IS664 Database Programming
Spring 2022

EXAM

FINAL EXAM

STORED PROCEDURES

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GENERAL

- This is your FINAL EXAM.
- You receive 30 points for a CORRECT solution.
- Read the task carefully and write the code necessary to create the defined Stored Procedure.
- Create a single SQL script containing all the code for the Task.
- The Stored Procedure MUST be created in the imperial_defense database.
- The Stored Procedure MUST utilize one or more cursors to retrieve all required data and MAY NOT have hardcoded values.
- You MAY NOT use any SELECT …INTO statements in your procedure.
- The Stored Procedure MAY INCLUDE user-defined and native functions.
- Utilize your MySQL documentation.
- Be conscious of good style and eliminate extraneous code from your SQL script.
- The EXAM is due on Tuesday May 10 at 9 PM.

TASK

Create the stored procedure SummarizeNetwork which accepts a single parameter and creates/ populates/displays the tables NetworkWidgets_EVEN, NetworkWidgets_ODD, NetworkSchema_Components

Parameter: The name of a Network.

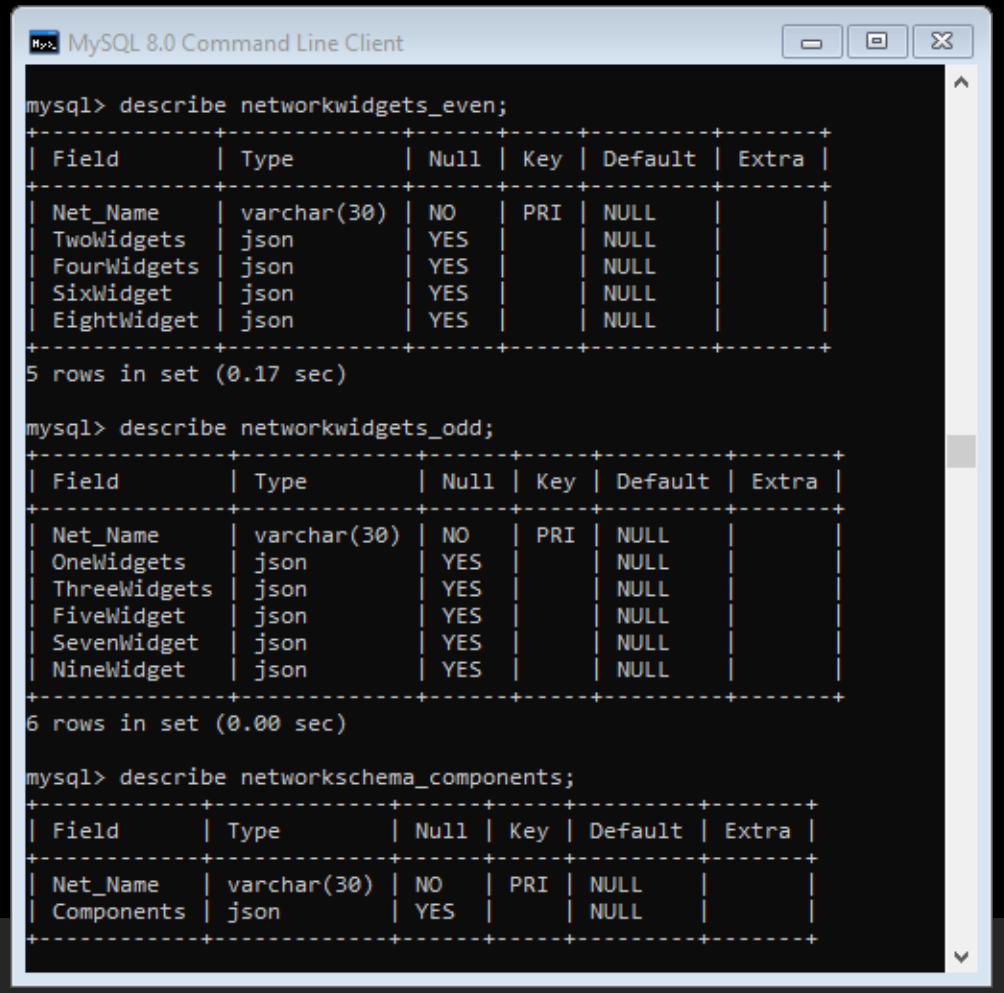

Table	Description
networkwidgets_even	Contains all the even Widget WID numbers assigned to the specified Network organized according to the first digit of their WID and stored as JSON Arrays.
networkwidgets_odd	Contains all the odd Widget WID numbers assigned to the specified Network organized according to the first digit of their WID and stored as JSON Arrays.
networkschema_components	Contains the number of routers, hubs, repeaters, and switches, with their associated IDs, assigned to the specified Network as a JSON Object with Key-Value pairs as shown.

EXPECTED OUTPUT

Call the procedure with the following parameters

MySQL 8.0 Command Line Client

Net_Name	TwoWidgets	FourWidgets	SixWidget	EightWidget
Brore03yNET_SAT	["203", "243", "255", "256", "273", "275", "287", "29", "297"]	["406", "410", "419", "421", "450", "469", "471", "480", "492", "493"]	[]	[]

1 row in set (0.07 sec)

Net_Name	OneWidgets	ThreeWidgets	FiveWidget	SevenWidget	NineWidget
Brore03yNET_SAT	["1", "11", "118", "121", "139", "145", "147", "151", "171", "180", "189", "192", "193", "194"]	["304", "307", "329", "342", "351", "359", "36", "362", "37", "372", "373", "388", "39"]	["52", "57"]	["79"]	[]

1 row in set (0.07 sec)

Net_Name	Components
Brore03yNET_SAT	{"Hubs": [5, ["HB-14", "HB-17", "HB-20", "HB-29", "HB-30"]], "Routers": [3, ["RTR10", "RTR29", "RTR8"]], "Repeater": [2, ["RPTR-2", "RPTR-25"]], "Switches": [4, ["SW-19", "SW-22", "SW-26", "SW-3"]]}

```
CALL SummarizeNetwork('Brore03yNET_SAT');
```

EXPECTED OUTPUT

Call the procedure with the following parameter

MySQL 8.0 Command Line Client

Net_Name	TwoWidgets	FourWidgets	SixWidget	EightWidget
Zebetis05uNET_CIV	["202", "208", "215", "218", "222", "234", "235", "251", "252", "257", "259", "283", "286", "290"]	["401", "428", "44", "451", "459", "46", "478", "487", "489"]	["6", "68"]	[]

1 row in set (0.12 sec)

Net_Name	OneWidgets	ThreeWidgets	FiveWidget	SevenWidget	NineWidget
Zebetis05uNET_CIV	["115", "122", "125", "150", "154", "159", "164", "173", "176", "185", "187", "196", "198"]	["310", "314", "317", "326", "333", "339", "345", "348", "358", "374", "376", "377"]	[]	["72"]	["91", "96"]

1 row in set (0.12 sec)

Net_Name	Components
Zebetis05uNET_CIV	{"Hubs": [3, ["HB-18", "HB-24", "HB-3"]], "Routers": [2, ["RTR17", "RTR19"]], "Repeater": [4, ["RPTR-10", "RPTR-22", "RPTR-3", "RPTR-5"]], "Switches": [2, ["SW-29", "SW-4"]]}

1 row in set (0.13 sec)

```
CALL SummarizeNetwork('Zebetis05uNET_CIV');
```