**Lab Exercise 4. Logic problems**

**Objective:**

These are just warm up questions before we start using if-else statements. *You don’t need to code, just use pen and paper.*

**Questions:**

**1.** When squirrels get together for a party, they like to have cigars. A squirrel party is successful when the number of cigars is between 40 and 60, inclusive. Unless it is the weekend, in which case there is no upper bound on the number of cigars. Return True if the party with the given values is successful, or False otherwise.

a) 30 cigars, not weekend - False

b) 50 cigars, not weekend - True

c) 70 cigars, weekend - True

**2.** The squirrels in Palo Alto spend most of the day playing. In particular, they play if the temperature is between 60 and 90 (inclusive). Unless it is summer, then the upper limit is 100 instead of 90. Given the temperature and the summer information, return True if the squirrels play and False otherwise.

a) Temperature 70, not summer - True

b) Temperature 95, not summer - False

c) Temperature 95, summer - True

**3.** You are driving a little too fast, and a police officer stops you. Examine the problem and return one of three possible answers: 0=no ticket, 1=small ticket, 2=big ticket. If speed is 60 or less, the result is 0. If speed is between 61 and 80 inclusive, the result is 1. If speed is 81 or more, the result is 2. Unless it is your birthday -- on that day, your speed can be 5 higher in all cases.

a) Speed 60, not your birthday - 0

b) Speed 65, not your birthday - 1

c) Speed 65, your birthday - 0