

STUDYID	INVID
DOMAIN	INVNAM
USUBJID	BRTHDTC
SUBJID	AGE
RFSTDTC	AGEU
RFENDTC	SEX
RFXSTDTC	RACE
RFXENDTC	ETHNIC
RFICDTC	ARMCD
RFPENDTC	ARM
DTHDTC	ACTARMCD
DTHFL	ACTARM
SITEID	COUNTRY

Base programming of the DM domain requires individually programming 26 variables

Validated templates reduce rework

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Using a validated template in an ETL solution means that only 4 variable need to be programmed. Validated code already exists to complete the other 22 variables

Process Alternatives

```
by SUBJECT_id;
if SUBJID NE '';
if INVID NE '';
/*
USUBJID
USUBJID=strip(STUDYID) || "-" || strip(INVID) || "-" || strip(SUBJID);
DOMAIN="DM";
/*
BRTHDTC
if BRTHDATD EQ '' AND BRTHDATMO EQ '' then BRTHDTC = BRTHDATYY;
else if BRTHDATD EQ '' AND BRTHDATMO NE '' then BRTHDTC = BRTHDATYY;
else BRTHDTC = BRTHDATYY || "-" || BRTHDATMO || "-" || BRTHDATD;

run;

/******
RFSTDTC
run;

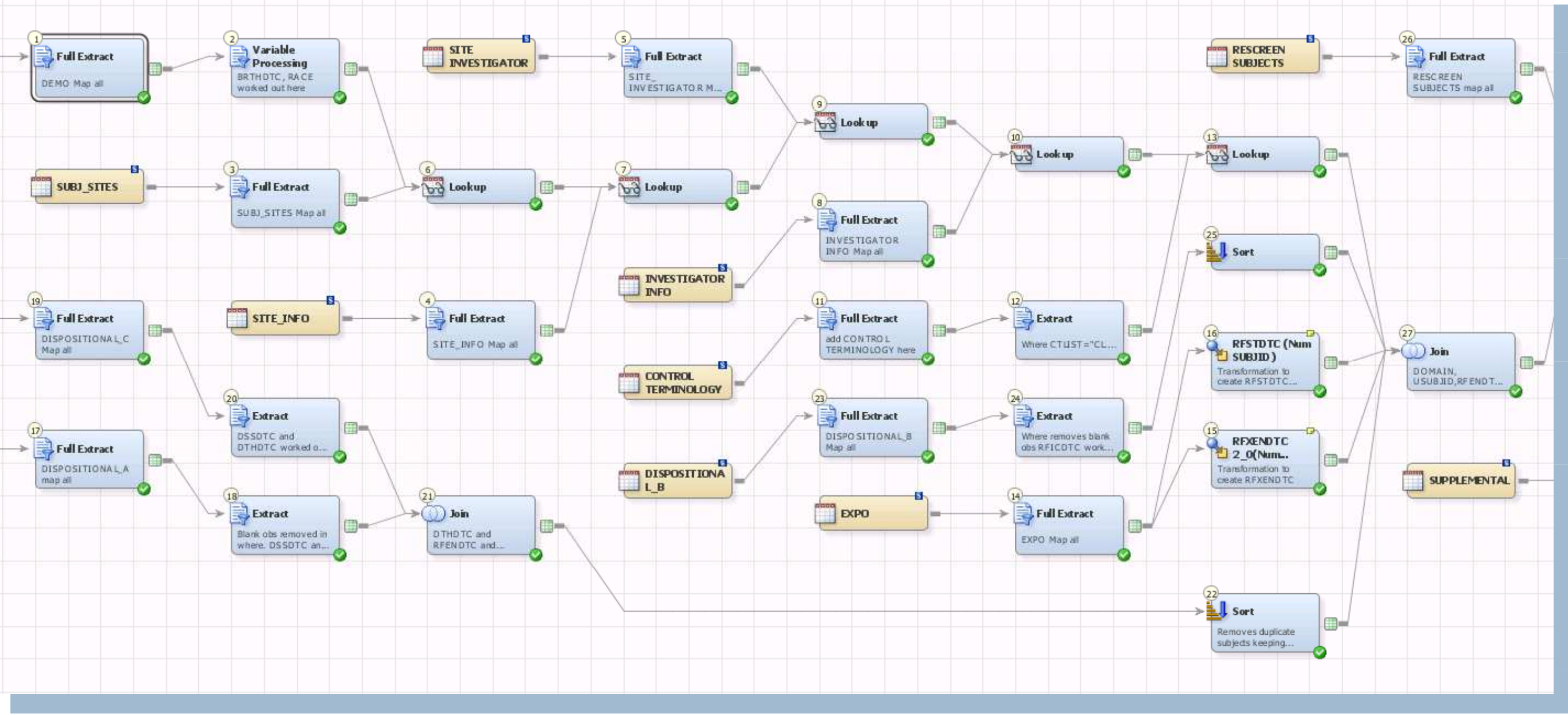
data DM.RFSTDTC_set1;
set DM.EX1001 (keep=SUBJID EXSTDATD EXSTDATMO EXSTDATYY EXSTIMER EXSTIMM1);
/* Convert date and time variables into a SAS date and time, drop records where SAS date and time is null (-).*/
StartDate = MDY(EXSTDATMO, EXSTDATD, EXSTDATYY);
if StartDate NE '';
/* Pull min(SAS date and time) and convert to ISO8601 format.*/
if EXSTIMER = '' then EXSTIMER = 0;
if EXSTIMM1 = '' then EXSTIMM1 = 0;
RFSTDTC = DMS(StartDate, EXSTIMER, EXSTIMM1, 00);
format StartDate i8601da. RFSTDTC i8601dt.;
run;

/*Sort by SUBJID and SAS date and time in ascending order.*/
proc sort data=DM.RFSTDTC_set1;
by SUBJID RFSTDTC;
run;

/*Merge onto demographics data by SUBJID. Will be null for subjects who did not receive study drug.*/
data DM.RFSTDTC_set2 (keep= SUBJID StartDate RFSTDTC);
merge DM.RFSTDTC_set1 DM.DM1001;
by SUBJID;
run;

/******
RFXENDTC
run;
/*
```

With base SAS code you have to read and understand the code in order to make changes that are efficient



With an ETL point and click you can visualize where the tables join and see the best places to make the changes easily

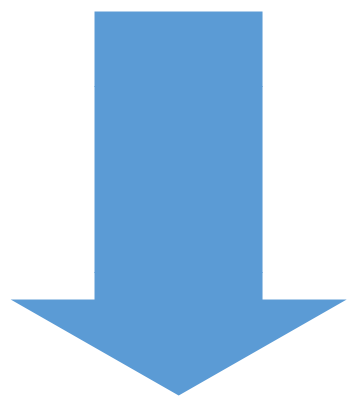
Table	Column	Value
DM	STUDYID	DM
DM	DOMAIN	DM
DM	USUBJID	DM
DM	SUBJID	DM
DM	RFSTDTC	DM
DM	RFENDTC	DM
DM	RFXSTDTC	DM
DM	RFXENDTC	DM
DM	RFICDTC	DM
DM	RFPENDTC	DM
DM	DTHDTC	DM
DM	DTHFL	DM
DM	SITEID	DM
DM	COUNTRY	DM

Once you find the transformation/module, simply edit the expression

Metrics

3600

For a full study from CRF to SDTM to ADaM using base SAS®



< 400

For a full study from CRF to SDTM to ADaM using validated templates

Blue represents variables that no longer need to be programmed. Orange represents variables that will need to be coded and validated

