data visit1;

input ID$ visit\_date mmddyy8. @19 bdate mmddyy8. race$ score;

cards;

198650 11/28/11 04/29/87 Hispanic 24

232738 09/19/11 03/22/54 Hispanic 33

233880 09/23/11 05/15/67 White 74

234127 11/07/11 07/03/72 Black 85

234152 09/27/11 11/08/50 Hispanic 28

234385 09/15/11 06/06/68 Black 85

;

data visit2;

input ID$ @9 visit\_date mmddyy8. score;

cards;

232738 10/18/11 66

233880 09/26/11 37

234127 12/16/11 85

234152 01/10/12 38

;

data visit3;

input ID$ @9 visit\_date mmddyy8. score;

cards;

232738 10/29/11 75

234127 12/29/11 45

234152 02/27/11 35

;

/\* Assignment is to combine the three data sets into one long-form data set \*/

/\* Without PROC SQL \*/

data mergeddata;

merge visit1 (rename=(visit\_date=visit\_date1 score=score1))

visit2 (rename=(visit\_date=visit\_date2 score=score2))

visit3 (rename=(visit\_date=visit\_date3 score=score3));

by id;

run;

data longform;

set mergeddata;

array vd[3] visit\_date1-visit\_date3;

array sc[3] score1-score3;

do visit=1 to 3;

visit\_date=vd[visit];

score=sc[visit];

output;

end;

keep id bdate race visit visit\_date score;

run;

data longformclean;

set longform;

if score ne .;

run;

title 'OUTPUT WITHOUT PROC SQL';

proc print noobs;

format bdate mmddyy10. visit\_date mmddyy10.;

run;

/\* With PROC SQL \*/

/\* add demo variables to visit2 data set \*/

proc sql;

create table visit2demo as

select b.id, a.bdate, a.race, 2 as visit,

b.visit\_date, b.score

from visit1 as a, visit2 as b

where a.id=b.id;

select \* from visit2demo;

quit;

/\* add demo variables to visit3 data set \*/

proc sql;

create table visit3demo as

select b.id, a.bdate, a.race, 3 as visit,

b.visit\_date, b.score

from visit1 as a, visit3 as b

where a.id=b.id;

select \* from visit3demo;

quit;

/\* concatenating visit1, visit2demo, and visit3demo \*/

title 'OUTPUT WITH PROC SQL';

proc sql;

create table longform as

select id, bdate, race, 1 as visit, visit\_date, score

from visit1

union

select \*

from visit2demo

union

select \*

from visit3demo;

select id, bdate format mmddyy10., race, visit, visit\_date format

mmddyy10., score from longform;

quit;