CO2 Lab Assignments
Procedures and Functions

1. Given an integer i, write a PL/SQL procedure to insert the tuple (i, 'xxx') into a given relation
   Hint: CREATE TABLE T2 (a INTEGER, b CHAR(10));

   ANSWER

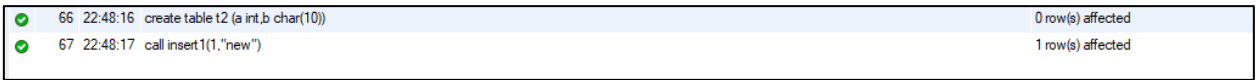
   Table creation and stored Procedure call

   CREATE TABLE t2 (a int,b char(10));
   CALL insert1(1,"new");

   STORED PROCEDURE :

```
CREATE DEFINER=`root`@`localhost` PROCEDURE `insert1`(i int ,j char(10))
BEGIN
    IF((SELECT COUNT(*) FROM t2 WHERE a=i)=0) THEN
        INSERT INTO t2 VALUES (i,j);
    END IF;
END
```

   OUTPUT



2. **W**rite a PL/SQL block to calculate the incentive of an employee whose ID is 110

   ANSWER

   Table creation and insertion

   CREATE TABLE employee(id int,basic double,hra double);
   INSERT INTO employee VALUES(101,12000,3200),(102,15000,3200);

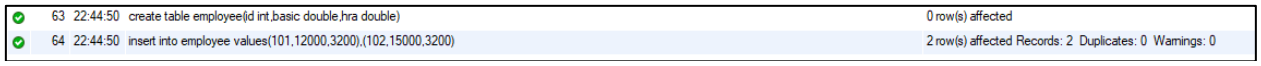
   Function call

   SELECT *,incentive(id) FROM employee;

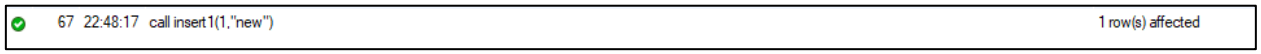
FUNCTION :

```
CREATE DEFINER=`root`@`localhost` FUNCTION `incentive`(id1 int) RETURNS
double
BEGIN
 DECLARE bp double;
 DECLARE h double;
 DECLARE inc double;
 SELECT basic INTO bp
        FROM employee
        WHERE id=id1;
 SELECT hra INTO h
        FROM employee
        WHERE id=id1;
 if(bp>10000) then
        set inc=bp+h+1200;
 else
        set inc=bp+h+4500;
 end if;
RETURN inc;
END
```

OUTPUT



Function call :



3. Create the Book database and do the following: (Consider the attributes based on the question given)
   book(book_name, author_name, price,quantity)

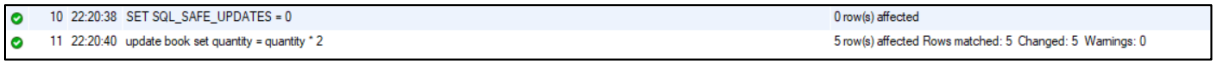
   a. Write a query to update the quantity by double in the table book.
   b. List all the book_name whose price is greater than those of book named "Database for Dummies"
   c. Retrieve the list of author_name whose first letter is 'a' along with the book_name and price (Explore more about *Like* keyword)
   d. Write a PL/SQL Procedure to find the total number of books of same author

```
create table book(book_name varchar(20),author_name varchar(20),price int,quantity int);
```

ANSWERS:

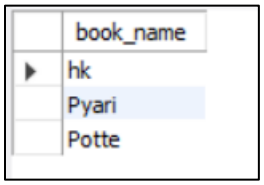
a.

```
update book set quantity = quantity * 2;
```



b.

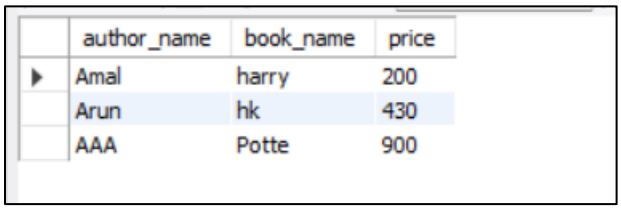
```
select book_name from book where price > (select price from book where book_name = 'database for dummies');
```



book_name
hk
Pyari
Potte

c.

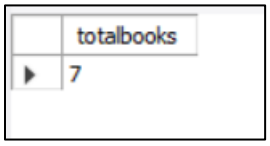
```
select author_name,book_name,price from book where author_name like 'a%';
```



author_name	book_name	price
Amal	harry	200
Arun	hk	430
AAA	Potte	900

d.

```
call total('Stanlee');

CREATE DEFINER=`root`@`localhost` PROCEDURE `total`(auth varchar(20))

BEGIN

        select sum(quantity) as totalbooks from book where author_name like auth;

END
```



totalbooks
7

4. Create the Company database with the following tables and do the following:
   Administration (employee_salary, development _cost, fund_ amount, turn_over,bonus)
   Emp_details (emp_no, emp_name, DOB, address, doj, mobile_no, dept_no, salary).

   a. Calculate the total and average salary amount of the employees of each department.

   b. Display total salary spent for employees.

   c. Develop a PL/SQL function to display total fund_amount spent by the administration department

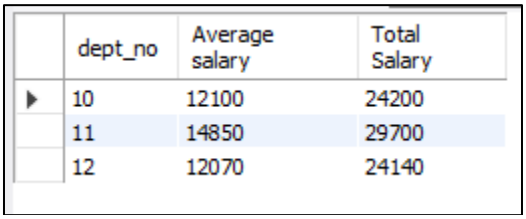
ANSWERS

Table creation and insertion

```
CREATE TABLE Administration (
employee_salary double,
development_cost double,
fund_amount double,
turn_over double,
bonus double);

CREATE TABLE Emp_details(
emp_no int,
emp_name varchar(20),
DOB date,
address varchar(20),
doj date,
mobile_no int(12),
dept_no int,
salary double);

INSERT INTO Administration VALUES
(12000,25000,560000,65000,5000),
(70000,55000,860000,15000,1000),
(18000,45000,160000,75000,7000),
(10000,27000,520000,60000,5000),
(18000,27000,360000,35000,3000);

INSERT INTO Emp_details VALUES
(1,"Ram","1999-10-10","Street - 2,vallakadavu","2020-10-10",9865986598,10,12000),
(2,"manoharan","1997-10-10","Street - 2,vallakadavu","2020-10-10",9865986598,10,12200),
(3,"mani","1996-10-10","Street - 2,vallakadavu","2020-10-10",9865986598,11,12500),
(4,"moran","1957-10-10","Street - 2,vallakadavu","2020-10-10",9865986598,11,17200),
(5,"sasi","1948-10-10","Street - 2,vallakadavu","2020-10-10",9865986598,12,12090),
```

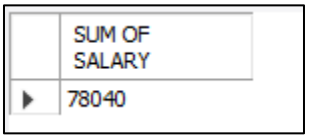
(6,"kaka","1988-10-10","Street - 2,vallakadavu","2020-10-10-",9865986598,12,12050);

a.
```
SELECT
        dept_no,
        avg(salary) 'Average salary',
        sum(salary) 'Total Salary'
FROM Emp_details
GROUP BY dept_no;
```
OUTPUT



dept_no	Average salary	Total Salary
10	12100	24200
11	14850	29700
12	12070	24140

b.
```
SELECT
        sum(salary) 'SUM OF SALARY'
FROM Emp_details;
```
OUTPUT



SUM OF SALARY
78040

c.

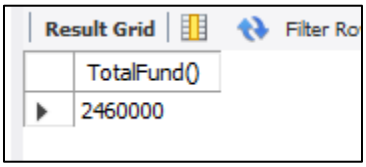
FUNCTION :

```
CREATE DEFINER=`root`@`localhost` FUNCTION `TotalFund`() RETURNS double
BEGIN
        DECLARE f DOUBLE;
   DECLARE i DOUBLE;
   SELECT SUM(fund_amount) INTO f
                FROM Administration;
RETURN f;
END
```

Function call :

```
SELECT TotalFund() from Administration LIMIT 1;
```

OUTPUT



TotalFund()
2460000