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Functions:
FINYEAR(date)
Date is any valid SAS date. FINYEAR returns a length 7 CHAR
representing the
Financial Year expressed as '9999-99'. (e.g. the date '16/5/2019'd
would return
'2018-19')

FINQTR(date)
Date is any valid SAS date. FINQTR returns a numeric value
representing the financial
quarter. (e.g. the date '16/5/2019'd would return 4)

FINYEARQTR(date)
Date is any valid SAS date. FINYEARQTR returns a length 10 CHAR
representing the financial
year and quarter expressed as '9999-99 Q9'. (e.g. the date
'16/5/2019'd would return
'2018-19 Q4')

************************************************************/
%let fcmplib=work;

*location of function package

*location to store compiled functions;
%let fmtlib=work;

* location to store formats;

/* use DELETEFUNC of FCMP to delete the existing functions. This is
done to avoid an
irritating warning message.
omit this step if using the WORK library as it will cause a warning
if the functions
have not yet been created */

/*proc fcmp outlib=&fcmplib..ndis.findates;*/
/*   deletefunc finyear;*/
/*   deletefunc finqtr;*/
/*   deletefunc finyearqtr;*/
/*run;*/
/*quit;*/
proc fcmp outlib=&fcmplib..ndis.findates;
     function finyear(date) $7;

           *accept a number var as the only argument, return char
length 7;
           length year 4;
           year=year(intnx('year.7',date,0,'B'));

           *calculate the starting year of the financial year;
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          /* return the beginning year of the financial year,
concatenated with a hyphen,
               followed by the last two digits of the following
year */
          return (catx('-',put(year,4.),substr(put(year+1,4.),3)));
     endsub;

     function finqtr(date);
          length calendar_quarter 3; *temp variable contain
calendar quarter;
          calendar_quarter=qtr(date);
          /* if the calendar quarter is GT 2 then subtract 2,
otherwise add 2 */
          return (ifn(calendar_quarter>2,calendar_quarter-
2,calendar_quarter+2));
     endsub;

     function finyearqtr(date) $10;
         /* concatenate the results for the FINYEAR & FINQTR
functions, separated by
           ' Q' */
          return (catx(' Q',finyear(date),put(finqtr(date),1.)));
     endsub;
run;

quit;

options cmplib=(&fcmplib..ndis);

/* test functions for the current date */
/*data _null_;*/
/*   date=today();*/
/*   finyear=finyear(date);*/
/*   finqtr=finqtr(date);*/
/*   fin_year_qtr=finyearqtr(date);*/
/*   put date= date9. finyear= finqtr= fin_year_qtr=;*/
run;

proc format lib=&fmtlib;
     value finyear (default=7 min=7 max=7)
          low-high=[finyear()];
     value finqtr (default=1 min=1 max=1)
          low-high=[finqtr()];
     value finyearqtr (default=10 min=10 max=10)
          low-high=[finyearqtr()];
run;

/*data work.testpack;*/
/*   current_date=today();*/
/*   length original_date finyear finqtr finyearqtr 5.;*/
/**/
/*   do original_date=intnx('year1.1',current_date,-5,'S') to
current_date;*/
/*         finyear=original_date;*/
/*         finqtr=original_date;*/
/*         finyearqtr=original_date;*/
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/*         output;*/
/*   end;*/
/**/
/*   format original_date date9. finyear finyear. finqtr finqtr.
finyearqtr finyearqtr.;*/
/*   drop current_date;*/
/*run;*/
/**/
/*proc freq data=work.testpack order=formatted;*/
/*   tables finyear finqtr finyearqtr/nocum nopercent;*/
/*run;*/



data work.Data1;
     set data;
     format     AprvlDt2 yymmn6.;

/*Set the dates before 30Sep2019 to be the first quarter 2016/17
Q1*/
     if AprvlDt le '30SEP2016'd then
          AprvlDt2 = "01jul2016"d;
     else AprvlDt2=FrstPlanAprvlDt;

/*Assign quarters to the rest of dates*/
      EntryQrtr=FINYEARQTR(AprvlDt2);
run;
```