FuzzySet

Safe Haskell	Trustworthy
Language	Haskell2010

This module defines the fuzzy set implementation which will be used within the project, as well as some basic operations on them.

Documentation

```
type FuzzySet = [Int]
```

A FuzzySet is the data type we'll be using to represent fuzzy sets. We use a list of Int s, each value represents the degree of membership of the Int index to the fuzzy set as a number between 0 and 10. Discreet lists and integer-only operations were preffered due to implementation convenience, but one can find it trivial to switch to any of the rich datakinds provided by CλaSH.

```
unionT :: FuzzySet -> FuzzySet -> FuzzySet
```

unionT is the function representing the combinational behaviour of a circuit which perform a union of FuzzySets.

```
union :: Reader Config (Signal (FuzzySet, FuzzySet) -> Signal FuzzySet)
```

union is the sequential circuit modelling of a FuzzySet unifier.

```
intersectT :: FuzzySet -> FuzzySet -> FuzzySet
```

intersectT returns the intersection of two FuzzySets.

```
intersect :: Reader Config (Signal (FuzzySet, FuzzySet) -> Signal
FuzzySet)
```

intersect is the sequential circuit modelling a FuzzySet intersector.