# Polymorphism

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# Lab

- Given a Mammal class (see next slide), do:
  - Develop classes for Dog, Cat, Horse, and Pig
  - Have these classes inherit the Mammal class
  - Override the speak() method to output how each animal "speaks". For example, you could do: coud << "Dog " << name << " barks" << endl;
  - In the main() function:
    - Define an array of Mammal*
    - Create an object for each animal using the new operator and put their pointers inside the array defined in the previous step
    - Have each animal "speak" using a for loop

```cpp
class Mammal{
public:
    Mammal(void);
    ~Mammal(void);
    virtual void Speak() const = 0;
protected:
    string name;
    int age;
};

Mammal::Mammal(void) : name("noname"), age(1) {
    cout << "Mammal constructor..." << endl;
}

Mammal::~Mammal(void){
    cout << "Mammal destructor..." << endl;
}
```