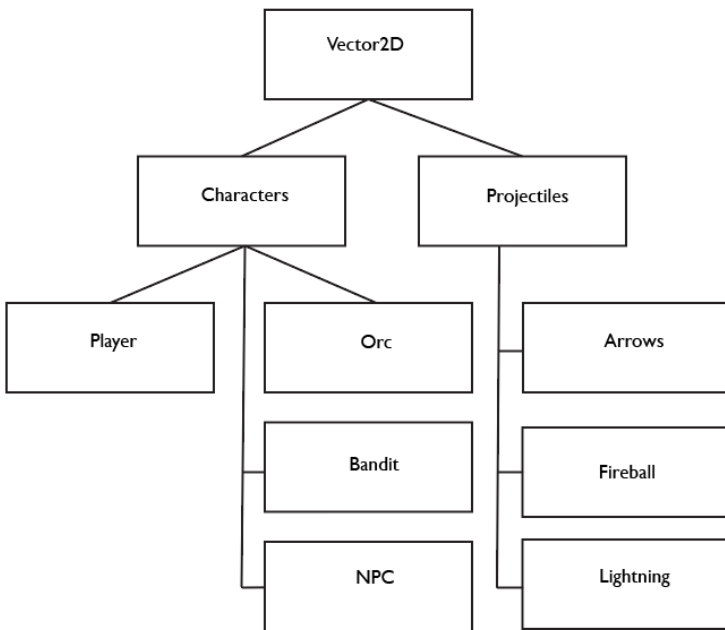
Summary:

The idea is to program a basic RPG game where the character will have a mission to accomplish and will need to go into a dungeon and fight orcs. The player will discover a narrative story and will fight other enemies outside the dungeon also.
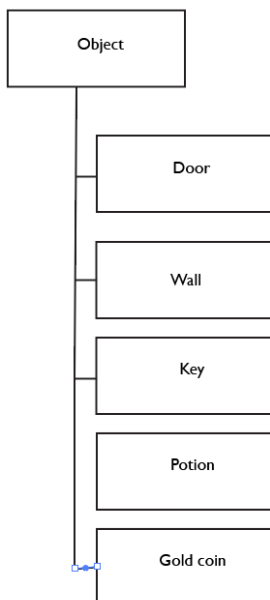
Description:

It is a story that takes place in my universe that I've been writing about and creating for the past 9 years. It is set in a medieval fantasy world where Humans, Orcs, Elves, Dwarves and other races live in an unstable harmony. The player will discover a small part of this world. The player will be able to walk in a forest and the camera will follow him. He will be able to swing a sword, fight enemies, and accomplish basic quests. He will move in the four basic directions in a pixelized version of the world. There will be several classes depending of the nature of the sprites. Objects or item will extend a super class that will handle the interactions with the player, something that I did not do for project 2, and the same principle for the different NPCs and the player extending a more general Character class. The first prototype is project 2, a level in a dungeon with Orcs where the player must find a key to go through a door towards the next level. Project 3 will take the code of project 2 and will extend and refine it so it implements polymorphism and inheritance. The character will be able to do more things and the story will be completer and more compelling. The art will be done by me and I will implement the new version of p5 where animated GIFs are supported. It will be kind of open world, but the narrative will be mostly linear. The player will be able to do minor actions at different times and it would be nice if the story could implement some decisions that could affect the game in different ways. Maybe, if I have time, I will try to implement Magic in the game, as the character could throw fireball projectiles for example. I will use arrays to store information and the projectile objects if I make the decision of going that way and I could use them also for animations if GIFs do not work well. I will use images, sounds and I will look into the Phasor Library to implement ideas like Tilemaps. I will try to implement a menu that could be opened in game.

This is my idea for the moving sprites classes and their inheritance:

```
                          ┌──────────┐
                          │ Vector2D │
                          └──────────┘
                   ┌─────────────┴─────────────┐
            ┌────────────┐              ┌─────────────┐
            │ Characters │              │ Projectiles │
            └────────────┘              └─────────────┘
         ┌───────┴────────┐                 │
   ┌────────┐      ┌──────────┐       ┌──────────┐
   │ Player │      │   Orc    │       │  Arrows  │
   └────────┘      └──────────┘       └──────────┘
                   ┌──────────┐       ┌──────────┐
                   │  Bandit  │       │ Fireball │
                   └──────────┘       └──────────┘
                   ┌──────────┐       ┌──────────┐
                   │   NPC    │       │ Lightning│
                   └──────────┘       └──────────┘
```

The objects inheritance would be much simpler as they all share the same methods regarding their interaction with the player (was it found?) but act differently depending on what the object is. It will simplify my code from project 2 and prevent repetitions.

```
   ┌──────────┐
   │  Object  │
   └──────────┘
        │
        ├──┌──────────┐
        │  │   Door   │
        │  └──────────┘
        ├──┌──────────┐
        │  │   Wall   │
        │  └──────────┘
        ├──┌──────────┐
        │  │   Key    │
        │  └──────────┘
        ├──┌──────────┐
        │  │  Potion  │
        │  └──────────┘
        └──┌──────────┐
           │ Gold coin│
           └──────────┘
```

It may change as I explore the Phasor Library.

To-do List

Art	Programming	Music/Sound
- Design the environments - Design the characters - Design the GUI - Create the animations - Design the objects - Create the menus and Narrative screens	- Adapt the code of the different classes to polymorphism and inheritance - Code the whole dungeon, create the different levels - Code outside of the dungeon (village? Forest? Cave? Castle?) - Code the projectile concepts and specify according to their subclasses - Code the different screens in another class perhaps?	- Create the music for inside the dungeon/battle music - Create the music for the forest - Create the music for the village? Cave? Menus/Screens? - Gather the different sounds for the different objects and events

Example of what the game would look like