

CS46B - Module #2

Inheritance & Polymorphism

- A class has access to non-private data & methods of all its superclasses - as if they were its own
- All classes invisibly extend `Object` if they don't visibly extend some superclass

Onion diagram:-



→ layers can access inner layers.

Object methods:- `toString`, `equals`, `hashCode`, `clone`, `wait`, `notify`.

→ Every class needs at least 1 ctor.

↳ if not provided → compiler implicitly creates a no-args version.

Polymorphism:-

- Where superclass is expected, a subclass is accepted.

Overriding is for when shared behaviour, implemented in the superclass, isn't right for some subclasses

JVM uses two kinds of storage:-

- References go to the "stack" || - Objects go to "heap"

```
Parrot polly = new Parrot();  
Bird birdy = polly;
```

Object — Heap
= Stack(References)