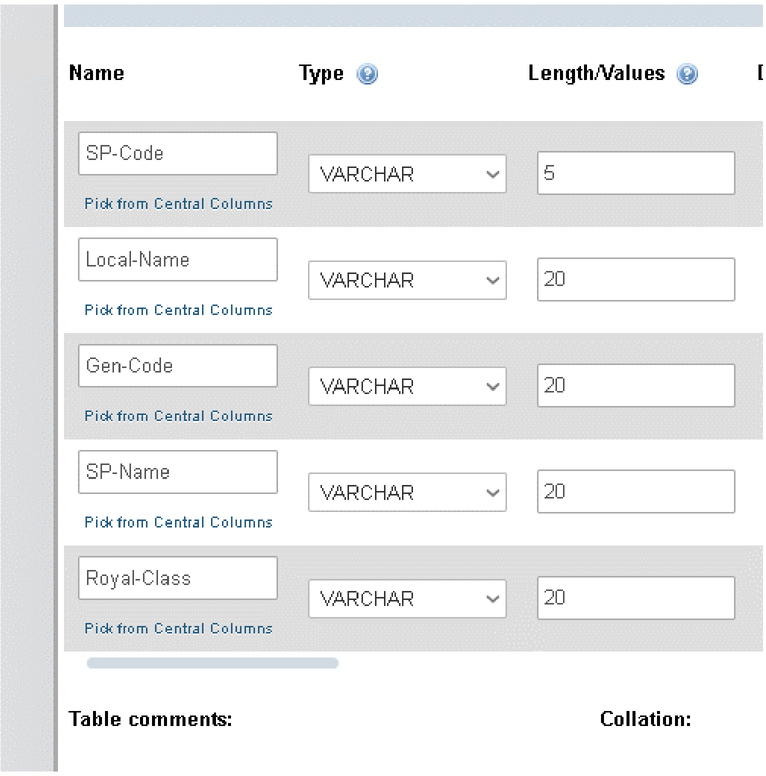
Step 1 : create database

create database call tree

create table named :

a) scientificname :



Name	Type	Length/Values
SP-Code	VARCHAR	5
Local-Name	VARCHAR	20
Gen-Code	VARCHAR	20
SP-Name	VARCHAR	20
Royal-Class	VARCHAR	20

Table comments:

Collation:

import scientifname. Csv

b) speciesname :

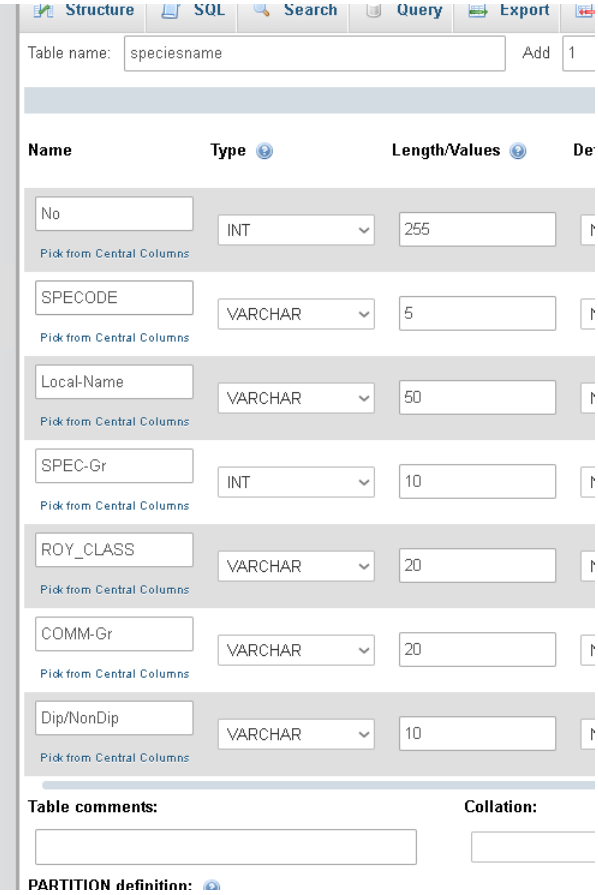


Table name: speciesname   Add 1

Name	Type	Length/Values
No	INT	255
SPECODE	VARCHAR	5
Local-Name	VARCHAR	50
SPEC-Gr	INT	10
ROY_CLASS	VARCHAR	20
COMM-Gr	VARCHAR	20
Dip/NonDip	VARCHAR	10

Table comments:

Collation:

import species.csv

c) damagetree (change int for cut_tree and victim to varchar)

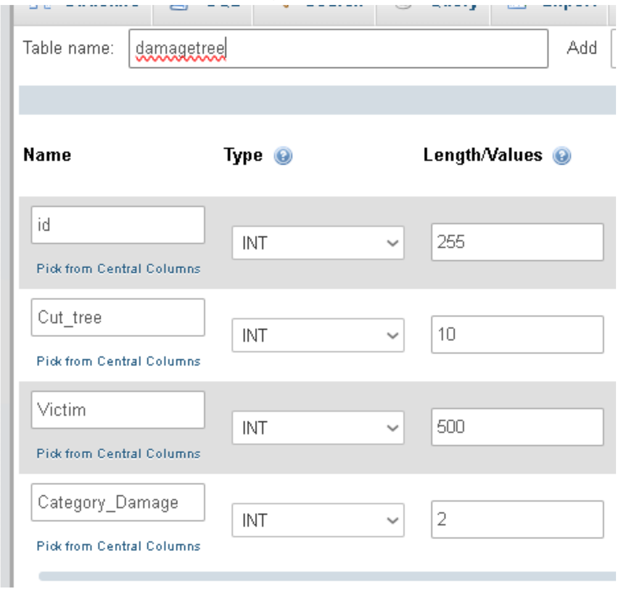
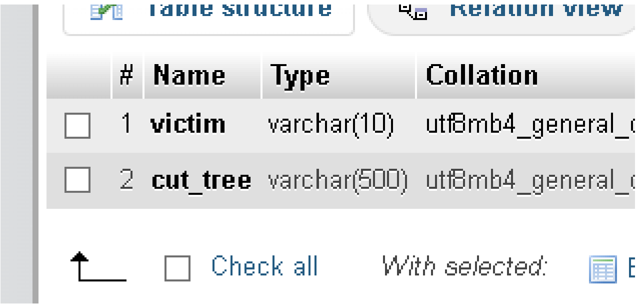


Table name: damagetree   Add

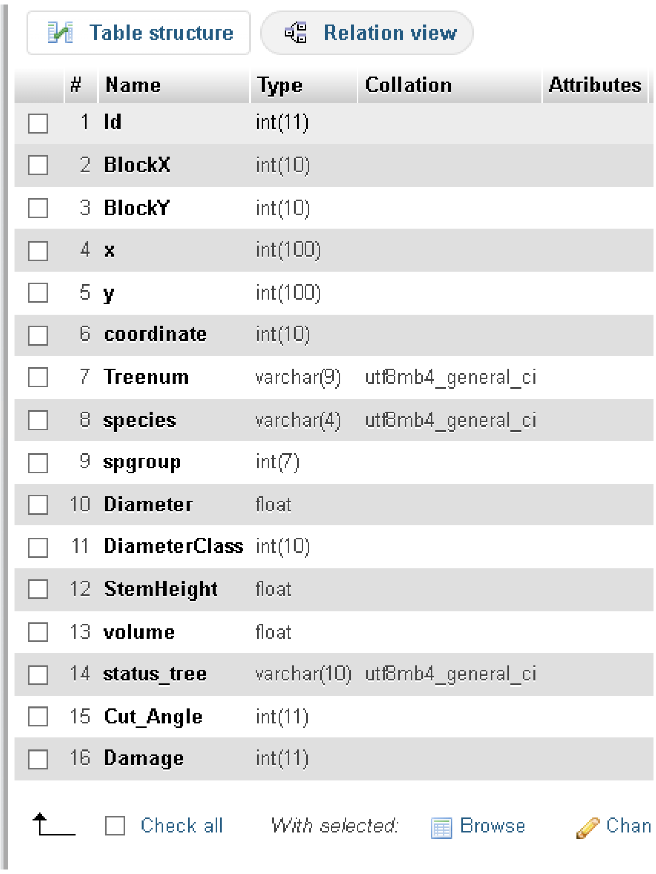
Name	Type	Length/Values
id	INT	255
Cut_tree	INT	10
Victim	INT	500
Category_Damage	INT	2

d) victim



	#	Name	Type	Collation
□	1	**victim**	varchar(10)	utf8mb4_general_c
□	2	**cut_tree**	varchar(500)	utf8mb4_general_c

e) newforestori (set coordinate as varchar sorry mb)



	#	Name	Type	Collation	Attributes
□	1	**Id**	int(11)		
□	2	**BlockX**	int(10)		
□	3	**BlockY**	int(10)		
□	4	**x**	int(100)		
□	5	**y**	int(100)		
□	6	**coordinate**	int(10)		
□	7	**Treenum**	varchar(9)	utf8mb4_general_ci	
□	8	**species**	varchar(4)	utf8mb4_general_ci	
□	9	**spgroup**	int(7)		
□	10	**Diameter**	float		
□	11	**DiameterClass**	int(10)		
□	12	**StemHeight**	float		
□	13	**volume**	float		
□	14	**status_tree**	varchar(10)	utf8mb4_general_ci	
□	15	**Cut_Angle**	int(11)		
□	16	**Damage**	int(11)		

Step 2 : Run create_forest.php

- Run it for 4 time to get 10 000 ++ data

Step 3 Run Sql Code in the new forest ori

1. UPDATE newforestori INNER JOIN speciesname ON newforestori.species = speciesname.No SET newforestori.species = speciesname.No
2. UPDATE newforestori SET Volume = 3.142 * POW((Diameter / 200), 2) * StemHeight * 0.50
3. UPDATE newforestori SET TreeNum = CONCAT('T', LPAD(BlockX, 2, '0'), LPAD(BlockY, 2, '0'), LPAD(x, 2, '0'), LPAD(y, 2, '0'))
4. UPDATE newforestori SET status_tree = CASE WHEN spgroup IN (1, 2, 3, 5) AND Diameter > 45 THEN 'Cut' WHEN spgroup IN (1, 2, 3, 5) AND Diameter <= 45 THEN 'Keep' ELSE status_tree END
5. UPDATE newforestori SET Cut_Angle = CASE WHEN status_tree = 'Cut' THEN FLOOR(RAND() * 360) + 1 ELSE NULL EN
6. UPDATE newforestori INNER JOIN speciesname ON speciesname.No = newforestori.species SET newforestori.species = speciesname.SPECODE
7. UPDATE newforestori SET coordinate = CONCAT('T', LPAD(x, 2, '0'), LPAD(y, 2, '0')}

Step 4 : run find_damage.php

- For produce the victim table

Step 5 : run find_victim.php

- For produce the cut table