CS4416 – Tutorial 6

Stored Procedures

Q. Consider relations R(A, B) and S(A, C) where all attributes are floating point numbers. Write a procedure which modifies each row (x,y) in relation R by adding to y the average value of attribute C in the rows with A=x in relation S.

For example, if R and S contain the following data:

R

A	B
1.0	1.0
1.0	2.0
1.0	3.0
2.0	4.0

S

A	C
1.0	2.0
1.0	3.0
2.0	7.0
2.0	1.0

then after the execution of your procedure, R should be changed to

R

A	B
1	3.5
1	4.5
1	5.5
2	8.0

Solution

SQL/PSM Procedure

```
CREATE PROCEDURE P( )
    DECLARE x INT;
    DECLARE y INT;
    DECLARE avgc INT;
    DECLARE NotFound CONDITION FOR SQLSTATE '02000';
    DECLARE c CURSOR FOR (SELECT * FROM R);
BEGIN
        OPEN c;
        menuLoop: LOOP
            FETCH c INTO x, y;
            IF NotFound THEN LEAVE menuLoop END IF;
            SELECT AVG(C) INTO avgc FROM S WHERE A = x;
            UPDATE R SET B = y + avgc WHERE A = x AND B = y;
        END LOOP;
        CLOSE c;
END;
```