

## DATABASE TECHNOLOGY WEEK 14 ASSIGNMENT

### 1 .Explain the Logical Structure of the Database.

- Oracle database contains the logical space for the data in the database
- The database logically separated into two more table spaces
- Logical units contain **Table Space, Segment, Extent, Oracle Data block**

#### **Tablespaces:**

- It arranges the data in logically that are available in physical storage.
- It is associated with one and only database. Single datafile that is used to store data from the dependent tablespace
- Tablespace can store objects of database like indexes view, sequences
- Database contains the logical storage units called tablespaces
- It relates the logical structures or datafile
- Tablespace contains more than one segments

#### **Data Blocks:**

- Data are stored in data block
- Each data block contains the particular number of bytes in physical space on the disk
- Creation of data block size determined for each tablespace
- It is the smallest logical unit storage in database

#### **EXTENTS:**

- Extent is the next level of logical database space.
- It is the logically continuous data blocks allotted for storing the specific type information

#### **SEGMENTS :**

- Collection of extents allotted for the particular database object (TABLE)
- Segment is next level of logical database storage above an Extent
- Each segment is associated with one and only tablespace.
- Extents of segment are stored in same tablespace
- Segment is collection of extents associated with particular logical structure

#### **Data segments:**

- All table data are stored in the extents of its data segments
- Non clustered And Nonindexed organized table has a segments
- In partition table each partition has a data segment

#### **Index segments**

- Index contains the index segments that store all of the data
- For partition index and each partition has the index segments

**UNDO segments:**

- One UNDO table space is created for each database instance.
- This contains many number of undo segments to temporarily store undo data information.
- This undo segments is used to generate the read consistent database information during database recovery, and rollback uncommitted transactions for user .

**Temporary Segment:**

- It is created by the oracle database when SQL query demand the temporary area to finish the execution
- After the completion of the execution the temporary segments extents is returned to the instance for the future need
- A database is containing more than one table spaces
- A Tablespace is composed of one or more than one datafile. Table space includes segments
- A Segment is containing the more than one extent. Segments resides in a table space but it contains data in data file in the tablespace
- An Extent is continuing set of blocks in disk .one table space is having a single file with in the table space.
- A Database contain smallest unit of block.
- Tablespace and Datafiles