CS 558 | October 2024

Note Title 2024-10-01

Review for Midterm

```
map f [1,2,3]
  where
    f x = show (x) ++ "."
```

```
map length ["abc", "def"]
```
→ [3, 3]

map :: (a → b) → [a] → [b]

map tail ["abc", "a", "cde"]

(c → d) → [c] → [d] [a] → [a]

a = Char
c = [a] = [Char]
d = [a] = [Char]

[[Char]] = [[Char]]

["abcacde"]

["bc", "", "de"]

map tail

(c → d) → [c] → [d] [a] → [a]

c → d = [a] → [a]
c = [a]
d = [a]

map tail :: [c] → [d]
map tail :: [[a]] → [[a]]

map zip

(a → b) → [a] → [b] [c] → ([d] → [(c,d)])

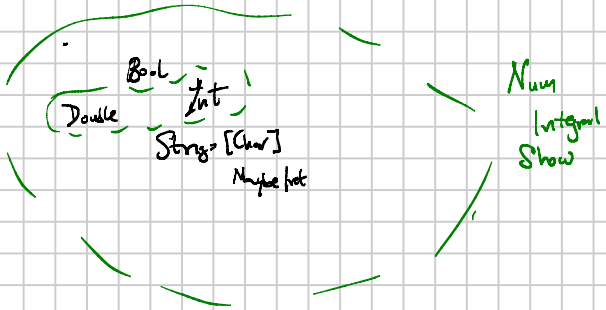
a → b = [c] → ([d] → [(c,d)])
a = [c]
b = [d] → [(c,d)]

map zip :: [a] → [b]
= [[c]] → [[d] → [(c,d)]]

```
((flip zip) ["a", "b"]) ["c", "d"]
```
→ [("c", "a"), ("d", "b")]

```
\x → (\y → x) :: a → (b → a)
```

a → b → a




```
three x = (x,x,x)
three :: a -> (a, a, a)
```