

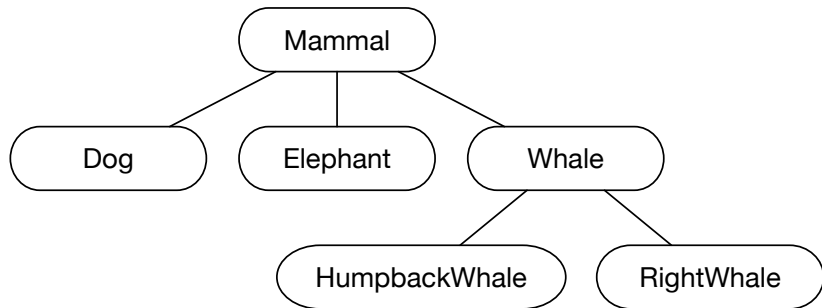
CIS 1068

April 14, 2026

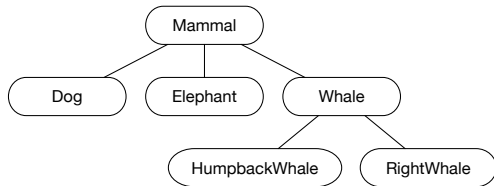
Administrative Stuff

- ▶ Grocery shopping assignment due
- ▶ Remaining assignments posted
- ▶ Reading: ch. 1-9

Warm up. Class Hierarchy



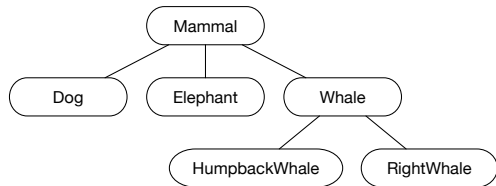
OK?



```
Mammal m = new Whale();
```

- ▶ What can m store?
- ▶ What is stored?
- ▶ OK?

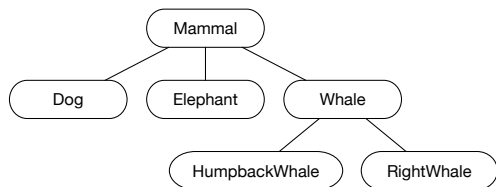
OK?



```
Mammal m = new Whale();
```

- ▶ What can `m` store?
location of a mammal
- ▶ What is stored?
- ▶ OK?

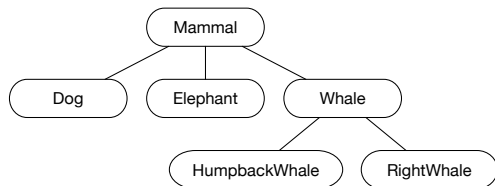
OK?



```
Mammal m = new Whale();
```

- ▶ What can `m` store?
location of a mammal
- ▶ What is stored?
location of a Whale
- ▶ OK?

OK?

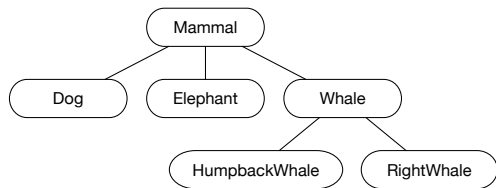


```
Mammal m = new Whale();
```

- ▶ What can `m` store?
location of a mammal
- ▶ What is stored?
location of a Whale
- ▶ OK? **Yes**

Why? a whale is a mammal

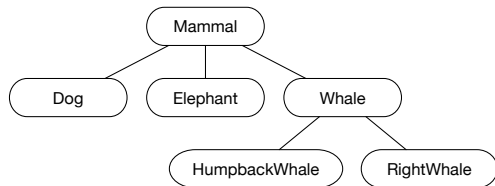
OK?



```
RightWhale r =  
    new Whale();
```

- ▶ What can r store?
- ▶ What is stored?
- ▶ OK?

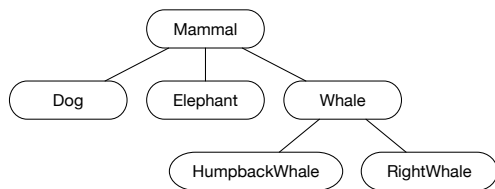
OK?



```
RightWhale r =  
    new Whale();
```

- ▶ What can r store?
location of a RightWhale
- ▶ What is stored?
- ▶ OK?

OK?

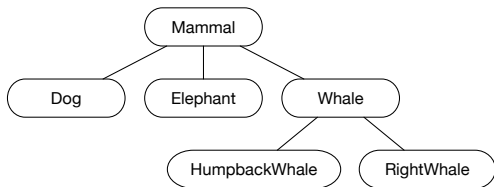


```
RightWhale r =  
    new Whale();
```

- ▶ What can `r` store?
location of a RightWhale
- ▶ What is stored?
location of a Whale
- ▶ OK?

OK?

Does NOT compile

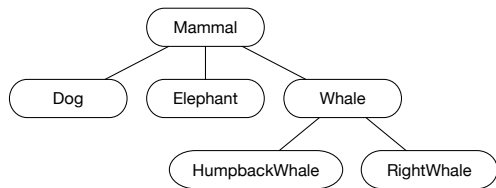


```
RightWhale r =  
    new Whale();
```

- ▶ What can r store?
location of a RightWhale
- ▶ What is stored?
location of a Whale
- ▶ OK? **No**

Why?
all RightWhales are Whales
but not all Whales are RightWhales

OK?

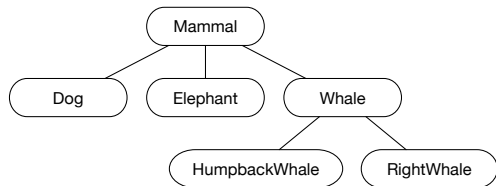


Mammal m =

```
new RightWhale();
```

- ▶ What can m store?
- ▶ What is stored?
- ▶ OK?

OK?

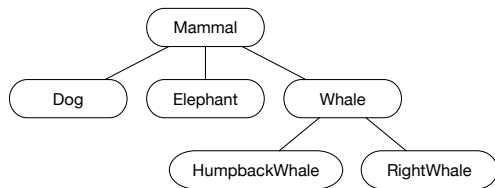


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Mammal m =
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new RightWhale();
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location of a mammal
- ▶ What is stored?
- ▶ OK?

OK?

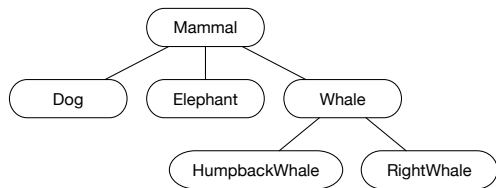


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Mammal m =
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new RightWhale();
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- ▶ What can `m` store?
location of a mammal
- ▶ What is stored?
location of a RightWhale
- ▶ OK?

OK?



```
Mammal m =
```

```
new RightWhale();
```

- ▶ What can `m` store?
location of a mammal
- ▶ What is stored?
location of a RightWhale
- ▶ OK? **Yes**

Assignment 10

End of Semester

April 2026

Su	Mo	Tu	We	Th	Fr	Sa
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

- ▶ **April 14** today
- ▶ **April 23** last class
- ▶ **April 27** last lab
- ▶ **April 30** final exam (at 8 AM)