Practice Problem 6

Define three child classes of Mammal named Dolphin, Platypus and Human, and one child class of Human named CSStudent. Override methods and instance variables to correctly model each class, as described below, so that the driver program included works correctly.

- A Dolphin does not lay eggs, and is often overheard saying "ak, ak, ak, ak"
- A Platypus lays eggs, and is often overheard saying "errr"
- A Human does not lay eggs, and is often overheard saying "I'll take a grande latte with a double-shot of espresso"
- A CSStudent does not lay eggs, and is often overheard saying "I love programming!"

```python
class Mammal:
    def __init__(self, sound):
        self.sound = sound

    def laysEggs(self):
        return False

    def speak(self):
        print( self.sound )


# Define all child classes here
class Dolphin(Mammal):
    def __init__(self):
        Mammal.__init__(self, "ak ak ak")

class Platypus(Mammal):
    def __init__(self):
        Mammal.__init__(self, "errr")

    def laysEggs(self):
        return True

class Human(Mammal):
    def __init__(self):
        Mammal.__init__(self, "I'll take a grande latte with a double-shot of espresso")

class CSStudent(Human):
    def __init__(self):
        Human.__init__(self)
        self.sound = "I love programming"

# Driver program
d = Dolphin()
d.speak()
print( d.laysEggs() )
```

```
p = Platypus()
p.speak()
print( d.laysEggs() )

h = Human()
h.speak()
print( h.laysEggs() )

s = CSStudent()
s.speak()
print( s.laysEggs() )
```