

## **Testing Summary:**

The testing for this assignment was far more extensive than any other assignment in this class so far. With several different classes involved in this assignment I had to do several different tests with each class. Several of the subclasses had special parameters for the attack or armor variables. In order to get these to work correctly I had to test the debugger inside xcode to make sure that data was being processed as expected. Below you will find a more detailed testing summary for each subclass. I found that during some of the testing process it was a bit easier to increase the total strength of the classes in order to see if the specials worked correctly. I did make sure to test them with their actual strength values to see how they performed, but I felt that it was important to make sure that the specials worked correctly. I also seeded the value of 4 for my random number generator.

### **BARBARIAN**

This was the first class that I created and I did much of my initial testing using this class. After first creating this class I checked the setter/getter methods and confirmed that they were returning and taking values as expected. I had to change a few things while I did this but they were just syntax errors so no deep troubleshooting was required.

I did find after creating these classes that I needed some way to have my creatures fight each other. With this in mind I decided to create the Battle class, which accepted two pointers to a creature class. Inside of the battle class I had a do/while loop that would roll the dice for each round and determine what the damage should be for 1 round. I used two barbarian classes to initially test this class. For the most part things went as I expected. I did have to mess with the order of things and making sure that the loops and if/else statements worked as expected. This became more in depth as I included checks for some of the specials that they other classes have.

Once I had my battle class setup I was able to have my barbarian class fight against all of the other classes. I found that the matchups with the Goblin class were fairly close and lasted for several rounds. However, against all of the other classes the matches end quickly. This matched what I expected since the Barbarian class lack armor and didn't really have that high of attack potential.

### **GOBLIN**

When testing the Goblin class it was important to confirm that the special attack worked correctly. This special attack cut the damage in half for any other class if the Goblin rolled a 12. This change would stay in effect for the rest of the game. On top of this requirement I also had to make sure that this special damage did not happen if the other class was also a Goblin. In order to confirm this aspect, I tested a Goblin vs Goblin class and confirmed that when a 12 was rolled, no changes were made to the Goblin Achilles variable. I then proceeded to test each of

the other classes to make sure everything ran correctly. I found that placing a breakpoint inside of my if statement for checking if the Achilles was cut did a good job confirming that the correct path was being followed after the Goblin special attack. I did find that this class was fairly weak when compared to other classes. It was fairly even with the Barbarian class but could not keep up with the other 3 classes. If the Goblin was able to get its special attack of things were much more competitive, but the frequency of rolling a 12 was rather low. For the most part the Goblin class performed as expected. Similar to the Barbarian class it is a weak class both strength and attack wise.

### **Reptile People**

The reptile people class was fairly straight forward. I basically copied the design from the barbarian class and then proceeded to test it against other classes. I found that class to be very strong and it won matches against the Goblin and Barbarian classes almost instantly. The matches with the Blue Men and Shadow classes were much closer and could easily go either way. Since this class did not have any sort of special there was not much to test besides making sure that it was being processed correctly.

### **Blue Men**

This class was similar to the reptile people. It is a very strong class that I expected to perform well. I found that this class performed almost identically to the reptile people and won matches easily against the weaker classes. Against the strong classes it was 50/50, which is what I was expecting

### **The Shadow**

The Shadow class was a more unique class that had a special skill, which allowed it to elude attacks 50% of the time. I found the easiest way to perform the 50/50 check was to randomly select a 1 or 2 during each defense roll. If a 2 was rolled I would return a value of -1, which would then enter an if statement that would set the attack points to 0 for that round. I placed a breakpoint inside this if statement and inside the random number selector to make sure that the correct path was being followed for a 1 or 2.

During the testing of this class I found it to have varying degrees of success. Defensive wise it is fairly weak, but the ability for it to dodge attacks makes it very powerful. I did find though that one powerful attack for the Reptile People or Blue Men would end the match rather quickly.