**TASK 9: Backing up and recovery in databases CO4, K3**

Perform following backup and recovery scenarios.

1. Recovering a NOARCHIVELOG Database with Incremental Backups
2. Restoring the Server Parameter File
3. Performing Recovery with a Backup Control File

**Scenario 1: Recovering a NOARCHIVELOG Database with Incremental Backups**

-- Step 1: Backup Database

BACKUP DATABASE [database\_name] TO DISK = 'backup\_file.bak' WITH NOFORMAT, NOINIT, NAME = 'Full Database Backup', SKIP, REWIND, NOUNLOAD, STATS = 10

-- Step 2: Create Incremental Backup

BACKUP DATABASE [database\_name] TO DISK = 'incremental\_backup.bak' WITH DIFFERENTIAL, NOFORMAT, NOINIT, NAME = 'Incremental Database Backup', SKIP, REWIND, NOUNLOAD, STATS = 10

-- Step 3: Simulate Data Loss

-- Intentionally delete or modify data.

-- Step 4: Restore Database

RESTORE DATABASE [database\_name] FROM DISK = 'backup\_file.bak' WITH REPLACE

-- Step 5: Apply Incremental Backup

RESTORE DATABASE [database\_name] FROM DISK = 'incremental\_backup.bak' WITH REPLACE

-- Step 6: Recover Database

RECOVER DATABASE [database\_name]

-- Step 7: Open Database

ALTER DATABASE [database\_name] SET ONLINE

**Scenario 2: Restoring the Server Parameter File (SPFILE)**

-- Step 1: Backup SPFILE

BACKUP SERVER PARAMETER FILE TO FILE = 'spfile.bak';

-- Step 2: Simulate SPFILE Loss

-- Delete or modify SPFILE.

-- Step 3: Restore SPFILE

STARTUP MOUNT

RESTORE SERVER PARAMETER FILE FROM FILE = 'spfile.bak';

SHUTDOWN

STARTUP

**Scenario 3: Performing Recovery with a Backup Control File**

-- Step 1: Backup Control File

BACKUP CONTROLFILE TO FILE = 'controlfile.bak';

-- Step 2: Simulate Control File Loss

-- Delete or modify control file.

-- Step 3: Restore Control File

STARTUP MOUNT

RESTORE CONTROLFILE FROM FILE = 'controlfile.bak';

ALTER CONTROLFILE REUSE;

-- Step 4: Recover Database

RECOVER DATABASE USING BACKUP CONTROLFILE;

-- Step 5: Open Database

ALTER DATABASE OPEN RESETLOGS;

SQL Server Commands:

- BACKUP DATABASE

- RESTORE DATABASE

- RECOVER DATABASE

- ALTER DATABASE

- BACKUP SERVER PARAMETER FILE

- RESTORE SERVER PARAMETER FILE

- BACKUP CONTROLFILE

- RESTORE CONTROLFILE

**Result:**