Oracle Recovery Scenarios

- Recovering from the loss of a multiplexed control file member
  - Scenario 1 : Disk and filesystem is intact
    - Shutdown abort
    - Copy good control file to original location of bad control file:- cp /path/blah_good.ctl /path/blah_bad.ctl
  - Scenario 2 : Disk and filesystem is no good
    - Shutdown abort
    - Copy good control file to a new location:- cp /path/blah_good.ctl /new_good_path/blah.ctl
    - Change the CONTROL_FILES param in init.ora to reflect the new good path
    - Startup

- Recovering from the loss of one member of an online redo log group
  - No need to shut down
  - To investigate what status is the missing redo log is - Select * from v$logfile shows which group and member is INVALID
  - From step 1, you will have the full path of the member that went corrupted. Drop this member - Alter database drop logfile member 'fullpath/log_filename.log'
  - Add a new member to the group - Alter database add logfile member '/fullpath/log_filename.log' reuse to group n; where log_filename.log and group n follow step 1

- Recovering from a situation where there is no data file backup
  - Do a shutdown abort
  - Startup mount
  - Get the Path and Size of the missing datafile - select df.file#, df.status, df.enabled, df.create_bytes, df.name from v$recover_file rf, v$datafile df where rf.file#=df.file# and rf.error = "FILE NOT FILE" (note the path and size of the missing file)
  - Create the datafile - alter database create datafile '/path/filename.dbf' as '/path/filename.dbf' size xxx reuse (Make sure that the path and size are the same as step 4)
  - If the file is offline, then bring in online - alter database datafile '/path/filename.dbf' online;
  - Recover the database - recover database
  - Open the database - alter database open

- Recovering from the loss of a data file that belongs to an indexes-only table space
  - Restore a good copy of datafile
  - Mount the database - startup mount
  - Recover the datafile - recover datafile 'fullpath/filename'
  - You will be prompted for archived log. Confirm until you receive "Media Recovery Complete"

- Recovering from the loss of a datafile that belongs to a temporary table space
  - Offline the table space
    - In archivelog - alter database datafile xxx offline immediate
    - In nonarchivelog - alter database datafile xxx offline drop
  - Drop the table space
    - Drop tablespace xxx
  - Remove physical files of the table space and recreate them

- Recovering from the loss of a datafile that belongs to a read-only table space
  - To recover a loss datafile that belongs to READ-ONLY table space is an easy task indeed. Since READ-ONLY table space is never modified, simply restore the datafile to its original location shall do the job. However, if you change from read-only to read-write vice-versa since last backup, you have to restore the file and do a media recovery on it.
    - Recover datafile xxx
    - Apply the logs until you see "Media Recovery Complete"

Oracle Recovery Scenarios

- Recovering from the loss of an inactive redo log group
    - To investigate what status is the missing redo log is - a. select * from v$logfile shows which group is INVALID. b. select * from v$log shows the status of the invalid group
    - Now that you are confirmed that the lost redo file is an INACTIVE redo log, shutdown the database - shutdown immediate
    - Mount the database - Startup mount
    - Since the redo log group is inactive and is archived, just clear the redo log - alter database clear logfile group N (where N is the group # of the lost redo log)
    - Open the database - Alter database open
    - Check status - select * from v$log shows a new redo with UNUSED status
    - Do a full backup if you want

- Recovering from the loss of a data file that belongs to the system table space
    - Shutdown abort the database if the database is still up
    - Copy the corrupted or lost datafile from backup to the original location
    - Startup mount
    - select v1.group#, member, sequence#, first_change# from v$log v1, v$logfile v2 where v1.group#=v2.group#;
    - Recover the database by Recover datafile '/path/filename.dbf'
    - Logs will be prompted. Confirm it until you see "Media Recovery Complete". If you are asked to enter a non-existence archived log, enter the full path of a member of the redo group where the sequence number matches the one being prompted (from step 4) until you see "Media Recovery Complete".
    - Alter database open

- Recovering from the loss of a data file that belongs to a traditional rollback segment table space
    - The database was cleanly shut down(All the committed data are written to disks)
        - Comment out the ROLLBACK_SEGMENTS entry in init.ora
        - Startup restrict mount
        - Alter database datafile '/path/filename.dbf' offline drop;
        - Alter database open
        - Drop tablespace tablespace_name including contents;
        - Recreate the rollback table space with all of its rollback segments. The segment name should correspond to ROLLBACK_SEGMENTS in init.ora
        - Shutdown immediate
        - Uncomment the ROLLBACK_SEGMENTS in init.ora
        - Startup
        - select segment_name, status from dba_rollback_segs just to make sure all rollback segments are online
    - The database was not cleanly shut down (there are active transactions in the rollback segments)
        - Restore the corrupted/lost file from backup using OS cp command
        - Startup mount
        - Check the status of the datafile: select name, status from v$datafile; Online the datafile if it's OFFLINE by Alter database datafile '/path/filename.dbf' ONLINE
        - select v1.group#, member, sequence#, first_change# from v$log v1, v$logfile v2 where v1.group#=v2.group#;
        - Recover datafile '/path/fileame.dbf'
        - Logs will be prompted. Confirm it until you see "Media Recovery Complete". If you are asked to enter a non-existence archived log, enter the full path of a member of the redo group where the sequence number matches the one being prompted (from step 4) until you see "Media Recovery Complete".
        - Alter database open
    - The database is up and running (Simpler)
        - Create few additional rollback segments to handle the database activities. E.g. Create tablespace rbstemp datafile '/path/rbstemp01.dbf' size 50M'. Create rollback segment xxx tablespace rbstemp
        - Offline the lost datafile: Alter database datafile '/path/filename.dbf' offline

Oracle Recovery Scenarios

- Restore the lost datafile from backup using OS cp
- select v1.group#, member, sequence#, first_change# from v$log v1, v$logfile v2 where v1.group#=v2.group#;
- Recover datafile '/path/filename.dbf'
- Logs will be prompted. Confirm it until you see "Media Recovery Complete". If you are asked to enter a non-existence archived log, enter the full path of a member of the redo group where the sequence number matches the one being prompted (from step 4) until you see "Media Recovery Complete"
- Online the datafile : Alter database datafile '/path/filename.dbf' online