Path-Dependent Types

Path-dependent types

Types that only exist while wrapped by other types or instances

```scala
class Outer {
  class Inner
}

val outer = new Outer
val inner = new outer.Inner // outer.Inner is a separate TYPE = path-dependent type
```

Instance-dependent types are all different

```scala
val otherInner: outerA.Inner = new outerB.Inner // error: type mismatch
```

All instance-dependent types are children of a class-dependent type

```scala
val bigInner: Outer#Inner = new outerB.Inner // ok
```

Uses: type-checking/inference in libraries, type-level programming

Scala rocks