Givens

Givens

A way for the compiler to inject arguments automatically

```
def combineAll[A](list: List[A])(using combinator: Combinator[A]): A =
   list.reduce((a,b) => combinator.combine(a,b))

given intCombinator: Combinator[Int] with {
   override def combine(x: Int, y: Int) = x + y
}
```

Uses for givens:

- changing program behavior depending on context, i.e. contextual abstractions
- type classes
- automatic dependency injection
- type-level programming

Synthesize new givens based on existing givens

```
given listOrdering(using Ordering[Int]): Ordering[List[Int]] with { ... }
```

Scala rocks