Lab 04: Making Decisions

Spring 2018

1 Question 1

Create three functions named in-subset-1?, in-subset-2?, and in-subset-3?. Each consumes a Num, x, and returns #true if x is in the subset and #false if it is outside the subset:

1. 2 < x ≤ 7
2. 0 < x < 4 or 8 < x < 31
3. the numbers outside of 2 ≤ x ≤ 5

2 Question 2

Create the predicate function connect? that consumes two non-empty Str, string1 and string2, and determines if the last character in string1 is the same as the first character in string2. Note that uppercase and lowercase letters are different.

(connect? "abc" "CDEF") => #false

3 Question 3

Consider an auction that only considers bids that are over $100 and are even numbers. Create a predicate function acceptable-bid? that consumes a list of Nat and returns #true if all the bids in the list are considered.

(acceptable-bid? (list 100 202 303)) => #false

4 Question 4

Create a function (of-age? guest1 guest2) that consumes two Nat, representing the ages of two guests. The function returns #true if they are both 18 or older, 1 if guest1 is 18 or older, 2 if guest2 is 18 or older, and #false if they are both under 18.

(of-age? 17 18) => 2