Team Assignment-4 DMDD6210

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Q1.A.

CREATE TABLE DEPT(

DEPTNO NUMBER(22,0) PRIMARY KEY NOT NULL,

DNAME VARCHAR2(14),

LOC VARCHAR2(13)

);



Q1.B.

INSERT INTO DEPT VALUES('10','ACCOUNTING','NEW YORK');

INSERT INTO DEPT VALUES('20','RESEARCH','DALLAS');

INSERT INTO DEPT VALUES('30','SALES','CHICAGO');

INSERT INTO DEPT VALUES('40','OPERATIONS','BOSTON');



SELECT \* FROM DEPT;



Q1.C.

CREATE TABLE EMP(

EMPNO NUMBER(37) PRIMARY KEY

,ENAME VARCHAR(50)

,JOB VARCHAR(100)

,MGR NUMBER(20)

,CONSTRAINT REFER1 FOREIGN KEY(MGR) REFERENCES EMP(EMPNO)

,HIREDATE DATE

,SAL NUMBER(20,2)

,COMM NUMBER(20,2)

,DEPTNO NUMBER(20)

,CONSTRAINT REFER2 FOREIGN KEY(DEPTNO) REFERENCES DEPT(DEPTNO)

);

INSERT INTO EMP VALUES(7839,'KING','PRESIDENT',NULL,' 17-NOV-81 ',5000,NULL,10);

INSERT INTO EMP VALUES(7698,'BLAKE','MANAGER',7839,' 1-MAY-81',2850,NULL,30);

INSERT INTO EMP VALUES(7782,'CLARK','MANAGER',7839,' 9-JUN-81 ',2450,NULL,10);

INSERT INTO EMP VALUES(7566,'JONES','MANAGER',7839,' 2-APR-81',2975,NULL,20);

INSERT INTO EMP VALUES(7788,'SCOTT','ANALYST',7566,' 19-APR-87',3000,NULL,20);

INSERT INTO EMP VALUES(7902,'FORD','ANALYST',7566,' 3-DEC-81 ',3000,NULL,20);

INSERT INTO EMP VALUES(7369,'SMITH','CLERK',7902,' 17-DEC-80 ',800,NULL,20);

INSERT INTO EMP VALUES(7499,'ALLEN','SALESMAN',7698,' 20-FEB-81',1600,300,30);

INSERT INTO EMP VALUES(7521,'WARD','SALESMAN',7698,' 22-FEB-81',1250,500,30);

INSERT INTO EMP VALUES(7654,'MARTIN','SALESMAN',7698,' 28-SEP-81 ',1250,1400,30);

INSERT INTO EMP VALUES(7844,'TURNER','SALESMAN',7698,' 8-SEP-81',1500,0,30);

INSERT INTO EMP VALUES(7876,'ADAMS','CLERK',7788,' 23-MAY-87',1100,NULL,20);

INSERT INTO EMP VALUES(7900,'JAMES','CLERK',7698,' 3-DEC-81 ',950,NULL,30);

INSERT INTO EMP VALUES(7934,'MILLER','CLERK',7782,'23-JAN-82 ',1300,NULL,10);



SELECT \* FROM EMP;



Q2.A.

--(I) CREATE TABLE

CREATE TABLE BRICKS (

BRICK\_ID INTEGER,

COLOR VARCHAR2(10),

SHAPE VARCHAR2(10),

WEIGHT INTEGER

);

--(II) WRITE CODE TO CONVERT THE BRICK\_ID TO PRIMARY KEY

ALTER TABLE BRICKS ADD PRIMARY KEY (BRICK\_ID);

--(III) INSERT ROWS

INSERT INTO BRICKS VALUES ( 1, 'BLUE', 'CUBE', 1 );

INSERT INTO BRICKS VALUES ( 2, 'BLUE', 'PYRAMID', 2 );

INSERT INTO BRICKS VALUES ( 3, 'RED', 'CUBE', 1 );

INSERT INTO BRICKS VALUES ( 4, 'RED', 'CUBE', 2 );

INSERT INTO BRICKS VALUES ( 5, 'RED', 'PYRAMID', 3 );

INSERT INTO BRICKS VALUES ( 6, 'GREEN', 'PYRAMID', 1 );

COMMIT;



Q2.B.

SELECT A.\*, COUNT(\*) OVER (ORDER BY BRICK\_ID) RUNNING\_TOTAL,

SUM ( WEIGHT ) OVER (ORDER BY BRICK\_ID) RUNNING\_WEIGHT,

ROUND ( AVG ( WEIGHT ) OVER (ORDER BY BRICK\_ID), 2 ) RUNNING\_AVERAGE\_WEIGHT

FROM BRICKS A ORDER BY BRICK\_ID;



Q2.C.

SELECT A.\*,

LAG ( SHAPE ) OVER ( ORDER BY BRICK\_ID ) PREV\_SHAPE, LEAD ( SHAPE ) OVER ( ORDER BY BRICK\_ID ) NEXT\_SHAPE

FROM BRICKS A;



Q3.A.

DROP TABLE BRICKS;

DROP TABLE COLORS;

CREATE TABLE BRICKS (

BRICK\_ID INTEGER,

COLOR VARCHAR2(10)

);

CREATE TABLE COLORS (

COLOR\_NAME VARCHAR2(10),

MINIMUM\_BRICKS\_NEEDED INTEGER

);

INSERT INTO COLORS VALUES ( 'BLUE', 2 );

INSERT INTO COLORS VALUES ( 'GREEN', 3 );

INSERT INTO COLORS VALUES ( 'RED', 2 );

INSERT INTO COLORS VALUES ( 'ORANGE', 1);

INSERT INTO COLORS VALUES ( 'YELLOW', 1 );

INSERT INTO COLORS VALUES ( 'PURPLE', 1 );

INSERT INTO BRICKS VALUES ( 1, 'BLUE' );

INSERT INTO BRICKS VALUES ( 2, 'BLUE' );

INSERT INTO BRICKS VALUES ( 3, 'BLUE' );

INSERT INTO BRICKS VALUES ( 4, 'GREEN' );

INSERT INTO BRICKS VALUES ( 5, 'GREEN' );

INSERT INTO BRICKS VALUES ( 6, 'RED' );

INSERT INTO BRICKS VALUES ( 7, 'RED' );

INSERT INTO BRICKS VALUES ( 8, 'RED' );

INSERT INTO BRICKS VALUES ( 9, NULL );

COMMIT;

Q3.B.

WITH BRICK\_COUNTS AS (

SELECT A.COLOR, COUNT(\*) COUNT FROM BRICKS A

GROUP BY A.COLOR

), AVERAGE\_BRICKS\_PER\_COLOUR AS ( SELECT AVG ( COUNT ) AVERAGE\_COUNT FROM BRICK\_COUNTS

)

SELECT \* FROM BRICK\_COUNTS B

JOIN AVERAGE\_BRICKS\_PER\_COLOUR ON B.COUNT < AVERAGE\_COUNT;

