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| **DBA CLASS ASSIGNMENT** | **DATE – 21/02/24** |

**DBA Assignment No. 2**

1. **List and distinguish predefined user accounts in Oracle:**

In Oracle, predefined user accounts serve as specialized roles for distinct functions. The "SYS" account functions as the overarching administrator with comprehensive privileges, while "SYSTEM" aids in general tasks. Accounts like "DBSNMP" monitor Oracle Enterprise Manager, "OUTLN" is for planning, "MDSYS" handles location-based data, "CTXSYS" manages text, and "XDB" deals with specific information types.

Predefined Roles in Oracle: Oracle roles act as sets of permissions. "CONNECT" provides basic access, "RESOURCE" allows users to create and manage their items, and "DBA" grants extensive control. Specific roles like "SELECT\_CATALOG\_ROLE" enable viewing database information, "EXP\_FULL\_DATABASE" facilitates exporting the entire database, and "OEM\_MONITOR" provides special access for monitoring, ensuring organized access in the database realm.

1. **Illustrate the distinction between system privilege and user-defined privilege:** System Privilege: Oracle's system privileges are pre-established authorizations that empower users to execute particular actions at the database level. Examples include "CREATE SESSION" for login, "CREATE TABLE" for table creation, and "ALTER SYSTEM" for modifying database-wide settings. Administrators assign these privileges based on roles and responsibilities.

User-Defined Privilege: In contrast, user-defined privileges are custom permissions created by administrators or privileged users to meet specific application or business needs. These privileges are typically granted to roles, and users inherit them by being assigned to those roles.

1. **Default Oracle Password Policy and Modification:** The default Oracle password policy encompasses rules for complexity, expiration, and reuse. To modify this default policy, use the ALTER PROFILE statement.
2. **Control File Overview (Content, Copies, Significance):** Content: The control file is a vital Oracle database component storing metadata such as datafile and redo log file information, database name, timestamp, and checkpoint data. Copies: It's advisable to maintain multiple copies of the control file for backup purposes, achieved through multiplexing control files. Significance: The control file is crucial for database recovery, ensuring consistency and integrity by recording changes and providing a recovery roadmap in case of failures.
3. **Scenarios Requiring New Control File Creation:** DBAs may create a new control file during database recovery, relocation, or in the event of control file corruption.
4. **Steps to Utilize a Newly Created Control File:**
   * Backup: Before any modifications, back up existing control files.
   * Create: Use the CREATE CONTROLFILE statement to generate a new control file with necessary parameters.
   * Shutdown: Gracefully shut down the database.
   * Replacement: Swap the old control files with the newly created ones.
   * Start: Launch the database using the modified control file.
5. **Views Associated with Control File:**
   * V$CONTROLFILE: Displays control file information.
   * V$CONTROLFILE\_RECORD\_SECTION: Provides details about control file sections.
   * V$DATABASE: Presents database information, including the control file name.

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