Suggestions for switched.pl

First of all, try some queries against the births/4 facts:

?- births(Year, Name, Sex, Count).
Year = 1950,
Name = 'Linda',
Sex = f,
Count = 80437 ;
Year = 1950,
Name = 'Mary',
Sex = f,
Count = 65461 ;
Year = 1950,
Name = 'Patricia',
Sex = f,
Count = 47942 .

?- births(1951, 'Dana',Sex,N).
Sex = f,
N = 1076 ;
Sex = m,
N = 1277 ;
false.

A good predicate to write first is ratio_for_year(+Name, +Year, -Ratio), to compute the male/female ratio for the given name and year:

?- ratio_for_year('Dana',1951,R).
R = 1.186802973977695 ;
false.

Have min_births(+Name, +Year) simply test to see if a given name meets the 100-name minimum for both males and females in the given year.

?- min_births('Dana',1951).
ture ;
false.

?- births(1951, 'Elroy',Sex,N).
Sex = m,
N = 70 ;
false.

?- min_births('Elroy',1951).
false.

switched_name(+First, +Last, ?Name) instantiates Name to each of the names that have seen a switch from male dominance in the year First to female dominance in the year Last.

?- switched_name(1951, 1958, Name).
Name = 'Jackie' ;
Name = 'Kim' ;
Name = 'Dana' ;
Name = 'Kelly' ;
Name = 'Rene' ;
Name = 'Tracy' ;
Name = 'Stacy' ;
false.

?- switched_name(1952, 1953, Name).
false.

My switched_name makes use of ratio_for_year and min_births.

header(+First, +Last) outputs a header line for the table:

?- header(1951,1959).
true.


line_for_name(+Name, +First, +Last) outputs the line in the table for a given name:

?- line_for_name('Dana', 1951, 1959).
true.

Dana        1.19  1.20  1.26  1.29  1.00  0.79  0.67  0.64  0.57

?- member(Name, ['Dana','Tracy']), line_for_name(Name, 1951, 1959), fail.
true.

Dana        1.19  1.20  1.26  1.29  1.00  0.79  0.67  0.64  0.57
Tracy       1.51  1.14  1.02  0.73  0.56  0.55  0.59  0.59  0.43

Finally, switched(+First, +Last) ties it all together.

?- switched(54,55).
true.

If you look close you'll see that the examples in the write-up don't have the empty line between the table and
true. that you see above. Both versions test clean because the tester discards empty lines before
diff'ing.