

MonadicFold m s a

```
perform :: (Monad m, Monoid r) => MonadicFold m s r -> s -> m r  
(!!) :: Monoid r => s -> MonadicFold m s r -> m r
```

Setter s t a b

```
sets :: ((a -> b) -> (s -> t)) -> Setter s t a b  
mapped :: Functor f => Setter (f a) (f b) a b  
  
over, (%~) :: Setter s t a b -> (a -> b) -> s -> t  
set, (.~) :: Setter s t a b -> b -> s -> t  
(+~) :: Num a => Setter s t a a -> a -> s -> t  
(*~) :: Num a => Setter s t a a -> a -> s -> t  
(~-) :: Num a => Setter s t a a -> a -> s -> t  
  
...  
(%=) :: MonadState s m => Setter s s a b -> (a -> b) -> m ()  
(.=) :: MonadState s m => Setter s s a b -> b -> m ()  
(+=) :: (Num a, MonadState s m) => Simple Setter s a -> a -> m ()  
(*=) :: (Num a, MonadState s m) => Simple Setter s a -> a -> m ()  
(-=) :: (Num a, MonadState s m) => Simple Setter s a -> a -> m ()  
  
...
```

Fold s a

```
folded :: Foldable f => Fold (f a) a  
foldMapOf :: Monoid r => Fold s a -> (a -> r) -> s -> r  
foldrOf :: Fold s a -> (a -> r -> r) -> r -> s -> r  
toListOf :: Fold s a -> s -> [a]  
anyOf :: Fold s a -> (a -> Bool) -> s -> Bool  
traverseOf_ :: Applicative f => Fold s a -> (a -> f r) -> s -> f ()  
  
...  
(^. ) :: Monoid r => s -> Fold s r -> r  
view :: (MonadReader s m, Monoid r) => Fold s r -> m r  
use :: (MonadState s m, Monoid r) => Fold s r -> m r
```

Action m s a

```
act :: Monad m => (s -> m a) -> Action m s a a  
acts :: Monad m => Action m (m a) a  
  
perform :: Monad m => Action m s a -> s -> m a  
(!!) :: s -> Action m s a -> m a
```

Getter s a

```
to :: (s -> a) -> Getter s a  
foldMapOf :: Getter s a -> (a -> r) -> s -> r  
  
...  
(^. ) :: s -> Getter s a -> a  
view :: MonadReader s m => Getter s a -> m a  
use :: MonadState s m => Getter s a -> m a
```

Lens s t a b

```
lens :: (s -> a) -> (s -> b -> t) -> Lens s t a b  
_1 :: Field1 s t a b => Lens s t a b  
_2 :: Field2 s t a b => Lens s t a b  
  
...  
_9 :: Field9 s t a b => Lens s t a b  
inside :: Lens s t a b -> Lens (e -> s) (e -> t) (e -> a) (e -> b)  
outside :: Prism s t a b -> Lens (s -> r) (t -> r) (a -> r) (b -> r)  
  
type Lens s t a b = forall f. Functor f => (a -> f b) -> s -> f t  
(%~) :: Functor f => Lens s t a b -> (a -> f b) -> s -> f t  
(%) :: MonadState s m => Lens s s a b -> (a -> (r, b)) -> m r
```

Iso s t a b

```
iso :: (s -> a) -> (b -> t) -> Iso s t a b  
from :: Iso s t a b -> Iso a b s t  
wrapping :: Wrapped s s a a -> (s -> a) -> Iso s s a a  
enum :: Enum a => Simple Iso Int a  
simple :: Simple Iso a a  
mapping :: Functor f => Iso s t a b -> Iso (f s) (f t) (f a) (f b)  
curried :: Iso ((a,b) -> c) ((d,e) -> f) (a -> b -> c) (d -> e -> f)  
uncurried :: curried :: Iso (a -> b -> c) (d -> e -> f) ((a,b) -> c) ((d,e) -> f)  
  
au :: Iso s t a b -> ((s -> a) -> e -> b) -> e -> t  
auf :: Iso s t a b -> ((r -> a) -> e -> b) -> (b -> s) -> e -> t  
under :: Iso s t a b -> (t -> s) -> b -> a
```

Equality s t a b

```
id :: Equality a b a b  
  
mapEq :: Equality s t a b -> f s -> f a  
fromEq :: Equality s t a b -> Equality b a t s  
substEq :: Equality s t a b -> ((s ~ a, t ~ b) => r) -> r
```

Traversal s t a b

```
traverse :: Traversable f => Traversal (f a) (f b) a b  
  
type Traversal s t a b = forall f. Applicative f => (a -> f b) -> s -> f t  
mapMOf :: Monad m => Traversal s t a b -> (a -> m b) -> s -> m t  
mapAccumROf :: Traversal s t a b -> (acc -> a -> (acc, b)) -> acc -> s -> (acc, t)  
mapAccumLOf :: Traversal s t a b -> (acc -> a -> (acc, b)) -> acc -> s -> (acc, t)  
transposeOf :: Traversal s t [a] a -> s -> [t]  
elementOf :: Traversal s t a b -> Int -> Traversal s t a b  
elementsOf :: Traversal s t a b -> (Int -> Bool) -> Traversal s t a b  
  
...  
(%~) :: Applicative f => Traversal s t a b -> (a -> f b) -> s -> f t  
(%) :: (MonadState s m, Monoid r) => Traversal s s a b -> (a -> (r, b)) -> m r
```

Prism s t a b

```
prism :: (b -> t) -> (s -> Either t a) -> Prism s t a b  
_left :: Prism (Either a c) (Either b c) a b  
_right :: Prism (Either c a) (Either c b) a b  
  
remit :: Prism s t a b -> Getter b t  
review :: MonadReader b m => Prism s t a b -> m t  
reviews :: MonadRader b m => Prism s t a b -> (t -> r) -> m r  
reuse :: MonadState b m => Prism s t a b -> m t  
reuse :: MonadState b m => Prism s t a b -> (t -> r) -> m r
```