

nothing to do with the calculation; it merely happens to use the result. A more general function would simply compute the median of an array and return it to the calling program. The resulting value can be used in further calculations, or stored, or printed in a variety of formats, depending on the application. Combining too many functions in one module is a sure way to limit its usefulness, while at the same time making it more complex and harder to maintain.

Each module should do one thing well.

Here is the same program modularized a different way:

```
ST14_3: PROCEDURE OPTIONS (MAIN);
/* READ A LIST AND PRINT MEDIAN */
DECLARE (N, X(100)) FIXED DECIMAL (3);

N = GETLIST(X, 100);
IF N = 0 THEN
  PUT SKIP LIST ('ARRAY HAS NO ENTRIES');
ELSE DO;
  IF MOD(N, 2) = 0 THEN
    PUT SKIP LIST ('ARRAY HAS EVEN NUMBER OF ENTRIES');
  ELSE
    PUT SKIP LIST ('ARRAY HAS ODD NUMBER OF ENTRIES');
  PUT SKIP LIST ('MEDIAN IS', MEDIAN(X, N));
END;

GETLIST: PROCEDURE (X, MAXN) RETURNS (FIXED DECIMAL (3));
/* READ AT MOST MAXN ITEMS INTO ARRAY X */
DECLARE (X(*), MAXN, I) FIXED DECIMAL(3);

ON ENDFILE (SYSIN)
  GOTO DONE;

DO I = 1 TO MAXN;
  GET LIST (X(I));
END;
RETURN (MAXN);
DONE:
RETURN (I-1);
END;
```