William Kim
kimw@oregonstate.edu
Assign3
Reflection

Design: I will create a Creature class as my base class that will hold variables for strength, armor, attack dice roll count, attack dice number of side, defense dice roll count, defense dice number of side. My constructor will initialize the variables. I will have 5 functions, one will handle the attack, another will handle the defense, the next will get armor value, then a get strength value, and also a function to handle the dice roll. Then I will create all of the characters to inherit the Creature class and their default constructor will initialize the variables to all of the set numbers.

Issues: I quickly realized the way I created my structure would not work with the assignment. The numbers that were initialized by each sub class was not being passed to the parents functions. I ended up having to create pure virtual functions in order to for the attack, defense, getArmor, and getStrength functions so that I can have the subclasses overload them. Once I got that working, my functions and characters were functioning as planned.

Testing:
I created a driver program that created instances of all of the characters. The first test was a barb vs barb fight, the chars initialized correctly and the attack rolls and defense rolls were coming back random and in range of what is expected of the dice[0-12]. So Barb1 attack was returning random in range integers and Barb2 defense was also returning random in range integers. I only tested the barbarians since all of my functions for each character is the same at this time. I was unable to implement the special attack and special defense.

Outputs:

```
Barbarian 1 vs Barbarian2
ATTACK: 7
DEFENSE: 8
No damage occured

_____________________________________________
Barbarian 1 vs Barbarian2
ATTACK: 6
DEFENSE: 7
No damage occured

_____________________________________________
Barbarian 1 vs Barbarian2
ATTACK: 8
DEFENSE: 12
No damage occured

_____________________________________________
Barbarian 1 vs Barbarian2
```

```
ATTACK: 10
DEFENSE: 6
DEFENDERS ARMOR: 0
DEFENDERS STRENGTH: 12
Damage to strength 4
Barb 2 was damaged new strength is 8
```