Shahad

Database Programming with PL/SQL
1-3: Creating PL/SQL Blocks
Practice Activities

Vocabulary

Identify the vocabulary word for each definition below:

Anon/mus PL/SQL Block	Unnamed blocks of code not stored in the database and do not exist after they are executed
Function	A program that computes and returns a value
SubPrograms	Named PL/SQL blocks that are stored in the database and can be declared as procedures or functions
Compiler	Software that checks and translates programs written in high-level programming languages into binary code to execute
Procedures	A program that performs an action and does not have to return a value

Try It / Solve It

1. Complete the following chart defining the syntactical requirements for a PL/SQL block:

	Optional or Mandatory?	Describe what is included in this section
DECLARE	Optional	Variables, cursors, user-def ind exception
BEGIN	Mandatory	SQL statments PL/SQL Statments
EXCEPTION	Optional	Actions to perform when errors occur
END;	Mandatory	End; (with semicolon)

2. Which of the following PL/SQL blocks executes successfully? For the blocks that fail, explain why they fail

A.
```
BEGIN
END;
```
A. Fails because the executable there section must contain at least one statment

B.
```
DECLARE
   amount INTEGER(10);
END;
```
B. Fails because there is no executable section (BEGIN is missing)

C.
```
DECLARE
BEGIN
END;
```
C. Fails because the executable there section must contain at least one statment

D. Succeeds

```
DECLARE
   amount NUMBER(10);
BEGIN
  DBMS_OUTPUT.PUT_LINE(amount);
END;
```

3. Fill in the blanks:

   A. PL/SQL blocks that have no names are called anonymous blocks.

   B. Procedures and Functions are named blocks and are stored in the database.

4. In Application Express, create and execute a simple anonymous block that outputs "Hello World." BEGIN DBMS_OUTPUT.PUT_LINE('Hello World'); End;

Extension Exercise

1. Create and execute a simple anonymous block that does the following:
   - Declares a variable of datatype DATE and populates it with the date that is six months from today
   - Outputs "In six months, the date will be: <insert date>."