




## 1. Difference Between Full, Differential, and Transactional Backup

- **Full Backup:**  
Copies the entire database (all data and objects).  
 Most complete, but takes time and space.
  - **Differential Backup:**  
Copies only data changed **since the last full backup**.  
 Faster than full; requires the last full backup to restore.
  - **Transaction Log Backup:**  
Backs up **all changes recorded in the transaction log** since the last log backup.  
 Used for point-in-time recovery.
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## 2. What is Permission? Difference Between GRANT and DENY

- **Permission:**  
Controls what users can do (SELECT, INSERT, etc.) on database objects.
  - **GRANT:**  
Gives a user permission to do an action (e.g., GRANT SELECT ON table TO user).
  - **DENY:**  
Explicitly blocks a permission. It overrides GRANT.
  - **Used on Levels:**
    - Server level (e.g., login access)
    - Database level (e.g., use database)
    - Object level (e.g., table, view, proc)
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### 3. What is SQL Profiler and When to Use It

- **SQL Profiler:**  
A tool to monitor and capture SQL Server activities in real time.
  - **Use Cases:**
    - Debug slow queries
    - Audit user actions
    - Analyze performance
    - Trace login issues
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### 4. What is a Trigger, Why Use It, and How It's Different from Stored Procedure

- **Trigger:**  
A special procedure that runs **automatically** after a specific event (INSERT, UPDATE, DELETE) on a table or view.
- **Why Use It:**
  - Enforce business rules
  - Automatically log changes
  - Maintain data integrity
- **Levels:**
  - Table level (AFTER or INSTEAD OF actions)
- **Difference from Stored Procedure:**
  - Trigger = auto-executed by events
  - Stored Procedure = manually called