Database Programming with PL/SQL

3-4: Using Transaction Control Statements

Practice Activities

Vocabulary

Identify the vocabulary word for each definition below:

|  |  |
| --- | --- |
|  | An inseparable list of database operations, which must be  executed either in its entirety or not at all. |
|  | Used for discarding any changes that were made to the  database after the last COMMIT. |
|  | Used to mark an intermediate point in transaction processing. |
|  | Keyword used to signal the end of a PL/SQL block, not the end  of a transaction. |
|  | Statement used to make database changes permanent. |

Try It / Solve It

**Because our online version of Oracle Application Express (APEX) automatically commits**

**changes as the code runs, the following activities will NOT work as intended unless you are**

**using an installed/local APEX environment.**

1. How many transactions are shown in the following code? Explain your reasoning.

BEGIN

INSERT INTO my\_savings (account\_id, amount)

VALUES (10377, 200);

INSERT INTO my\_checking (account\_id, amount)

VALUES (10378, 100);

END;

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**Because our online version of Oracle Application Express (APEX) automatically commits**

**changes as the code runs, the following activities will NOT work as intended unless you are**

**using an installed/local APEX environment.**

2. Create the endangered species table by running the following statement in Application Express:

**Unless you are using an installed/local APEX environment, there is no reason to run this code.**

**If you are using our online version of Oracle Application Express (APEX), you should pretend**

**this code runs successfully before you try to answer the next question.**

CREATE TABLE endangered\_species

(species\_id

NUMBER(4) CONSTRAINT es\_spec\_pk PRIMARY KEY,

common\_name VARCHAR2(30) CONSTRAINT es\_com\_name\_nn NOT NULL,

scientific\_name VARCHAR2(30) CONSTRAINT es\_sci\_name\_nn NOT NULL);

3. Examine the following block of code. If you were to run this block, what data do you think would be saved in the database?

**Unless you are using an installed/local APEX environment, there is no reason to run this code.**

**If you are using our online version of Oracle Application Express (APEX), you should pretend**

**this code runs successfully to answer the remaining questions.**

BEGIN

INSERT INTO endangered\_species

VALUES (100, 'Polar Bear', 'Ursus maritimus');

SAVEPOINT sp\_100;

INSERT INTO endangered\_species

VALUES (200, 'Spotted Owl', 'Strix occidentalis');

SAVEPOINT sp\_200;

INSERT INTO endangered\_species

VALUES (300, 'Asiatic Black Bear', 'Ursus thibetanus');

ROLLBACK TO sp\_100;

COMMIT;

END;

4. Run the block above to test your theory. Confirm your projected data was added.

**Unless you are using an installed/local APEX environment, you should skip this question. The**

**block above will NOT run as intended in our online version of Oracle Application Express**

(APEX) because it automatically commits changes as the code runs.