**RESTORES**

**RESTORES** : A MECHANISM TO USE EXISTING BACKUPS AND RECOVER (RECREATE) THE DATABASE.

**LEVELS OF RESTORE**:

1. FULL DATABASE RESTORE

2. FILEGROUP LEVEL RESTORE

3. FILE LEVEL RESTORE

4. PAGE LEVEL RESTORE

**PHASES OF RESTORE**:

1. **COPY** PHASE : CONTENTS OF THE BACKUP FILE ARE COPIED TO SQL SERVER

2. **REDO** PHASE : COMMITTED DATA FROM LOG FILE ROLL FORWARDED TO DATA FILE.

3. **UNDO** PHASE : INCOMPLETE TRANSACTIONS FROM LOG FILE ARE ROLL BACK [UNDO].

**RESTORE OPTIONS** :

, **NORECOVERY** : DATABASE IN "RESTORING STATE", READY FOR FURTHER RESTORES

. **RECOVERY** : DATABASE IN ONLINE STATE, NOT READY FOR FURTHER RESTORES **STANDBY** : DATABASE IN ONLINE STATE, READ ONLY. One **RUF** File is Auto Created.

ROLLBACK UNDO FILE. TO CONVERT STANDBY DATABASE TO READWRITE.

**POINT-IN-TIME RECOVERY**: TO RESTORE DATABASE TO A SPECIFIC POINT OF TIME. (**PITR**)

**HOW TO RESTORE A DATABASE ?**

OPTION 1: USING **SCRIPTS** : Flexible

OPTION 2: USING **GUI** : Easier

**RESTORES USING USER INTERFACE (GUI) :**

ITEM #1: HOW TO RESTORE A DATABASE ?

LAUNCH SSMS > CONNECT TO THE SERVER > RIGHT CLICK DATABASES > RESTORE DATABASE > DEVICE > SPECIFY THE BACKUP FILE PATH > OK.

ITEM #2: HOW TO RESTORE A DATABASE TO A DIFFERENT FILE PATH ?

LAUNCH SSMS > CONNECT TO THE SERVER > RIGHT CLICK DATABASES > RESTORE DATABASE > DEVICE > SPECIFY THE BACKUP FILE PATH > FILES > RELOCATE / REPOSTION THE DATA FILES AND LOG FILES TO REQUIRED LOCATION(S) > OK.

ITEM #3: HOW TO PERFORM PITR = POINT-IN-TIME RECOVERY ?

LAUNCH SSMS > CONNECT TO THE SERVER > RIGHT CLICK DATABASES > RESTORE DATABASE > DEVICE > SPECIFY THE BACKUP FILE PATH > TIMELINE > SPECIFY THE REQUIRED TIMELINE > OK.

ITEM #4: HOW TO RESTORE A DATABASE IN A STANDBY (READ ONLY) FORMAT ?

LAUNCH SSMS > CONNECT TO THE SERVER > RIGHT CLICK DATABASES > RESTORE DATABASE > DEVICE > SPECIFY THE BACKUP FILE PATH > OPTIONS > SPECIFY "STANDBY" IN THE RESTORE OPTIONS > OK.

THIS AUTO CREATES ON STANDBY BACKUP FILE. DATABASE IN READ ONLY STATE.

ITEM #5: HOW TO CONVERT A STANDBY (READ ONLY) DATABASE TO READ WRITE DATABASE ?

LAUNCH SSMS > CONNECT TO THE SERVER > RIGHT CLICK ABOVE DATABASE > TASKS > RESTORE > LOG >

THEN THE RUF IS AUTO SELECTED > RESTORE.

**OPTION 2: RESTORES USING SCRIPTS [T-SQL]**