**W1D2 – Answer**

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**Question 2**

Define an array to be nice if **whenever it contains 4, it also contains 3.**See examples below:

[7, 6, 2, 3, 1]   //nice

[7, 6, 2, 4, 1]   // NOT nice. 4 is there, but 3 is not there

[3, 6, 2, 3, 4]   //nice

[3, 4, 2, 3, 4, 7, 4]   //nice

[1, 6, 2, 8, 2, 9]   //nice

Explain how map and fold (of functional programming) can be used to determine whether or not **an array is nice**.  In other words, write pseudo-code for functions f and g, specify initial value and interpretation for final value.

**Answer**:

**Part 1**: pseudo code for f.

int f(x)

{ if(x != 3 || x != 4) return 1 ;

else return x;

}

**Part 2**: pseudo code for g.

int g(x, y)

{ if (y == 1 || x == y) return x;

if (x == 1 && (y == 3 || y == 4)) return y;

if ((x == 3 && y == 4) || (x == 4 && y ==3)) return 5;

}

**Part 3**: Specification of initial value.

Initial value = 1

**Part 4**: Interpretation of final value.

5: nice

1,3,4 : not a nice