From Pushkar Malik to Everyone: 11:11 AM

Create a tree structure in MySql table that could store the following tree structure:http://prnt.sc/wcbzth

[CREATE](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/create-database.html) [DATABASE](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/create-database.html) sqltest

CREATE TABLE electronicstree(id int(11) unsigned NOT NULL AUTO\_INCREMENT PRIMARY KEY, name varchar(255) NOT NULL, parent\_key int(11) unsigned DEFAULT NULL )

INSERT INTO `electronicstree`( `name`, `parent\_key`) VALUES ("ELECTRONICS",NULL)

INSERT INTO `electronicstree`( `name`, `parent\_key`) **VALUES**('Laptops & PC',1);

INSERT INTO `electronicstree`( `name`, `parent\_key`) **VALUES**('Laptops',2);

INSERT INTO `electronicstree`( `name`, `parent\_key`) **VALUES**('PC',2);

INSERT INTO `electronicstree`( `name`, `parent\_key`) **VALUES**('Cameras & photo',1);

INSERT INTO `electronicstree`( `name`, `parent\_key`) **VALUES**('Camera',5);

INSERT INTO `electronicstree`( `name`, `parent\_key`) **VALUES**('Phones & Accessories',1);

INSERT INTO `electronicstree`( `name`, `parent\_key`) **VALUES**('Smartphones',7);

INSERT INTO `electronicstree`( `name`, `parent\_key`) **VALUES**('Android',8);

INSERT INTO `electronicstree`( `name`, `parent\_key`) **VALUES**('iOS',8);

INSERT INTO `electronicstree`( `name`, `parent\_key`) **VALUES**('Other Smartphones',8);

INSERT INTO `electronicstree`( `name`, `parent\_key`) **VALUES**('Batteries',7);

INSERT INTO `electronicstree`( `name`, `parent\_key`) **VALUES**('Headsets',7);

INSERT INTO `electronicstree`( `name`, `parent\_key`) VALUES('Screen Protectors',7);

Write a query to find the root node. [SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/select.html) \* FROM `electronicstree` WHERE parent\_key [IS](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/comparison-operators.html#operator_is) NULL

2) Write a query to find leaf node.[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/select.html) t1.id,t1.name FROM electronicstree t1 [LEFT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/string-functions.html#function_left) JOIn electronicstree t2 ON t2.parent\_key = t1.id WHERE t2.id [IS](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/comparison-operators.html#operator_is) NULL

3) Write a query to find non-leaf node.[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/select.html) DISTINCT t1.name,t1.id FROM electronicstree t1 [RIGHT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/string-functions.html#function_right) JOIN electronicstree t2 on t1.id=t2.parent\_key

4) Write a query to find the path of each node. e.g. http://prnt.sc/wcc4bg

5) Write a function to calculate node level. e.g. Electronics is at 0 level, Camera is on level 2 and iOs is on level 3.

6) Write a procedure to get the immediate children.

QUERY FOR IMMEDIATE CHID={ SELECT id,name FROM electronicstree WHERE parent\_key=””;}

DELIMITER $$

CREATE PROCEDURE immediatechild(IN `ID` INT(11))

BEGIN

SELECT t1.name FROM

electronicstree t1

LEFT JOIN

electronicstree t2

ON

t1.parent\_key=t2.id

WHERE

t2.id=ID;

**END**$$

DELIMITER ;

7) Write a trigger to delete all children if parent node was deleted.

8) Write a function/procedure to change the node's parent also move the the whole sub-tree if it is non-leaf node and alert/throw error if changing root node's parent. \