→ Stored Procedures

a. Stored procedure is a pre-compiled and Pre-written program that can be executed within MySQL server
b. It is stored in MySQL database and can be called from an application or directly from MySQL client(User)
c. Stored Procedures are commonly used to simplify complex database operations, improve performance
d. Stored procedure can be more complex, and can include control statements, loops, conditional statements and exception handling codes
e. Uses of Stored procedure:
   i. <u>Data Validation:</u> It can be used to validate the data before it is inserted or updated in a database. For example, we have created a stored procedure to check whether a student have filled the valid mobile number, email before inserting into database
   ii. <u>Report Generation:</u> It can be used to generate reports based on queries
   iii. <u>Transactions:</u> Stored procedure can be used to execute a transaction that involves multiple steps or queries. For example, if we want to transfer funds between bank accounts, stored procedure will ensure that transaction will be executed in a secure manner
   iv. asa
f. They can also modify data in database in addition to SELECT statements
g. While creating stored procedure, we can use the following keywords in the parameters, which include
   i. IN:
      1. It is used to pass input value to procedures or functions
      2. These parameters can be used in SELECT, INSERT, UPDATE or DELETE statements

   ii. OUT:
      1. It is used to return a single value from the procedure or a function
      2. These parameters can be used to return value such as result error or any statement

   iii. INOUT:
      1. This parameter is used when you want to pass a value to a procedure and also receives a modified value back from a procedure
   iv.
   v. asa
h. asa

→ Interview challenge / problem

a. What do we use for validation?
   i. <complete_here>
b. asa

→Trigger
    a. A trigger is a stored program invoked automatically in response to an event such as INSERT, UPDATE, DELETE events
    b. Before INSERT, a trigger can be used to validate data before it is inserted into the table
    c. After UPDATE, a trigger can be used to update another table based on changes made to the original table
    d.
    e. asa

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