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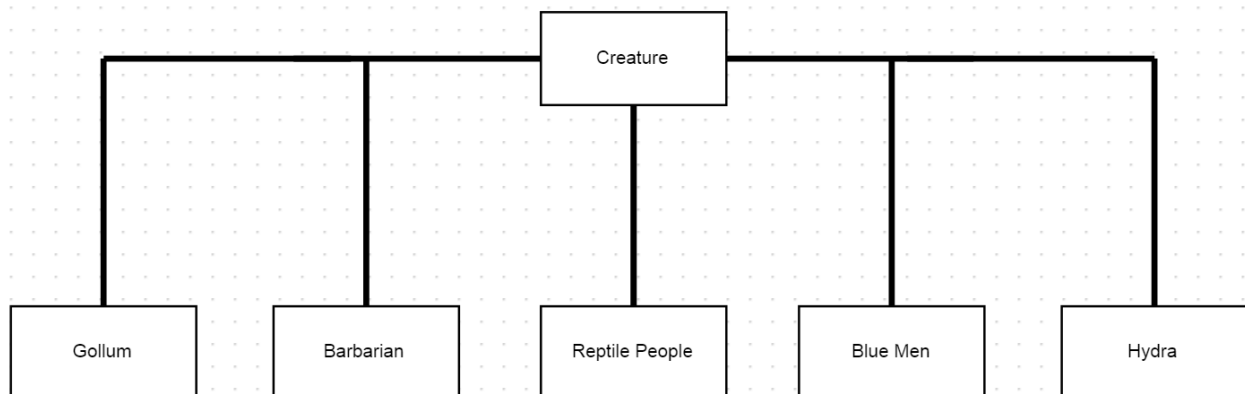
CS 162

Assignment 3

Design:

Make each subclass inherit from the creature class. Make attack and defense virtual in creature and the make them different in each subclass based on the number of sides for each die and the number of dice. Have a roll function in the base class to get random numbers (have sides as a parameter). Declare variables as public so they can be accessed outside just to make it easier. Set number of heads for each equal to zero except hydra so it can be changed possibly) in the strength-calculating function. Set values in constructor for armor, heads, and strength points. Strength points= attack strength – defense strength – armor. In the main, the creature instantiations needs to be pointers in main. Also needs to be a menu type thing. The things I didn't include in this are obvious like what else needs to be in main.

Class Hierarchy:



Understanding the problem:

Needs a creature class and subclasses with some virtual functions for different uses in two classes because some of the functions are different for the subclasses. The subclasses must be inherited. Also some of the understanding is stated in the description above.

Devising a plan: See above.

Looking Back: The original plan didn't really change. I had a lot of syntax problems but eventually they were resolved. I'm glad I designed the way I did otherwise I would have had more issues. The results tell me that my plan worked.

Test plan:

Input	Expected Output	Actual Output	Reason
Barb & Barb	Barb wins	Barb wins	Normal

Barb & Reptile	One wins	Reptile wins	Normal
Barb & Blue guy	One wins	Blue guy wins	Normal
Barb & Gollum	Barbarian wins	Barbarian wins	Normal
Barb & Hydra	Hydra wins	Hydra wins	Normal
Gollum & Gollum	Gollum wins	Gollum wins	Normal
Gollum & Reptile	Reptile wins	Reptile wins	Normal
Gollum & Blue guy	Blue guy wins	Blue guy wins	Normal
Gollum & Hydra	Hydra wins	Hydra wins	Normal
Reptile & Reptile	Reptile wins	Reptile wins	Normal
Reptile & Blue guy	One wins	Blue guy wins	Normal
Reptile & Hydra	One wins	Hydra wins	Normal
Blue guy & blue guy	Blue guy wins	Blue guy wins	Normal
Blue guy & hydra	One wins	Blue guy wins	Normal
Hydra & Hydra	Hydra wins	Hydra wins	Normal
R	Invalid input seg fault	Seg fault	Invalid input
12	Invalid input seg fault	Seg fault	Invalid input