DATABASE LANGUAGES

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DATABASE LANGUAGE

- A DBMS has languages and interfaces to express database queries and updates.
- Database languages can be used
- To read the data,
- To store the data
- update the data in the database.

TYPES OF DATABASE LANGUAGE

- DATA DEFINITION LANGUAGE
- DATA MANIPULATION LANGUAGE

DATA DEFINITION LANGUAGE

The DDL statements include:

- **CREATE**: Create new database, table, etc.
- **ALTER**: Alter existing database, table, etc.
- **DROP**: Drop the database.
- **SEQUENCE**:To share the multiple users.
- **INDEX:**To store the data index wise.
- **RENAME**: Set a new name for the table.
- **TRUNCATE:** It is used to delete all the data from the table

Create: It is used to create objects in the database.

- **create command** is known as Database Object.It can be used to hold and manipulate the data.Some of the examples of database objects are : view, sequence, indexes, etc.
- **Table** – Basic unit of storage; composed rows and columns
- **View** – Logically represents subsets of data from one or more tables
- **Sequence** – Generates primary key values
- **Index** – Improves the performance of some queries
- **Synonym** – Alternative name for an object

Create table

Syntax :

CREATE TABLE [schema.]table (column datatype [DEFAULT expr][, ...]);

Example :

CREATE TABLE dept (deptno NUMBER(2), dname VARCHAR(14), loc VARCHAR(13));

OUTPUT:

Name	Null?	Type
DEPTNO		NUMBER(2)
DNAME		VARCHAR2(14)
LOC		VARCHAR2(13)

VIEW THE TABLE

View – This database object is used to create a view in database.A view is a logical table based on a table or another view. A view contains no data of its own but is like a window through which data from tables can be viewed or changed.

SYNTAX FOR VIEW

Syntax :

CREATE [OR REPLACE]
[FORCE|NOFORCE]

VIEW view [(alias[, alias]...)] AS subquery
[WITH CHECK OPTION [CONSTRAINT constraint]] [WITH READ ONLY [CONSTRAINT constraint]];

VIEW THE TABLE

```
CREATE VIEW
salvu50 AS
SELECT employee_id ID_NUMBER, last_name NAME, salary*12
ANN_SALARY
FROM employees
WHERE department_id = 50;
```

OUPUT

SELECT * FROM salvu50;

ID_NUMBER	NAME	ANN_SALARY
124	Mourgos	69600
141	Rajs	42000
142	Davies	37200
143	Matos	31200
144	Vargas	30000

SEQUENCE

- A sequence is a user created database object that can be shared by multiple users to generate unique integers.

SYNTAX:SEQUENCE

CREATE SEQUENCE

sequence [INCREMENT BY n] [START WITH n]
[{MAXVALUE n | NOMAXVALUE}]

[{MINVALUE n | NOMINVALUE}]

[{CYCLE | NOCYCLE}]

[{CACHE n | NOCACHE}];

QUERIES

```
CREATE SEQUENCE dept_deptid_seq
INCREMENT BY 10 START WITH 120
MAXVALUE 9999
NOCACHE
NOCYCLE;
```

INDEX

- An index provides direct and fast access to rows in a table.

- Its purpose is to reduce the necessity of disk I/O by using an indexed path to locate data quickly.

SYNTAX AND EXAMPLE

Syntax :
CREATE INDEX index ON table (column[, column]...);

Example :
CREATE INDEX emp_last_name_idx ON
employees(last_name

DROP THE TABLE

Drop the table:

It is used to delete the table from the database

Syntax:

DROP TABLE table name;

TRUNCATE THE TABLE

Syntax :

truncate table tablename;

Example:

SQL>truncate table student;

Table truncated.

SQL>Select * from student;

no rows selected.

DATA MANIPULATION LANGUAGES

COMMAND

- INSERT to insert data into table
- SELECT to retrieve data from the table
- UPDATE to modify existing data in the table
- DELETE to delete records from the table.

INSERT ROW

SYNTAX:

insert into tablename (column1, column2, ..columnN)

Values (expression1, expression2, ... , expressionN);

Example:

insert into student values(7512,'parimal','computer');

SELECT

- This command is used to retrieve the rows and columns
- To select the particular rows . For ex.in student table to select the student_id,student_name and mark also.
- Syntax:

select * from tablename;

EXAMPLE FOR SELECT

Example:

SQL>Select * from student;

ENROLL_NO	NAME	DEPT
7512	Bharathy	computer
7503	Sarathy	computer

SELECT THE ROWS

Query:

```
select * from student;
```

Output:

stu_id	stu_name	mark
111	bharathy	98

SELECT THE COLUMN

Query:

```
select stu_name from student;
```

Output:

stu-name
bharathy

UPDATE

SQL>Update student set enroll_no=03 where name='preethi';

1 row updated.

SQL>select * from student;

ENROLL_NO	NAME	DEPT
7512	bharathy	computer
03	preethi	computer
7503	Sarathy	computer

DELETE

delete from tablename;

Example:

SQL>delete from student;

2 rows deleted.

SQL>select * from student;

no rows selected.