Lab PL/SQL Batch Processing

DECLARE

CURSOR c1 IS

SELECT account\_id, oper\_type, new\_value FROM action

ORDER BY time\_tag

FOR UPDATE OF status;

BEGIN

FOR acct IN c1 LOOP -- process each row one at a time

acct.oper\_type := upper(acct.oper\_type);

/\*----------------------------------------\*/

/\* Process an UPDATE. If the account to \*/

/\* be updated doesn't exist, create a new \*/

/\* account. \*/

/\*----------------------------------------\*/

IF acct.oper\_type = 'U' THEN

UPDATE accounts SET bal = acct.new\_value

WHERE account\_id = acct.account\_id;

IF SQL%NOTFOUND THEN -- account didn't exist. Create it.

INSERT INTO accounts

VALUES (acct.account\_id, acct.new\_value);

UPDATE action SET status =

'Update: ID not found. Value inserted.'

WHERE CURRENT OF c1;

ELSE

UPDATE action SET status = 'Update: Success.'

WHERE CURRENT OF c1;

END IF;

/\*--------------------------------------------\*/

/\* Process an INSERT. If the account already \*/

/\* exists, do an update of the account \*/

/\* instead. \*/

/\*--------------------------------------------\*/

ELSIF acct.oper\_type = 'I' THEN

BEGIN

INSERT INTO accounts

VALUES (acct.account\_id, acct.new\_value);

UPDATE action set status = 'Insert: Success.'

WHERE CURRENT OF c1;

EXCEPTION

WHEN DUP\_VAL\_ON\_INDEX THEN -- account already exists

UPDATE accounts SET bal = acct.new\_value

WHERE account\_id = acct.account\_id;

UPDATE action SET status =

'Insert: Acct exists. Updated instead.'

WHERE CURRENT OF c1;

END;

/\*--------------------------------------------\*/

/\* Process a DELETE. If the account doesn't \*/

/\* exist, set the status field to say that \*/

/\* the account wasn't found. \*/

/\*--------------------------------------------\*/

ELSIF acct.oper\_type = 'D' THEN

DELETE FROM accounts

WHERE account\_id = acct.account\_id;

IF SQL%NOTFOUND THEN -- account didn't exist.

UPDATE action SET status = 'Delete: ID not found.'

WHERE CURRENT OF c1;

ELSE

UPDATE action SET status = 'Delete: Success.'

WHERE CURRENT OF c1;

END IF;

/\*--------------------------------------------\*/

/\* The requested operation is invalid. \*/

/\*--------------------------------------------\*/

ELSE -- oper\_type is invalid

UPDATE action SET status =

'Invalid operation. No action taken.'

WHERE CURRENT OF c1;

END IF;

END LOOP;

COMMIT;

END;