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**COURSE CODE : CSA0520**  
**COURSE NAME : DATABASE MANAGEMENT FOR DATA ANALYTICS**

### **Program 1:**

Write a function that uses CASE statement where if monthly\_value is equal to or less than 4000, then income\_level will be set to 'Low Income'. If monthly\_value is equal to or less than 5000, then income\_level will be set to 'Avg Income'. Otherwise, income\_level will be set to 'High Income'.

### **Procedure:**

LOOP Syntax

[begin\_label:] LOOP

statement\_list

END LOOP [end\_label]

LOOP implements a simple loop construct, enabling repeated execution of the statement list, which consists of one or more statements, each terminated by a semicolon

(;) statement delimiter. The statements within the loop are repeated until the loop is terminated. Usually, this is accomplished with a LEAVE statement. Within a stored function, RETURN can also be used, which exits the function entirely.

### **Program 2:**

Write a function that will use ITERATE statement which would cause the loop to repeat while income is less than 4000. Once income is greater than or equal to 4000, would terminate the LOOP.

1)

```

mysql> CREATE FUNCTION INCOMELEVEL(MONTHLY_VALUE INT) RETURNS VARCHAR(20) BEGIN
DECLARE INCOME_LEVEL VARCHAR(20); CASE MONTHLY_VALUE WHEN 4000 THEN SET INCOME_L
EVEL='LOW INCOME'; WHEN 5000 THEN SET INCOME_LEVEL='AVG INCOME'; ELSE SET INCOME
_LEVEL='HIGH INCOME'; RETURN INCOME_LEVEL; END; //
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that
corresponds to your MySQL server version for the right syntax to use near '' at
line 1
mysql> DELIMITER //
mysql>
mysql> CREATE FUNCTION IncomeLevel ( monthly_value INT )
-> RETURNS varchar(20)
->
-> BEGIN
->
-> DECLARE income_level varchar(20);
->
-> CASE monthly_value
-> WHEN 4000 THEN
-> SET income_level = 'Low Income';
->
-> WHEN 5000 THEN
-> SET income_level = 'Avg Income';
->
-> ELSE
-> SET income_level = 'High Income';
-> END CASE;
->
-> RETURN income_level;
->
-> END; //
Query OK, 0 rows affected (0.01 sec)

mysql> SELECT INCOMELEVEL(5300); //
+-----+
| INCOMELEVEL(5300) |
+-----+
| High Income      |
+-----+
1 row in set (0.00 sec)

mysql>

```

2)

```
mysql> SELECT INCOMELEVEL2(2100);
-> //
ERROR 1054 (42S22): Unknown column 'starting_value' in 'field list'
mysql> SELECT IncomeLevel2(2100);
-> //
ERROR 1054 (42S22): Unknown column 'starting_value' in 'field list'
mysql> DROP FUNCTION INCOMELEVEL2 //
Query OK, 0 rows affected (0.00 sec)

mysql> CREATE FUNCTION CALCINCOME2 ( starting_value INT )
-> RETURNS INT
->
-> BEGIN
->
->   DECLARE income INT;
->
->   SET income = 0;
->
->   label1: LOOP
->     SET income = income + starting_value;
->     IF income < 4000 THEN
->       ITERATE label1;
->     END IF;
->     LEAVE label1;
->   END LOOP label1;
->
->   RETURN income;
->
-> END; //
Query OK, 0 rows affected (0.00 sec)

mysql> SELECT CALCINCOME2(2100);
-> //
+-----+
| CALCINCOME2(2100) |
+-----+
|          4200 |
+-----+
1 row in set (0.00 sec)

mysql> 
```



