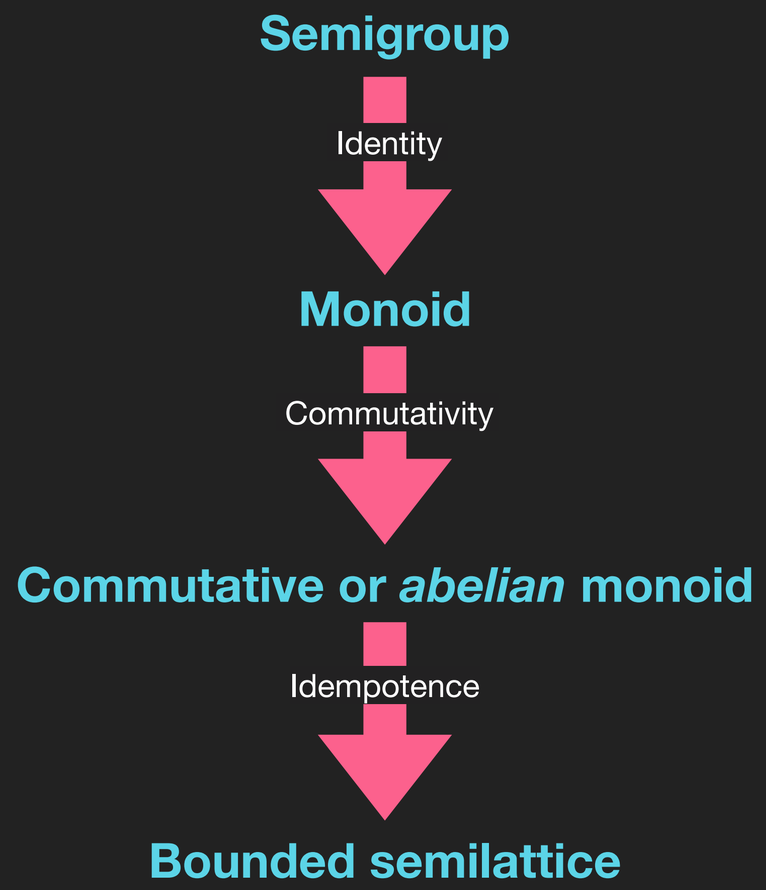
A monoid, which is also commutative and idempotent is a **bounded semilattice**

```
class Semigroup a where
  append :: a → a → a

class Semigroup m ⩽ Monoid m where
  mempty :: m

class Monoid m ⩽ CommutativeMonoid m

class CommutativeMonoid m
  ⩽ BoundedSemilattice m
```



I’m a programmer, why do I care ?