CS211 Lab 12 Warm-Up Activity

```cpp
class Animal {

protected:

    int numLegs;

    bool vertebrate;


Public:

void setNumLegs(int legs)

        numLegs = legs;


void setVertebrate(bool hasBackbone)

vertebrate = hasBackbone;

};


class Domesticated : public Animal {

protected:

    string food;


public:

    void setFood(const string& f)

        food = f;

};
```

```cpp
class Wild : public Animal {
protected:
    string continent;
    bool endangered;

Public:
void setContinent(const string& c)
continent = c;

void setEndangered(bool isEndangered)
endangered = isEndangered;
};


class Pet : public Domesticated {
protected:
    int lifeExpectancy;
    string breed;

public:
    void setLifeExpectancy(int years)
lifeExpectancy = years;
```

```cpp
void setBreed(const string& b)

        breed = b;

};

class Livestock : public Domesticated {

protected:

    int feedFrequency;

    string habitat;

public:

    void setFeedFrequency(int frequency)

        feedFrequency = frequency;

    void setHabitat(const string& h)

        habitat = h;

};

int main() {

    Pet labrador;

    labrador.setNumLegs(4);

    labrador.setVertebrate(true);

    labrador.setFood("Dog food");

    labrador.setLifeExpectancy(12);

    labrador.setBreed("Labrador Retriever");


    Wild asianElephant;

    asianElephant.setNumLegs(4);
```

```
asianElephant.setVertebrate(true);

asianElephant.setContinent("Asia");

asianElephant.setEndangered(true);


Livestock merinoSheep;

merinoSheep.setNumLegs(4);

merinoSheep.setVertebrate(true);

merinoSheep.setFood("Grass");

merinoSheep.setFeedFrequency(2);

merinoSheep.setHabitat("Pasture");


Wild honeyBee;

honeyBee.setNumLegs(6);

honeyBee.setVertebrate(false);

honeyBee.setContinent("Worldwide");

honeyBee.setEndangered(false);


Pet petPython;

petPython.setNumLegs(0);

petPython.setVertebrate(true);

petPython.setFood("Small rodents");

petPython.setLifeExpectancy(30);

petPython.setBreed("Ball Python");
```

```
    Wild wildPython;

    wildPython.setNumLegs(0);

    wildPython.setVertebrate(true);

    wildPython.setContinent("Africa");

    wildPython.setEndangered(false);


    return 0;
}
```