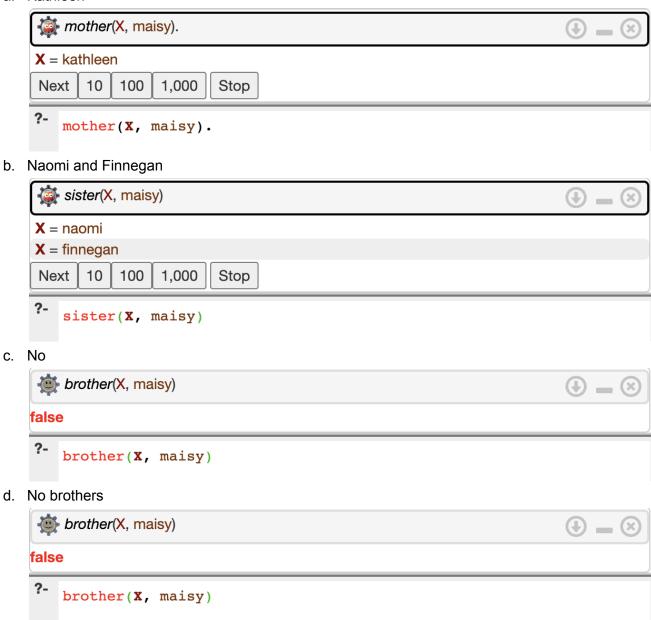
Assignment 4

Code is in corresponding Q folders. (some too long to submit screenshots)

- 1. Query results. Siblings defined as having the same 2 parents. Uncles and aunt inlaws are not considered.
 - a. Kathleen



e. Neila grandmother(X, maisy) X = neilafalse grandmother(X, maisy). f. Joe grandfather(X, maisy). X = joeNext 1,000 Stop 100 grandfather(X, maisy). g. Ashley and naomi2 aunt(X, maisy). X = ashleyX = naomi2100 | 1,000 Next 10 Stop aunt(X, maisy). h. Beau which is a second of the contract of the co X = beau Next 100 1,000 Stop ?- uncle(X, maisy). i. joe_sr greatgrandfather(X, maisy). $X = joe_sr$ Next Stop 100 | 1,000 greatgrandfather(X, maisy).

```
j. None
             greatgreatgrandmother(X, maisy).
                greatgreatgrandmother(X, maisy).
       i.
  k. None
      greatgreatgrandfather(X, maisy).
     false
                                   Predicate defined in line 84
         greatgreatgrandfather (x, maisy).
                                    append ([d, c, b], [a], (a) + [d, c, b, a]
        reversea ({a,b,c,d],Q).
  7 -
         L H= a , T= [b,c,d]
             reverse a([b,c,d],Q). apperd ([d,c],[b],R) + R=[d,c,b]
             [b, ]= T, d=H el
               reverse a ([c,d],Q), append ([4], [c],n) + R=[d,c]
                L H=C , T= d
                  reverse a ((d) a). append ([], (d), R) > R=(d)
                   H=d T=
                   4 reverse ( ( ) Q).
                     reverse a ([],[]). -> [] base case
reversea([a,b,c,d],Q).
Q = [d, c, b, a]
   reversea([a,b,c,d],Q).
melements([1,2,3,4,5,6,7], Q).
Q = 12
Next
           100
                1,000
                        Stop
   nelements([1,2,3,4,5,6,7], Q).
```

2.

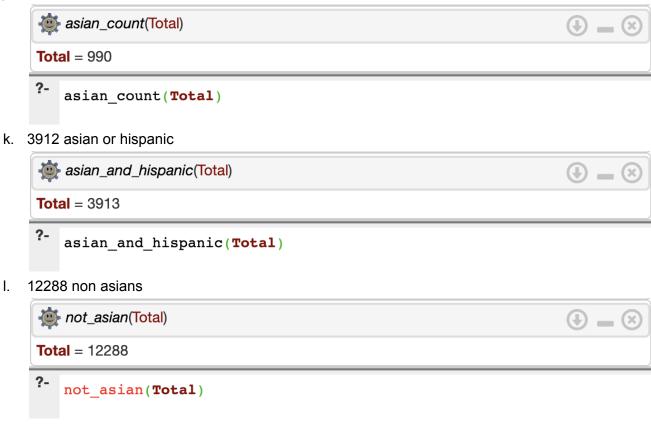
3.

```
delements([a, [b,c], d, e, f], Q)
    \mathbf{Q} = [d, e, f]
        delements([a, [b,c], d, e, f], Q)
5. Not sure
6. Query results.
      a. 35 and over
           smallestFirstYearGroup(Age)
           Age = 35
              smallestFirstYearGroup(Age)
      b. 15-19 has largest number of 1st years
           | largestFirstYearGroup(Age)
           Age = 1519
                            1,000
                                   Stop
           Next
                 10
                      100
              largestFirstYearGroup(Age)
      c. White_alone_non_hispanic
           largest_race(Race, Count)
           Count = 6923,
           Race = white_alone_non_hispanic
              largest_race(Race, Count)
      d. 2793 full time employed students
           full_time_employ_count(Total)
           Total = 2793
              full_time_employ_count(Total)
```

4.

e. 13278 total students total_students(Total) **Total** = 13278 total students(Total) f. 4128 students unemployed first_and_second_unemployed(Total) **Total** = 4128 first and second unemployed(Total) g. 9393 students older_than_twenty(Total) **Total** = 9393 older_than_twenty(**Total**) h. 8237 students older_than_twenty_but_under_thirtyfive(Total) **Total** = 8237 older_than_twenty_but_under_thirtyfive(Total) 438 disabilities **(+) -** (×) disability_count_no_four_years(Total) **Total** = 438 disability count no four years(Total)

j. 990 asians



m. Only have statistics on asian-alone so don't know if any asians are hispanic