

# Homework 2: Vectors

**Due** No Due Date      **Points** None

***This homework is ungraded. Feel free to ask and answer questions via Canvas, but don't post complete solutions.***

Consider the type `Vect` from the slides. For each definition think carefully about the type of the function.

(a) Define a function `zipW` on vectors that works in the same way as `zipWith` on lists.

(b) Define a function `lst` that computes the last element of a vector.

(c) Define a function `initial` that removes the last element of a vector.

(d) Define a function `palin` that tests whether a vector is a palindrome.

```
palin : Eq a => Vect n a -> Bool
```

**Note:** You should use the functions `lst` and `initial` in your definition. **Don't** try to define and use a function for reversing a vector. Here are some test cases.

```
p1 : Vect 2 Char
p1 = ['a', 'b']

p2 : Vect 3 Char
p2 = ['a', 'b', 'a']

p3 : Vect 4 Char
p3 = ['a', 'b', 'b', 'a']

p4 : Vect 21 Char
p4 = ['a', 'm', 'a', 'n', 'a', 'p', 'l', 'a', 'n', 'a', 'c', 'a', 'n', 'a', 'l', 'p', 'a', 'n', 'a', 'm', 'a']

*HW2-Vectors> palin p1
False : Bool

*HW2-Vectors> palin p2
True : Bool

*HW2-Vectors> palin p3
True : Bool

*HW2-Vectors> palin p4
True : Bool
```