```
*************************************************************************************************

PURPOSE:
PROGRAMMER:
DATE:
OUTPUT:
MACROS:

*************************************************************************************************

MODIFICATION HISTORY:

*************************************************************************************************;


libname sasraw '/home/u64395997/SASSTUDY/Raw data';


proc copy in=sasraw out=work;
 select demog demog1 ex;
run;

options validvarname=upcase;

/* SUBJID */

data dm1;
 set demog;
 subjid1=strip(put(subjid,best.));
 studyid='S-CDSK-12445';
 domain='DM';
 drop subjid;
run;

/* RFXSTDTC */

data dm2;
 set ex;
```

```
 dt1=input(exstdat_raw,date11.);
 rfstdtc=strip(put(dt1,is8601da.));
 dt2=input(exendat_raw,date11.);
 rfendtc=strip(put(dt2,is8601da.));
 rfxstdtc=rfstdtc;
 rfxendtc=rfendtc;
run;

proc sort data=dm1;
 by usubjid;
run;

proc sort data=dm2;
 by usubjid;
run;

data dm3;
 merge dm1(in=a) dm2(in=b);
 by usubjid;
run;

/* RFICDTC */

data dm4;
 set demog1;
 dt=input(icdat_raw,date11.);
 rficdtc=strip(put(dt,is8601da.));
 drop subjid dt enddat_raw;
run;

data dm5;
 merge dm3(in=a) dm4(in=b);
 by usubjid;
 if a;
run;

/* RFPENDTC */

data dm6;
```

```
 set demog1(rename=(icdat_raw=date)) demog1(rename=(enddat_raw=date)) ex(rename=(exstdat_raw=date))
  ex(rename=(exendat_raw=date));
 dtx=input(date,date11.);
 keep usubjid date dtx;
run;

proc sort data=dm6;
 by usubjid dtx;
run;

data dm7;
 set dm6;
 by usubjid dtx;
 if last.usubjid;
run;

data dm8;
    merge dm5(in=a) dm7(in=b);
    by usubjid;
    if a;
    dthdtc='';
    dthfl='';
    brthdtc0=strip(put(brthdtc,is8601da.));
    actarm=arm;
    actarmcd=armcd;
    drop brthdtc subjid;
run;

data dm (label='Demographics');
 retain STUDYID DOMAIN USUBJID SUBJID1 RFSTDTC RFENDTC RFXSTDTC RFXENDTC RFICDTC RFPENDTC
 DTHDTC DTHFL SITEID BRTHDTC0 AGE AGEU SEX RACE ETHNIC ARMCD    ARM ACTARMCD ACTARM COUNTRY;
 set dm8;
 label STUDYID='Study Identifier' DOMAIN='Domain Abbreviation'
  USUBJID='Unique Subject Identifier' SUBJID='Subject Identifier for the Study'
  RFSTDTC='Subject Reference Start Date/Time' RFENDTC='Subject Reference End Date/Time'
  RFXSTDTC='Date/Time of First Study Treatment' RFXENDTC='Date/Time of Last Study Treatment'
  RFICDTC='Date/Time of Informed Consent' RFPENDTC='Date/Time of End of Participation'
  DTHDTC='Date/Time of Death'   DTHFL='Subject Death Flag'
  SITEID='Study Site Identifier' BRTHDTC='Study Site Identifier'
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```
   AGE='Age' AGEU='Age Units' SEX='Sex' RACE='Race' ETHNIC='Ethnic'
   ARMCD='Planned Arm Code' ARM='Description of Planned Arm' ACTARMCD='Actual Arm Code'
   ACTARM='Description of Actual Arm' COUNTRY='Country';
  rename SUBJID1=SUBJID BRTHDTC0=BRTHDTC;
  keep STUDYID DOMAIN USUBJID SUBJID1 RFSTDTC RFENDTC RFXSTDTC RFXENDTC RFICDTC RFPENDTC
   DTHDTC DTHFL SITEID BRTHDTC0 AGE AGEU SEX RACE ETHNIC ARMCD ARM ACTARMCD ACTARM COUNTRY;
run;


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MODIFICATION HISTORY:

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libname sasraw '/home/u64395997/SASSTUDY/Raw data';


proc copy in=sasraw out=work;
 select ae2 ae1 aecode aedt;
run;

options validvarname=upcase;

data A1;
 set AE1;
 studyid='S-CDSK-01';
 domain='AE';
 AESEQ=_n_;
 AESEPID=recordno;
```

```
 AETERM=UPCASE(aeterm1);
 if aeterm1='AGITATED' then AEMODIFY='AGITATION';
 if aeterm1='VOMIT' then AEMODIFY='VOMITING';
 by usubjid;
 drop recordno;
run;

proc sort data=A1;
 by aeterm1;
run;

proc sort data=aecode;
 by aeterm1;
run;

data A2;
 merge A1(in=a) aecode(in=b);
 by aeterm1;
 if a;
 drop aeterm1;
run;


data A3;
 set AE2;
 by usubjid;
 length aesev $20;
 if ae_sev=1 then aesev='Mild';
 if ae_sev=2 then aesev='Moderate';
 if ae_sev=3 then aesev='Severe';
 if ae_sev le 2 then aeser='N';
 else aeser='Y';
 AEACN=AE_ACN;
 AEREL=AE_REL;
 AET=input(ae_endat,date11.);
 AEENDTC=strip(put(aet,is8601da.));
 drop aet ae_acn ae_rel ae_sev ae_endat;
run;
```

```
proc sort data=A2;
 by usubjid;
run;

proc sort data=A3;
 by usubjid;
run;

data A4;
 merge A2(in=a) A3(in=b);
 by usubjid;
 if a;
run;

/* AESTDTC */

data A5;
 set aedt;
 aest=input(aestdat_raw,date11.);
 AESTDTC=strip(put(aest,is8601da.));
 drop aest aestdat_raw;
run;

data A6;
 merge A4 A5;
 by usubjid;
 if AEENDTC='.' then do;
 AEENRF='AFTER';
 END;
run;

data A7;
 merge A6(in=a) DM(in=b);
 by usubjid;
 if a;
 aestdtc1=input(aestdtc,is8601da.);
 aeendtc1=input(aeendtc,is8601da.);
 rfstdtc1=input(rfstdtc,is8601da.);
 if aestdtc1 ge rfstdtc1 then do;
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```
 aestdy1=(aestdtc1-rfstdtc1)+1;
 if aestdtc1 lt rfstdtc1 then do;
 aestdy1=(aestdtc1-rfstdtc1);
  end;
  end;
 if aeendtc1 ge rfstdtc1 then aeendy1=(aeendtc1-rfstdtc1)+1;
 else aeendy1=(aeendtc1-rfstdtc1);
 aestdy=day(aestdy1);
 aeendy=day(aeendy1);
 keep usubjid aestdy aeendy;
run;

data A8;
 merge A6(in=a) A7(in=b);
 by usubjid;
 if a;
run;

data AE (label='Adverse Events');
 retain STUDYID DOMAIN USUBJID AESEQ AESPID AETERM AEMODIFY AEDECOD AEBODSYS AESEV AESER
   AEACN AEREL AESTDTC AEENDTC AESTDY AEENDY AEENRF;
 set A8;
 label STUDYID='Study Identifier' DOMAIN='Domain Abbreviation'
  USUBJID='Unique Subject Identifier'  AESEQ='Sequence Number'
  AESPID='Sponcer Dsfined Identifier' AETERM='Reported Term for the Adverse Evevnts'
  AEMODIFY='Modified Reported Term' AEDECOD='Dictonary Derived Term'
  AEBODSYS='Body System Organ Class' AESEV='Severity/Intensity'
  AESER='Serious Event' AEACN='Action Taken with Study Treatment'
  AEREL='Causality' AESTDTC='Start Date/Time of Adverse Event'
  AEENDTC='End Date/Time of Adverse Event' AESTDY='Study Day of Start of Adverse Event'
  AEENDY='Study Day of End of Adverse Event' AEENRF='End Relative to Reference Period';
 keep STUDYID DOMAIN USUBJID AESEQ AESPID AETERM AEMODIFY AEDECOD AEBODSYS AESEV AESER
   AEACN AEREL AESTDTC AEENDTC AESTDY AEENDY AEENRF;
 run;
```