

CSE 130 (Wi 25) Handout

March 11, 2025

Question 1

There is a common pattern across two *datatypes*

```
mapList :: (a -> b) -> List a -> List b    -- List
mapTree :: (a -> b) -> Tree a -> Tree b    -- Tree
```

Lets make a class for it! What type do w

```
class Mappable t where
```

```
  map :: _____
```

```
instance Mappable List where
```

```
  map _____ = _____
```

```
  map _____ = _____
```

```
instance Mappable Tree where
```

```
  map _____ = _____
```

```
  map _____ = _____
```

Question 2

Recall the Monad instance for [a]

How can you use >>= and return to implement the map function for lists?

```
map :: (a -> b) -> [a] -> [b]
map f xs = do
```

```
_____
```

```
_____
```