1. What's the difference between full, differential and transactional back up

A-) Full backup: Taking a full backup of the database this backup includes:

- All data
- All objects
- Enough information to fully restore the database

It's slow to back up but fast when restore.

B-) Differential backup: only restores the changes that made since the last full backup

- Taken frequently
- Smaller and faster than full back up
- Depends on the last full back
- Restore the full back first then apply the most recent changes

C-) Transaction log backup: capture all transaction changes since last log backup

- Support point in time recovery
- Used in high availability or mission critical systems
- When restore must first restore the full back then restore the transaction to the desired time

2. What is permission and What's the difference between grant and deny and used on what level

A-) Permission: control who can do what in the database like read change etc.

It's like the security layer to prevent unauthorized user from damaging the data or view it.

B-) Difference between Grant and Deny:

- Grant: give permission, allow user to do an action, applies only if not denied.
- Deny: block, prevent action even if granted elsewhere overrides grant.

3. What's SQL profiler and when using it

is a graphical tool provided by Microsoft as part of SQL Server tools that lets you:

- Capture and view real-time events happening on the SQL Server.
- Track queries, stored procedure calls, login attempts, and more.
- Diagnose performance problems, slow queries, or unexpected behavior.

When using it:

- Performance tuning
- Debugging
- Security auditing
- Testing
- Troubleshooting
- Activity monitoring

4. What is trigger and why use it and on what level and what makes it different from normal Stord procedure

Trigger is special type of stored procedure that executed when certain event happens like inset, delete, update.

The difference between it and stored procedure is

- It's automatically execute
- Event based
- Cannot be called

And it can be used in table level, view level or row level.