NSHURO ARNAUD NELLIGAN

27960

PHASE VI

Objective:

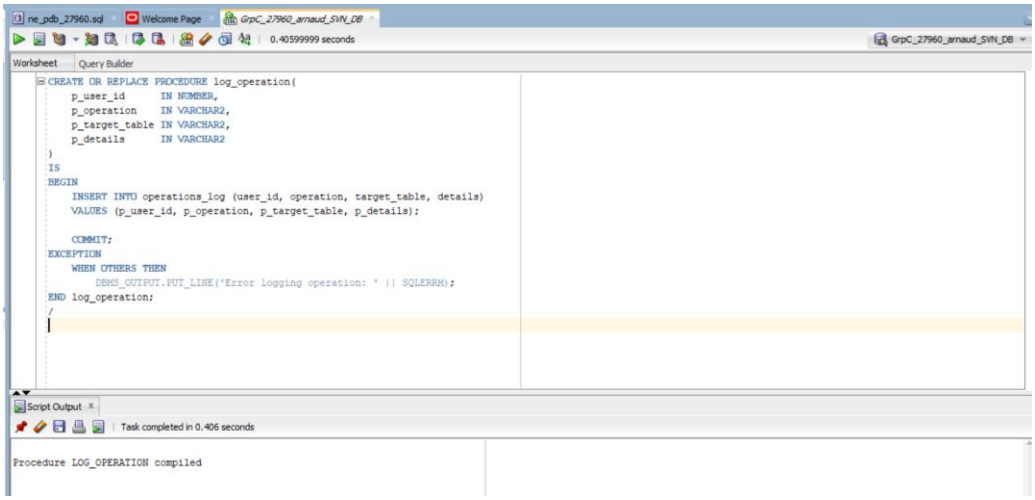
Develop PL/SQL procedures, functions, packages, and cursors to handle:

- **Logging database operations**
- **Detecting violations**
- **Sending alerts to administrators**
- **Exception handling**
- **Basic analytics preparation**

1. PL/SQL Procedures

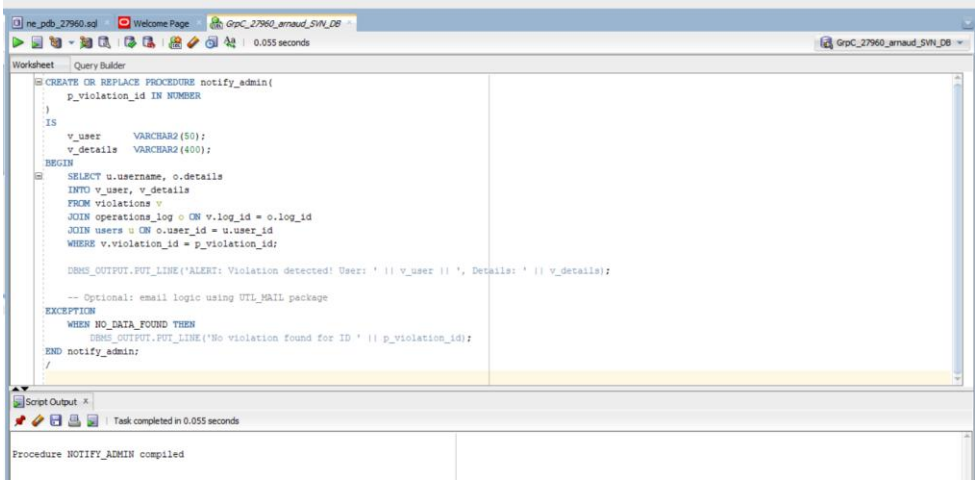
Procedure 1: Log Operation

Logs any user operation in the database.



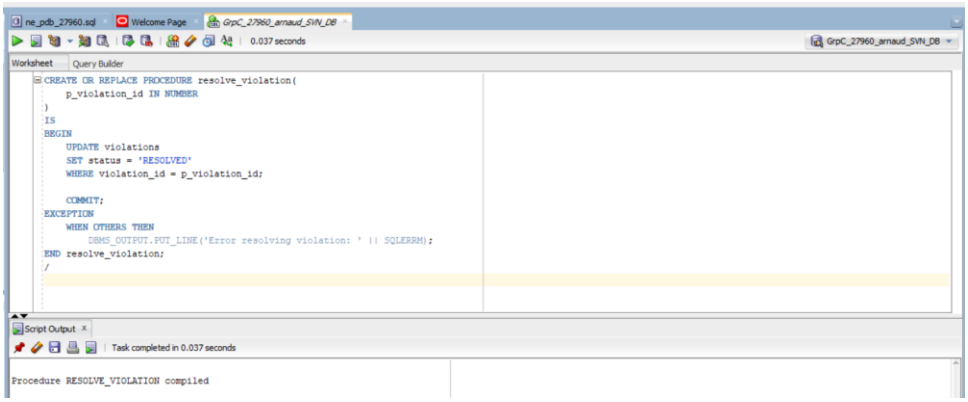
Procedure 2: Notify Administrator

Sends alerts to admins when a violation occurs.



Procedure 3: Resolve Violation

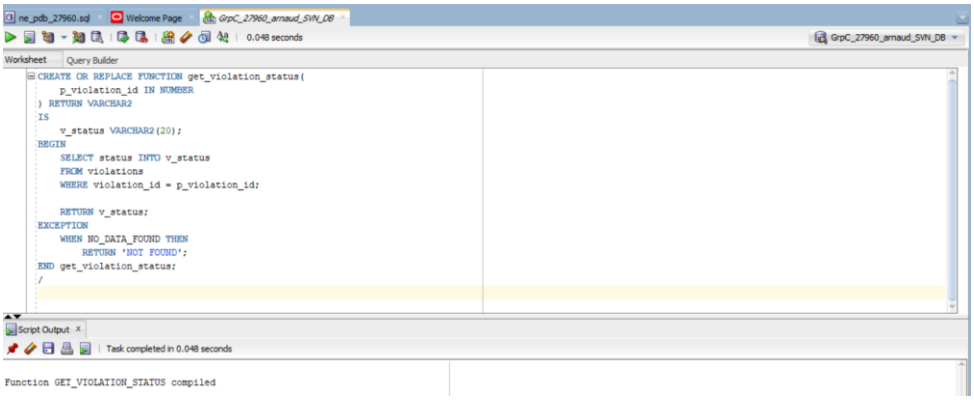
Marks a violation as resolved.



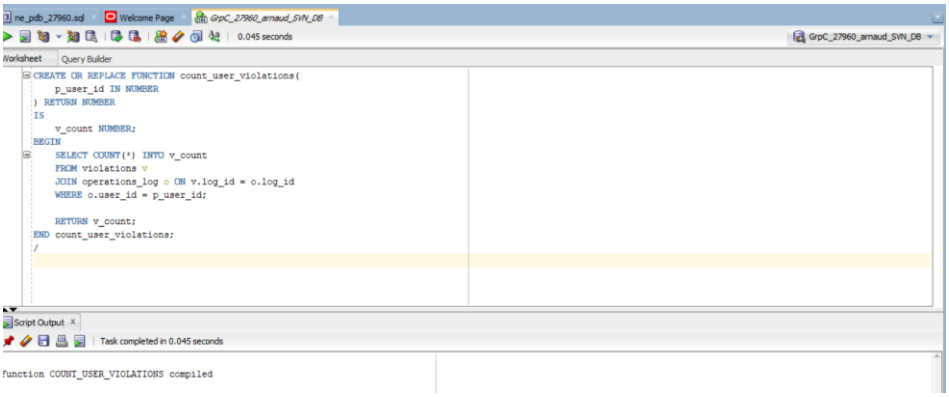
2. PL/SQL Functions

Function 1: Check Violation Status

Returns current status of a violation.

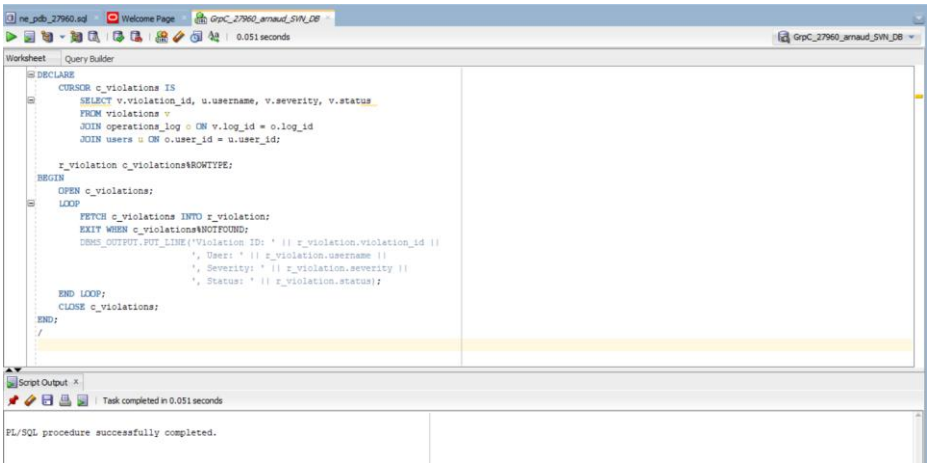


Function 2: Count Violations by User



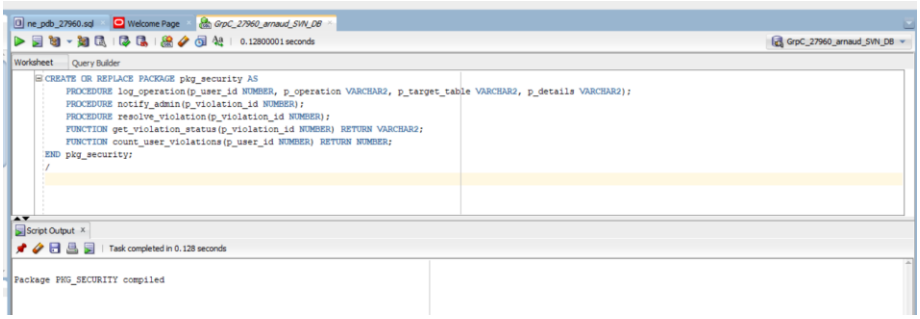
3. Cursors

Explicit Cursor: List All Violations

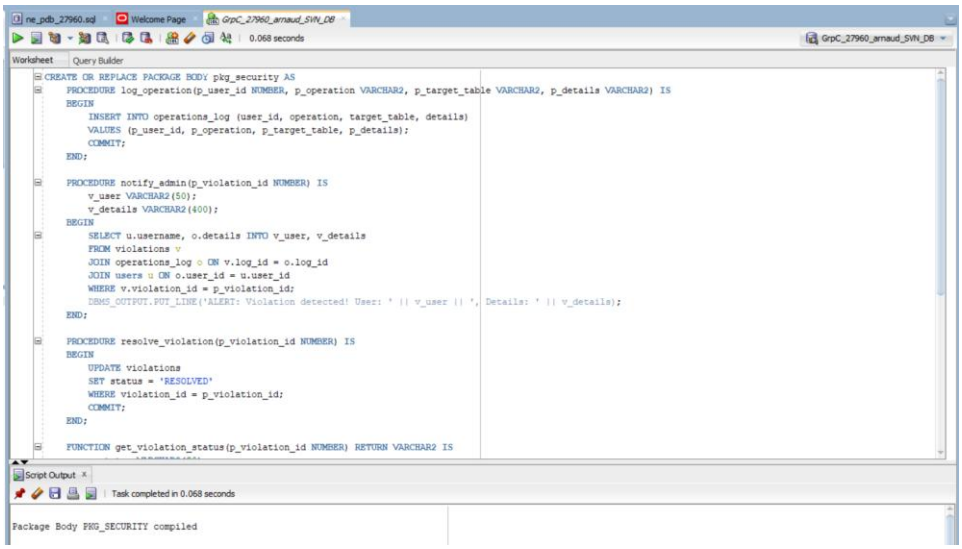


4. Package Example

Package Specification



Package Body


ne_pdb_27960.sql
Welcome Page
GrpC_27960_arnaud_SVN_DB
0.068 seconds
GrpC_27960_arnaud_SVN_DB
Worksheet
Query Builder
CREATE OR REPLACE PACKAGE BODY pkg_security AS
PROCEDURE log_operation(p_user_id NUMBER, p_operation VARCHAR2, p_target_table VARCHAR2, p_details VARCHAR2) IS
BEGIN
INSERT INTO operations_log (user_id, operation, target_table, details)
VALUES (p_user_id, p_operation, p_target_table, p_details);
COMMIT;
END;
PROCEDURE notify_admin(p_violation_id NUMBER) IS
v_user VARCHAR2(50);
v_details VARCHAR2(400);
BEGIN
SELECT u.username, o.details INTO v_user, v_details
FROM violations v
JOIN operations_log o ON v.log_id = o.log_id
JOIN users u ON o.user_id = u.user_id
WHERE v.violation_id = p_violation_id;
DBMS_OUTPUT.PUT_LINE('ALERT: Violation detected! User: ' || v_user || ', Details: ' || v_details);
END;
PROCEDURE resolve_violation(p_violation_id NUMBER) IS
BEGIN
UPDATE violations
SET status = 'RESOLVED'
WHERE violation_id = p_violation_id;
COMMIT;
END;
FUNCTION get_violation_status(p_violation_id NUMBER) RETURN VARCHAR2 IS
Script Output
Task completed in 0.068 seconds
Package Body PKG_SECURITY compiled