## 1. What’s the difference between full, differential and transactional backup

- Full Backup: A complete backup of the entire database, including all data and objects. It serves as the base for other types of backups.  
- Differential Backup: Backs up only the changes made since the last full backup. It’s faster and smaller in size than a full backup but needs the last full backup to be restored.  
- Transaction Log Backup: Captures all the transaction log records since the last transaction log backup. It allows point-in-time recovery and is used mainly in databases running in full recovery mode.

## 2. What is permission and what’s the difference between GRANT and DENY and at what level they are used

- Permission: Permissions define what operations a user or role is allowed (or denied) to perform on database objects such as tables, views, or stored procedures.  
- GRANT: Allows a user to perform a specific action (e.g., SELECT, INSERT).  
- DENY: Explicitly prevents a user from performing an action, even if permission is granted via a role.  
- Permissions can be applied at the server level (e.g., LOGIN), database level (e.g., CREATE TABLE), or object level (e.g., SELECT on a specific table).

## 3. What is SQL Profiler and when to use it

SQL Profiler is a tool provided by SQL Server that allows you to monitor and capture SQL Server events in real-time. It is used to:  
- Debug T-SQL queries and stored procedures  
- Monitor performance issues  
- Audit database activity  
- Track slow-running queries and deadlocks

## 4. What is a trigger, why use it, on what level, and what makes it different from a stored procedure

- A Trigger is a special kind of stored procedure that automatically runs in response to certain events on a particular table or view, such as INSERT, UPDATE, or DELETE.  
- Triggers are useful for enforcing business rules, auditing changes, and maintaining data integrity.  
- Triggers are defined at the table level and execute automatically.  
- Difference from stored procedure: Stored procedures must be called explicitly by a user or application, while triggers run automatically when the event occurs.