

# MAT 202 – Computer Science II

## Homework #5 - A Pet Hierarchy with I/O

1. Name \_\_\_\_\_
2. Due: 11/9/05 10:30am
3. Grading

Given the Pet Hierarchy from HW #4, add file input/output to this program. Prompt the user for an input file, and then open up this input file. The input file contains an unknown number of animals inside it, in the format shown before. Using a vector of pointers to the Animal type will likely be the easiest way to implement this arbitrary length of Animals. You should be able to use the overloaded input operator for pointers to Animal, however some edits to detect eof may be required. Once the file has been read into the vector, output information about each animal to the screen as shown below.

### Sample Input File

```
c 10 3 black
d 1900 100 angry
c 5 2 tabby
d 2200 80 happy
d 15 3 speedy
```

### Sample Output to Screen

```
The black cat is 3 feet long, 10 pounds and cannot fly.
The angry dragon is 100 feet long, 1900 pounds and can fly.
The tabby cat is 2 feet long, 5 pounds and cannot fly.
The happy dragon is 80 feet long, 2200 pounds and cannot fly.
The speedy dragon is 4 feet long, 15 pounds and can fly.
```

### Extra Credit

Add a LuckDragon class which is exactly like a dragon except:

It can only grow to be 10 feet long at the most.

Its type is "Luck Dragon" instead of "dragon"

Input for a luck dragon is denoted by an l (ell, not a one) instead of a d