MANAS PRATIM BISWAS

IT-A1-025 DBMS FINAL LAB EVALUATION

PART A

1. Create your own table EMP_XXX and DEPT_XXX with the same structure and data as EMP and DEPT
The table given above [Here XXX denotes the last three digits of your roll number. For example, EMP_001 or
EMP_001L (if you are lateral or EMP_001R if readmitted)].

ANS=>

```
CREATE TABLE EMP_025
(
ENO   NUMBER(4) PRIMARY KEY,
ENAME VARCHAR2(10),
JOB VARCHAR2(9),
MGR NUMBER(4),
HIREDATE DATE,
SAL NUMBER(5),
COMM NUMBER(5),
DEPTNO NUMBER(2)
);



CREATE TABLE DEPT_025
(
DNO NUMBER(2) PRIMARY KEY,
DNAME VARCHAR2(10),
LOCATION VARCHAR2(15)
);

INSERT INTO EMP_025 VALUES(7369, 'SMITH', 'CLERK', 7902, '17-DEC-88',
1000, NULL, 20);
INSERT INTO EMP_025 VALUES(7499, 'ALLEN', 'SALESMAN', 7698,
'20-FEB-89', 1600, 300, 30 );
INSERT INTO EMP_025 VALUES(7521, 'WARD', 'SALESMAN', 7698, '22-FEB-89',
1250, 500, 30 );
```

```
INSERT INTO EMP_025 VALUES(7566, 'JONES', 'MANAGER', 7839, '02-APR-89',
2975, NULL, 20);
INSERT INTO EMP_025 VALUES(7654, 'MARTI' , 'SALESMAN' , 7698,
'28-SEP-89', 1250, 1400 ,30 );
INSERT INTO EMP_025 VALUES(7698, 'BLAKE' , 'MANAGER' , 7839,
'01-MAY-89', 2850, NULL,30 );
INSERT INTO EMP_025 VALUES(7782, 'CLARK', 'MANAGER', 7839, '09-JUN-89',
2450,NULL,10);
INSERT INTO EMP_025 VALUES( 7788, 'WONG', 'ANALYST', 7566, '19-APR-87',
3000, NULL,20 );
INSERT INTO EMP_025 VALUES( 7839, 'KING', 'PRESIDENT', null,
'17-NOV-89', 5000, NULL, 10 );
INSERT INTO EMP_025 VALUES(7844, 'TURN', 'SALESMAN', 7698, '08-SEP-89',
1500 , 0,  30 );
INSERT INTO EMP_025 VALUES(7876, 'ADAM', 'CLERK', 7788, '23-MAY-87' ,
1100  , NULL,    20 );
INSERT INTO EMP_025 VALUES(7900, 'JAMES', 'CLERK', 7698, '03-DEC-89',
950,NULL,30 );
INSERT INTO EMP_025 VALUES(7902, 'FORD', 'ANALYST', 7566, '03-DEC-89',
3000, NULL,     20 );
INSERT INTO EMP_025 VALUES(7934, 'MILLE', 'CLERK', 7782, '23-JAN-86',
1300  ,NULL,10 );



INSERT INTO DEPT_025 VALUES(10, 'HRD', 'HOUSTON');
INSERT INTO DEPT_025 VALUES(20, 'RESEARCH', 'DALLAS');
INSERT INTO DEPT_025 VALUES(30, 'SALES', 'CHICAGO');
INSERT INTO DEPT_025 VALUES(40, 'OPERATIONS', 'BOSTON');
```

SELECT * FROM EMP_025

	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
1	ENO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
2	7369	SMITH	CLERK	7902	17-DEC-88	1000	-	20
3	7499	ALLEN	SALESMAN	7698	20-FEB-89	1600	300	30
4	7521	WARD	SALESMAN	7698	22-FEB-89	1250	500	30
5	7566	JONES	MANAGER	7839	02-APR-89	2975	-	20
6	7654	MARTI	SALESMAN	7698	28-SEP-89	1250	1400	30
7	7698	BLAKE	MANAGER	7839	01-MAY-89	2850	-	30
8	7782	CLARK	MANAGER	7839	09-JUN-89	2450	-	10
9	7788	WONG	ANALYST	7566	19-APR-87	3000	-	20
10	7839	KING	PRESIDENT	-	17-NOV-89	5000	-	10
11	7844	TURN	SALESMAN	7698	08-SEP-89	1500	0	30
12	7876	ADAM	CLERK	7788	23-MAY-87	1100	-	20
13	7900	JAMES	CLERK	7698	03-DEC-89	950	-	30
14	7902	FORD	ANALYST	7566	03-DEC-89	3000	-	20
15	7934	MILLE	CLERK	7782	23-JAN-86	1300	-	10

SELECT * FROM DEPT_025

DNO	DNAME	LOCATION
10	HRD	HOUSTON
20	RESEARCH	DALLAS
30	SALES	CHICAGO
40	OPERATIONS	BOSTON

2. Display the name of employees whose commission field is NULL.

ANS=>

```
SELECT ENAME FROM EMP_025 WHERE COMM IS NULL;
```

	Standard
1	ENAME
2	SMITH
3	JONES
4	BLAKE
5	CLARK
6	WONG
7	KING
8	ADAM
9	JAMES
10	FORD
11	MILLE

3. Display output in the following format for each salesman. Format Mr. <Employees Name>'s Total Earning is (sal+com).

ANS=>

```
SELECT 'Mr.'||ENAME||''s Total Earning is '||SAL ||'.'
FROM (SELECT ENAME,SAL+NVL(COMM,0) SAL FROM EMP_025 WHERE JOB LIKE
'SALESMAN%');
```

'MR.'||ENAME||''STOTALEARNINGIS'||SAL||'.'
Mr.ALLEN's Total Earning is 1900.
Mr.WARD's Total Earning is 1750.
Mr.MARTI's Total Earning is 2650.
Mr.TURN's Total Earning is 1500.

4. Display names of those employees whose name's second character is 'o'

ANS=>

```
SELECT ENAME FROM EMP_025 WHERE ENAME LIKE '_O%';
```

ENAME
JONES
WONG
FORD

5. While deleting the "HRD" department of DEPT Table it automatically deletes all the employees of that department from the EMP Table

ANS=>

```
ALTER TABLE EMP_025
ADD FOREIGN KEY (DEPTNO) REFERENCES DEPT_025(DNO) ON DELETE CASCADE;

DELETE FROM DEPT_025 WHERE DNAME='HRD';


SELECT * FROM EMP_025;
```

	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
1	ENO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
2	7369	SMITH	CLERK	7902	17-DEC-88	1000	-	20
3	7499	ALLEN	SALESMAN	7698	20-FEB-89	1600	300	30
4	7521	WARD	SALESMAN	7698	22-FEB-89	1250	500	30
5	7566	JONES	MANAGER	7839	02-APR-89	2975	-	20
6	7654	MARTI	SALESMAN	7698	28-SEP-89	1250	1400	30
7	7698	BLAKE	MANAGER	7839	01-MAY-89	2850	-	30
8	7788	WONG	ANALYST	7566	19-APR-87	3000	-	20
9	7844	TURN	SALESMAN	7698	08-SEP-89	1500	0	30
10	7876	ADAM	CLERK	7788	23-MAY-87	1100	-	20
11	7900	JAMES	CLERK	7698	03-DEC-89	950	-	30
12	7902	FORD	ANALYST	7566	03-DEC-89	3000	-	20

PART B

1) Write a PL/SQL code block to calculate the difference between highest salaried and lowest salaried employee. Store the information in a table.

ANS=>

```
DECLARE
CURSOR C1 IS
SELECT MAX(SAL) FROM EMP_025;
CURSOR C2 IS
SELECT MIN(SAL) FROM EMP_025;
MIN_SAL EMP_025.SAL%TYPE;
MAX_SAL EMP_025.SAL%TYPE;
RES EMP_025.SAL%TYPE;
BEGIN
OPEN C1;
FETCH C1 INTO MAX_SAL;
CLOSE C1;
OPEN C2;
FETCH C2 INTO MIN_SAL;
CLOSE C2;
RES:=MAX_SAL-MIN_SAL;
DBMS_OUTPUT.PUT_LINE('DIFFERENCE BETWEEN HIGHEST AND LOWEST SALARIED
EMPLOYEE IN MODIFIED TABLE =' || RES);
END;
```

```
Statement processed.
DIFFERENCE BETWEEN HIGHEST AND LOWEST SALARIED EMPLOYEE IN MODIFIED TABLE =2050
```

2) Write a PL/SQL cursor that will update salary of all employees. It allows an increment of 30% if the salary is less than 1500 otherwise increment of Rs.1000. It should print old and new salary for all employees.

ANS=>

```
DECLARE

E_ENO EMP_025.ENO%TYPE;
E_NAME EMP_025.ENAME%TYPE;
E_SAL EMP_025.SAL%TYPE;
E_NEWSAL EMP_025.SAL%TYPE;
CURSOR CUR_UPD IS
SELECT ENO,ENAME,SAL FROM EMP_025;
BEGIN
OPEN CUR_UPD;
LOOP
FETCH CUR_UPD INTO E_ENO,E_NAME,E_SAL;
IF E_SAL<1500 THEN
E_NEWSAL := E_SAL*1.30;
ELSE
E_NEWSAL := E_SAL + 1000;
END IF;
DBMS_OUTPUT.PUT_LINE('Mr ' || E_NAME || '''s Old Salary: ' || E_SAL ||
', New Salary: ' || E_NEWSAL);
UPDATE EMP_025 SET SAL=E_NEWSAL WHERE ENO=E_ENO;
EXIT WHEN CUR_UPD%NOTFOUND;
END LOOP;
CLOSE CUR_UPD;
END;
```

```
Statement processed.
Mr SMITH's Old Salary: 1000, New Salary: 1300
Mr ALLEN's Old Salary: 1600, New Salary: 2600
Mr WARD's Old Salary: 1250, New Salary: 1625
Mr JONES's Old Salary: 2975, New Salary: 3975
Mr MARTI's Old Salary: 1250, New Salary: 1625
Mr BLAKE's Old Salary: 2850, New Salary: 3850
Mr WONG's Old Salary: 3000, New Salary: 4000
Mr TURN's Old Salary: 1500, New Salary: 2500
Mr ADAM's Old Salary: 1100, New Salary: 1430
Mr JAMES's Old Salary: 950, New Salary: 1235
Mr FORD's Old Salary: 3000, New Salary: 4000
Mr FORD's Old Salary: 3000, New Salary: 4000
```