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Date:11-10-2017 Roll No: 1

**Cursor**

# Write a stored procedure using cursor to calculate the total and the percentage of marks of the students in four subjects from the table - Student with the schema given below.

STUDENT ( RNO , S1 , S2, S3, S4, total, percentage)

[Initially table is partially filled except the last two columns. Those columns should be updated from your procedure]

1. Write a stored procedure using cursor to display employee SSN, name and basic\_pay of 5 highest paid employees. For this create the following tables and populate it.

EMP\_DETAILS(SSN,name,address,year\_of\_exp) EMP\_SAL(SSN, basic\_pay,da,hra,gross\_sal)

1. Write a stored procedure using cursor to calculate the total salary of first 'n' records of EMP\_SAL table. The value of n is passed to procedure as parameter.
2. Write a stored procedure using cursor to update the salary of all employees who earn less than the average salary. Use EMP\_SAL table. All the updations must be recorded in a separate table with details: employee SSN, date of updation and updated salary.
3. Write a stored procedure using cursor to delete employees whose experience is less than 2 years. USE tables EMP\_DETAILS and EMP\_SAL.

## 1.

DELIMITER $$

DROP PROCEDURE IF EXISTS P1$$ CREATE PROCEDURE P1()

BEGIN

DECLARE rnum INT; DECLARE a INT; DECLARE b INT; DECLARE c INT; DECLARE d INT;

DECLARE flag INT DEFAULT 0; DECLARE ttl INT;

DECLARE per DECIMAL(4,2);

DECLARE curs CURSOR FOR SELECT rno,s1,s2,s3,s4 FROM student1; DECLARE CONTINUE HANDLER FOR NOT FOUND SET flag=1;

OPEN curs;

lbl:WHILE flag!=1 DO

FETCH curs INTO rnum,a,b,c,d; SET ttl=a+b+c+d;

SET per=ttl/4;

UPDATE student1 SET total=ttl,percentage=per WHERE

rno=rnum;

END WHILE lbl;

CLOSE curs;

END$$ DELIMITER ;

mysql> select \* from student1;

+-----+------+------+------+------+-------+------------+

| rno | s1 | s2 | s3 | s4 | total | percentage |

+-----+------+------+------+------+-------+------------+

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | | 1 | | | 85 | | | 96 | | | 71 | | | 45 | | | NULL | | | NULL | | |
| | | 2 | | | 55 | | | 65 | | | 87 | | | 90 | | | NULL | | | NULL | | |
| | | 3 | | | 65 | | | 55 | | | 90 | | | 98 | | | NULL | | | NULL | | |
| | | 4 | | | 46 | | | 98 | | | 83 | | | 75 | | | NULL | | | NULL | | |
| | | 5 | | | 56 | | | 45 | | | 63 | | | 46 | | | NULL | | | NULL | | |

+-----+------+------+------+------+-------+------------+

mysql> source p1.sql; mysql> call P1();

mysql> select \* from student1;

+-----+------+------+------+------+-------+------------+

| rno | s1 | s2 | s3 | s4 | total | percentage |

+-----+------+------+------+------+-------+------------+

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | | 1 | | | 85 | | | 96 | | | 71 | | | 45 | | | 297 | | | 74.25 | | |
| | | 2 | | | 55 | | | 65 | | | 87 | | | 90 | | | 297 | | | 74.25 | | |
| | | 3 | | | 65 | | | 55 | | | 90 | | | 98 | | | 308 | | | 77.00 | | |
| | | 4 | | | 46 | | | 98 | | | 83 | | | 75 | | | 302 | | | 75.50 | | |
| | | 5 | | | 56 | | | 45 | | | 63 | | | 46 | | | 210 | | | 52.50 | | |

+-----+------+------+------+------+-------+------------+

2.

## DELIMITER $$

DROP PROCEDURE IF EXISTS P2$$ CREATE PROCEDURE P2()

BEGIN

DECLARE sid INT;

DECLARE flag INT DEFAULT 0; DECLARE i INT DEFAULT 0;

DECLARE curs CURSOR FOR SELECT ssn FROM emp\_sal ORDER BY

gross\_sal DESC LIMIT 5;

DECLARE CONTINUE HANDLER FOR NOT FOUND SET flag=1;

OPEN curs;

lbl:WHILE flag!=1 AND i<var DO FETCH curs INTO sid;

SELECT a.ssn,name,basic\_pay FROM emp\_details as a,emp\_sal as b WHERE a.ssn=sid AND a.ssn=b.ssn;

SET i=i+1; END WHILE lbl;

CLOSE curs;

END$$ DELIMITER ;

mysql> select \* from emp\_details;

+------+--------+---------+-------+

| ssn | name | address | y\_o\_e |

+------+--------+---------+-------+

| 1000 | alpha | aaaa | 3 |

| 1002 | beta | bbbb | 5 |

| 1003 | cola | cccc | 2 |

| 1005 | damond | dddd | 0 |

| 1007 | earni | eeee | 5 |

| 1009 | fammy | ffff | 9 |

+------+--------+---------+-------+

mysql> select \* from emp\_sal;

+------+-----------+-------+-------+-----------+

| ssn | basic\_pay | da | hra | gross\_sal |

+------+-----------+-------+-------+-----------+

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | | 1000 | | | 15000 | | | 5000 | | | 3000 | | | 18000 | | |
| | | 1002 | | | 20000 | | | 5000 | | | 5000 | | | 30000 | | |
| | | 1003 | | | 1500 | | | 500 | | | 500 | | | 2000 | | |
| | | 1005 | | | 25000 | | | 5000 | | | 5000 | | | 30000 | | |
| | | 1007 | | | 10000 | | | 5000 | | | 7500 | | | 22500 | | |
| | | 1009 | | | 25000 | | | 10000 | | | 10000 | | | 45000 | | |

+------+-----------+-------+-------+-----------+

mysql> source p2.sql; mysql> call p2();

+------+-------+-----------+

| ssn | name | basic\_pay |

+------+-------+-----------+

| 1009 | fammy | 25000 |

+------+-------+-----------+

+------+------+-----------+

| ssn | name | basic\_pay |

+------+------+-----------+

| 1002 | beta | 20000 |

+-----+------+-----------+

+------+--------+-----------+

| ssn | name | basic\_pay |

+------+--------+-----------+

| 1005 | damond | 25000 |

+------+--------+-----------+

+------+-------+-----------+

| ssn | name | basic\_pay |

+------+-------+-----------+

| 1007 | earni | 10000 |

+------+-------+-----------+

+------+-------+-----------+

| ssn | name | basic\_pay |

+------+-------+-----------+

| 1000 | alpha | 15000 |

+------+-------+-----------+

## 3.

DELIMITER $$

DROP PROCEDURE IF EXISTS P3$$ CREATE PROCEDURE P3(var INT) BEGIN

DECLARE sid INT; DECLARE b INT; DECLARE d INT; DECLARE h INT;

DECLARE i INT DEFAULT 0; DECLARE ts INT DEFAULT 0; DECLARE flag INT DEFAULT 0;

DECLARE curs CURSOR FOR SELECT ssn,basic\_pay,da,hra FROM emp\_sal LIMIT var;

DECLARE CONTINUE HANDLER FOR NOT FOUND SET flag=1;

OPEN curs;

lbl:WHILE flag!=1 AND i<var DO

END$$

FETCH curs INTO sid,b,d,h; SET ts=ts+b+d+h;

SET i=i+1; END WHILE lbl;

SELECT ts AS Total\_Salary; CLOSE curs;

DELIMITER ;

mysql> source p3.sql; mysql> call p3(3);

+--------------+

| Total\_Salary |

+--------------+

| 55500 |

+--------------+

## 4.

DELIMITER $$

DROP PROCEDURE IF EXISTS P4$$ CREATE PROCEDURE P4()

BEGIN

DECLARE sid INT;

DECLARE avg\_s INT;

DECLARE flag INT DEFAULT 0; DECLARE i INT DEFAULT 0; DECLARE temp INT;

DECLARE curs CURSOR FOR SELECT ssn FROM emp\_sal; DECLARE CONTINUE HANDLER FOR NOT FOUND SET flag=1;

OPEN curs;

DROP TABLE IF EXISTS upsal;

CREATE TABLE upsal (ssn INT,d\_o\_u DATE,u\_sal INT); SELECT avg(gross\_sal) INTO avg\_s FROM emp\_sal; lbl:WHILE flag!=1 DO

FETCH curs INTO sid;

SELECT gross\_sal INTO temp FROM emp\_sal WHERE ssn=sid; IF temp < avg\_s THEN

INSERT INTO upsal VALUES(sid,sysdate(),avg\_s);

UPDATE emp\_sal SET gross\_sal=avg\_s,basic\_pay=basic\_pay+(avg\_s-temp) WHERE ssn=sid;

END IF; END WHILE lbl;

CLOSE curs;

END$$ DELIMITER ;

mysql> source p4.sql; mysql> call p4();

mysql> select \* from upsal;

+------+------------+-------+

| ssn | d\_o\_u | u\_sal |

+------+------------+-------+

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| | | 1000 | | | 2017-10-11 | | | 24583 | | |
| | | 1003 | | | 2017-10-11 | | | 24583 | | |
| | | 1007 | | | 2017-10-11 | | | 24583 | | |

+------+------------+-------+

mysql> select \* from emp\_sal;

+------+-----------+-------+-------+-----------+

| ssn | basic\_pay | da | hra | gross\_sal |

+------+-----------+-------+-------+-----------+

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | | 1000 | | | 21583 | | | 5000 | | | 3000 | | | 24583 | | |
| | | 1002 | | | 20000 | | | 5000 | | | 5000 | | | 30000 | | |
| | | 1003 | | | 24083 | | | 500 | | | 500 | | | 24583 | | |
| | | 1005 | | | 25000 | | | 5000 | | | 5000 | | | 30000 | | |
| | | 1007 | | | 12083 | | | 5000 | | | 7500 | | | 24583 | | |
| | | 1009 | | | 25000 | | | 10000 | | | 10000 | | | 45000 | | |

+------+-----------+-------+-------+-----------+

## 5.

DELIMITER $$

DROP PROCEDURE IF EXISTS P5$$ CREATE PROCEDURE P5()

BEGIN

DECLARE sid INT;

DECLARE flag INT DEFAULT 0;

DECLARE curs CURSOR FOR SELECT ssn FROM emp\_details; DECLARE CONTINUE HANDLER FOR NOT FOUND SET flag=1;

OPEN curs;

lbl:WHILE flag!=1 DO FETCH curs INTO sid;

DELETE FROM emp\_details WHERE ssn=sid AND y\_o\_e<2;

END$$

END WHILE lbl;

CLOSE curs;

DELIMITER ;

mysql> select \* from emp\_details;

+------+--------+---------+-------+

| ssn | name | address | y\_o\_e |

+------+--------+---------+-------+

| 1000 | alpha | aaaa | 3 |

| 1002 | beta | bbbb | 5 |

| 1003 | cola | cccc | 2 |

| 1005 | damond | dddd | 0 |

| 1007 | earni | eeee | 5 |

| 1009 | fammy | ffff | 9 |

+------+--------+---------+-------+

mysql> source p5.sql; mysql> call p5();

mysql> select \* from emp\_details;

+------+-------+---------+-------+

| ssn | name | address | y\_o\_e |

+------+-------+---------+-------+

| 1000 | alpha | aaaa | 3 |

| 1002 | beta | bbbb | 5 |

| 1003 | cola | cccc | 2 |

| 1007 | earni | eeee | 5 |

| 1009 | fammy | ffff | 9 |

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