Generics

to save the day

```kotlin
val account = SavingsAccount("GB00...", 10_000.toBigDecimal(), "0.024".toBigDecimal())
println(account.interest)

val (updatedAccount, _) = account.withdraw(10.toBigDecimal())
println(updatedAccount.interest)
```

```
val account = SavingsAccount
        account.interest

val  updatedAccount       = account.withdraw
        updatedAccount.interest
```

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```
fun <T : Account> T.withdraw(amount: BigDecimal): Pair<T, BigDecimal>
```

```kotlin
fun <T : Account> T.withdraw(amount: BigDecimal): Pair<T, BigDecimal> = run {
    val account = this as Account
    when (account) {
        is CurrentAccount -> account.copy(balance = balance - amount) as T to amount
        is SavingsAccount -> account.copy(balance = balance - amount) as T to amount
        /* ommited */
    }
}
```

Generics

to save the day

```kotlin
fun <T : Account> T.withdraw(amount: BigDecimal): Pair<T, BigDecimal> = run {
    val account = this as Account
    when (account) {
        is CurrentAccount -> account.copy(balance = balance - amount) as T to amount
        is SavingsAccount -> account.copy(balance = balance - amount) as T to amount
        /* ommited */
    }
}

val account = SavingsAccount("GB00...", 10_000.toBigDecimal(), "0.024".toBigDecimal())
println(account.interest)

val (updatedAccount, _) = account.withdraw(10.toBigDecimal())
println(updatedAccount.interest) ✓
```

Generics

type erasure