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**College: PCCOE**

**Domain: SQL**

**WEEK 5 TASK**

Note: I have used Oracle SQL for execution of Task.

**-- 1. Create SubjectAllotments table**

**CREATE TABLE SubjectAllotments (**

**StudentId VARCHAR2(20),**

**SubjectId VARCHAR2(20),**

**Is\_valid NUMBER(1) -- 1 for valid, 0 for invalid**

**);**

**-- 2. Create SubjectRequest table**

**CREATE TABLE SubjectRequest (**

**StudentId VARCHAR2(20),**

**SubjectId VARCHAR2(20)**

**);**

**-- 3. Insert sample data into SubjectAllotments**

**INSERT INTO SubjectAllotments VALUES ('159103036', 'PO1491', 1);**

**INSERT INTO SubjectAllotments VALUES ('159103036', 'PO1492', 0);**

**INSERT INTO SubjectAllotments VALUES ('159103036', 'PO1493', 0);**

**INSERT INTO SubjectAllotments VALUES ('159103036', 'PO1494', 0);**

**INSERT INTO SubjectAllotments VALUES ('159103036', 'PO1495', 0);**

**-- 4. Insert sample request into SubjectRequest**

**INSERT INTO SubjectRequest VALUES ('159103036', 'PO1496');**

**-- 5. Create Stored Procedure**

**CREATE OR REPLACE PROCEDURE ProcessSubjectRequests IS**

**BEGIN**

**FOR req IN (SELECT StudentId, SubjectId FROM SubjectRequest) LOOP**

**DECLARE**

**v\_count NUMBER;**

**v\_current\_subject VARCHAR2(50);**

**BEGIN**

**SELECT COUNT(\*) INTO v\_count**

**FROM SubjectAllotments**

**WHERE StudentId = req.StudentId;**

**IF v\_count = 0 THEN**

**-- No entry yet: insert new record as valid**

**INSERT INTO SubjectAllotments (StudentId, SubjectId, Is\_valid)**

**VALUES (req.StudentId, req.SubjectId, 1);**

**ELSE**

**BEGIN**

**SELECT SubjectId INTO v\_current\_subject**

**FROM SubjectAllotments**

**WHERE StudentId = req.StudentId AND Is\_valid = 1;**

**IF v\_current\_subject != req.SubjectId THEN**

**-- Invalidate old subject**

**UPDATE SubjectAllotments**

**SET Is\_valid = 0**

**WHERE StudentId = req.StudentId AND Is\_valid = 1;**

**-- Insert new subject as valid**

**INSERT INTO SubjectAllotments (StudentId, SubjectId, Is\_valid)**

**VALUES (req.StudentId, req.SubjectId, 1);**

**END IF;**

**EXCEPTION**

**WHEN NO\_DATA\_FOUND THEN**

**-- No valid subject found, just insert new one**

**INSERT INTO SubjectAllotments (StudentId, SubjectId, Is\_valid)**

**VALUES (req.StudentId, req.SubjectId, 1);**

**END;**

**END IF;**

**END;**

**END LOOP;**

**-- Optional: clear processed requests**

**DELETE FROM SubjectRequest;**

**END;**

**/**

**-- 6. Run the procedure**

**EXEC ProcessSubjectRequests;**

**-- 7. View updated data**

**SELECT \* FROM SubjectAllotments;**