# IS664 Database Programming Spring 2022

**EXAM** 



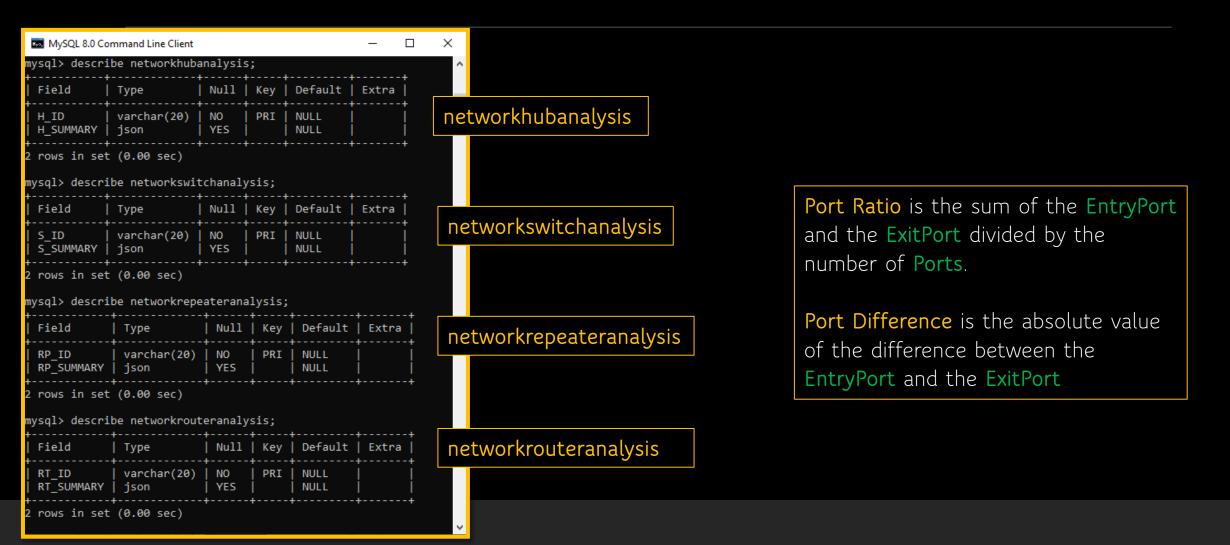
**EXAM: STORED PROCEDURE PROGRAMMING** 

#### **GENERAL**

- •This is your MIDTERM EXAM.
- You receive 30 points for a CORRECT solution.
- •Read the task <u>carefully</u> 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 <u>procedure</u>...You can use them in any function.
- •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 February 8 at 6 PM.

#### **TASK**

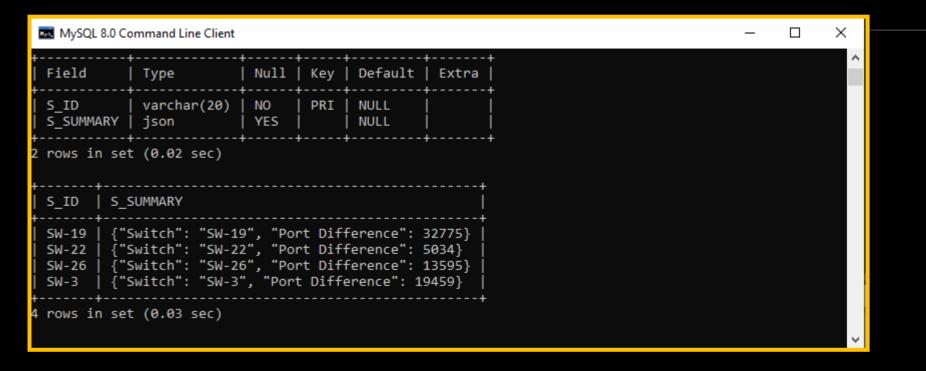
Create the stored procedure networkComponentAnalysis which accepts the name of <u>any</u> network and a component type (Hub, Switch, Repeater, or Router) and creates, populates, shows structure and data of a table which contains the specified information about <u>every</u> specified component type in the specified network.



Call the procedure with the following parameters ('Brore03yNET\_SAT','Hub')

```
MySQL 8.0 Command Line Client
                                                                                               Х
 Field
                           Null | Key | Default | Extra
 H ID
           | varchar(20) |
 H SUMMARY | json
                                        NULL
2 rows in set (0.08 sec)
         H SUMMARY
 H ID
         {"Hub": "HB-14", "Port Ratio": 191.14, "Port Difference": 0}
 HB-14
         {"Hub": "HB-17", "Port Ratio": 72.84, "Port Difference": 6}
 HB-17
         {"Hub": "HB-20", "Port Ratio": 232.50, "Port Difference": 8}
 HB-20
 HB-29
         {"Hub": "HB-29", "Port Ratio": 32.75, "Port Difference": 11}
         {"Hub": "HB-30", "Port Ratio": 15.17, "Port Difference": 5}
5 rows in set (0.09 sec)
```

Call the procedure with the following parameters ('Brore03yNET\_SAT', 'Switch')



Call the procedure with the following parameters ('Brore03yNET\_SAT', 'Repeater')

```
MySQL 8.0 Command Line Client
  Field
                            Null | Key | Default | Extra
             | varchar(20) | NO |
  RP ID
                                   PRI | NULL
 RP SUMMARY | json
                            YES
                                          NULL
2 rows in set (0.02 sec)
  RP ID
           RP_SUMMARY
            {"Repeater": "RPTR-2", "Port Ratio": 0.01, "Port Difference": 41}
  RPTR-2
  RPTR-25 | {"Repeater": "RPTR-25", "Port Ratio": 0.11, "Port Difference": 5}
2 rows in set (0.02 sec)
Query OK, 0 rows affected (0.03 sec)
```

Call the procedure with the following parameters ('Brore03yNET\_SAT','Router')

```
MySQL 8.0 Command Line Client
                            Null | Key | Default | Extra
 Field
RT ID
             varchar(20) | NO
                                   PRI NULL
 RT SUMMARY
                                         NULL
                            YES
2 rows in set (0.05 sec)
 RT_ID | RT_SUMMARY
         {"Type": "Exterior", "Router": "RTR10", "Connect": "Backbone", "Finding": "Static"}
 RTR10
        {"Type": "Border", "Router": "RTR29", "Connect": "Backbone", "Finding": "Static"}
 RTR29
         {"Type": "Border", "Router": "RTR8", "Connect": "Backbone", "Finding": "Dynamic"}
```