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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;**