

Advanced SQL and JDBC

The database tables, their schema and data is given as:

Table emp:

```
mysql> SELECT * FROM emp;
```

empno	ename	job	mgr	hiredate	sal	comm	deptno
7369	SMITH	CLERK	7902	1980-12-17	800.00	NULL	20
7499	ALLEN	SALESMAN	7698	1981-02-20	1600.00	300.00	30
7521	WARD	SALESMAN	7698	1981-02-22	1250.00	500.00	30
7566	JONES	MANAGER	7839	1981-04-02	2975.00	NULL	20
7654	MARTIN	SALESMAN	7698	1981-09-28	1250.00	1400.00	30
7698	BLAKE	MANAGER	7839	1981-05-01	2850.00	NULL	30
7782	CLARK	MANAGER	7839	1981-06-09	2450.00	NULL	10
7788	SCOTT	ANALYST	7566	1987-07-13	3000.00	NULL	20
7839	KING	PRESIDENT	NULL	1981-11-17	5000.00	NULL	10
7844	TURNER	SALESMAN	7698	1981-09-08	1500.00	0.00	30
7876	ADAMS	CLERK	7788	1987-07-19	1100.00	NULL	20
7900	JAMES	CLERK	7698	1981-12-03	950.00	NULL	30
7902	FORD	ANALYST	7566	1981-12-03	3000.00	NULL	20
7934	MILLER	CLERK	7782	1982-01-23	1300.00	NULL	10

14 rows in set (0.00 sec)

Table dept:

```
mysql> SELECT * FROM dept;
```

deptno	dname	loc
10	ACCOUNTING	NEW YORK
20	RESEARCH	DALLAS
30	SALES	CHICAGO
40	OPERATIONS	BOSTON

4 rows in set (0.00 sec)

Table employeeedetails:

```
mysql> SELECT * FROM employeeedetails;
```

empno	Mobile	PresentAddress	Area	City	Country
Qualification	Email				
7839	1234567879	1 MAIN AVE	WA	TACOCA	USA
GRADUATE	chinxyz@emp.com				
7698	2152313213	B BLOCK NICE STREET	WENEN	TACOCA	SCODD
GRADUATE	mike230@emample.com				
7521	4517825469	UNIVERSAL NEW AVE	BOURNNILE	BRISDON	NEW START
MANAGEMENT	greenden3939@emample.com				
7934	5741115523	SPACE1 OF 1	ANDALUSIAN	PARALLEL	NEW RIVER
MATHEMATICS	dpaul_lime44@emample.com				
7900	4755#55522	NOT KNOWN	WOODOO	COMMONS	UNITED KING
ADVANCE PHYSICS	matts-ino33@emample.com				
7844	5124785452	TUCSON, AZ MSA	ALPINE	ARIZONA	USA
DIPLOMA IN FINANCE	plaoto_nk984@emample.com				

6 rows in set (0.00 sec)

1) Find all employees whose Employee name ends with 'N'. List the employee number, the Employee name, and the last character of the Employee name.

```
mysql> SELECT empno, ename, RIGHT(ename,1) FROM emp WHERE ename LIKE "%n";
+-----+-----+-----+
| empno | ename  | RIGHT(ename,1) |
+-----+-----+-----+
| 7499  | ALLEN  | N              |
| 7654  | MARTIN | N              |
+-----+-----+-----+
2 rows in set (0.00 sec)
```

2) Write a procedure to increment the salary of employee who works in sales department.

```
mysql> DELIMITER //
mysql> CREATE PROCEDURE updateSalary(IN amount DECIMAL(7,2))
  -> BEGIN
  -> UPDATE emp SET sal = sal + amount WHERE deptno = (SELECT deptno FROM dept
WHERE dname = "SALES");
  -> END//
Query OK, 0 rows affected (0.00 sec)
```

```
mysql> CALL updateSalary(100);
  -> //
Query OK, 6 rows affected (0.20 sec)
```

3) write a function to find the total salary of employees, who works in Accounts department.

```
mysql> CREATE FUNCTION sumSalary () RETURNS int
  -> BEGIN
  -> DECLARE total INT(4) DEFAULT 0;
  -> SELECT sum(e.sal) INTO total from emp e INNER JOIN dept d ON e.deptno=d.deptno WHERE d.dname ='ACCOUNTING';
  -> RETURN total;
  -> END //
Query OK, 0 rows affected (0.00 sec)
```

```
mysql> select sumSalary();
+-----+
| sumSalary() |
+-----+
|          8750 |
+-----+
1 row in set (0.06 sec)
```

4) Create a new table for keeping transaction records, record will be updated in this table when there is deduction in the salary, when salary is deducted a trigger is executed which insert employee name ,updatedby ,changedsalary,updateddate in new table.

```
mysql> CREATE TABLE transactions(ename VARCHAR(25), updatedby VARCHAR(25), changedsalary DECIMAL(7,2), updateddate DATE);
Query OK, 0 rows affected (0.44 sec)
```

```
mysql> CREATE TRIGGER update_transactions
-> AFTER UPDATE ON emp
-> FOR EACH ROW
-> BEGIN
-> INSERT INTO transactions VALUES(NEW.ename, "Shreyansh", NEW.sal, NOW());
-> END//
Query OK, 0 rows affected (0.08 sec)
```

```
mysql> UPDATE emp SET sal = sal - 100 WHERE empno = 7499;
Query OK, 1 row affected (0.27 sec)
Rows matched: 1  Changed: 1  Warnings: 0
```

```
mysql> SELECT * FROM transactions;
+-----+-----+-----+-----+
| ename | updatedby | changedsalary | updateddate |
+-----+-----+-----+-----+
| ALLEN | Shreyansh | 1700.00 | 2018-02-21 |
+-----+-----+-----+-----+
1 row in set (0.00 sec)
```