

## Task 11

### Backing up and recovery in databases.

Scenario 1: Recovering a NOARCHIVELOG Database with Incremental backups.

Step 1: Backup Database

```
BACKUP DATABASE [database_name] TO DISK = 'incremental-backup.bak'  
WITH DIFFERENTIAL, NOFORMAT, NOINT, 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 = 'incremental-backup.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

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: Thus the backing up and recovery in databases is verified and executed successfully.