SQL

SQL

Data -

Departments, products, suppliers, customers, orders,…

Loans, Account, transactions, customer

Employees,department

Fastrack, 437854398758, ang@g.com....

Information –

Stuctured and organized data.

DataBase- System that stores information/organized data.

Files- Excel, xml,word

MsAccess

Oracle

Oracle MySql

Microsoft Sql Server

IBm Db2

Postgress

NoSQl DB:

MongoDB

Cassandra

DBMS – DataBaseManagement System is an application/software which helps

To analyse and capture data – It can interact with User, Application and DataBase itself

To perform CRUD(Create, retrieve, update, delete) Operations.

Amazon- Departments, products, suppliers, customers, orders

Create tables - columns, constraints

Insert data into the table

Update the information

Delete the information.

Normalization- is the technique that helps to avoid data redundancy and maintain data integrity.

RDBMS : RelationalDatabase Management System uses normalization principles.

RDBMS maintains relation between tables using primarykey, foreignkey, index…

Table – It is one of the Database Objects. Set of rows and columns

Column- attribute

SQL – StructuredQueryLanguage that interacts with DataBase to perform CRUD operations.

ER Diagrams – pictorial representation of relations between tables in RDBMS.

Types of Relations:

One-One

One-Many

Many-Many

primaryKey – A column or Set of Columns which help to identify a row uniquely

In a table. Max of 32 columns we can combine I oracle DB as PK.

ForeignKey – A column that enforces referential integrity. A column in one table(child table)

that references column in another table(parent table).

Create table tablename (

Name varchar2 primary key,

Id number primary key

)

<https://login.oracle.com/mysso/signon.jsp-> Create account

USe the same uname and pwd for <https://livesql.oracle.com/apex/livesql/file/index.html>

If u are not creating account use:

username: training@whitebox-learning.com ,

password: Innovapath123

Schema – It is a structure/space where all database objects are created.

Toad,SQLDeveloper,RoboMongo – tools which help to connect to

Given database and execute the queries/methods.

But we are using livesql session to execute queries.

DDL

DML - Select

DCL

TCl

SQL is not case sensitive but data is case sensitive

DataType: Kind of data we access or store

Number

Varchar – string

Date

BLOB

Select:

Syntax: Select columnnames from tablename;

\*- all columns

More than one column- , separated names

Where- to filter the rows

Order by- sort in asc or desc order

Can be used for more than one column, it will always be at the end of sql statement

Distinct- get unique column data

Like with %

And – for more than one condition

--select employee\_id,first\_name from hr.employees;

--select \* from hr.employees where employee\_id=130;

--SELECT \* from hr.employees where first\_name='Ellen';

--select \* from hr.employees where HIRE\_DATE='11-MAY-04';

--select department\_id,employee\_id,first\_name from hr.employees order by

-- department\_id desc, employee\_id desc;

--select \* from hr.employees where last\_name like '%in%';

--select \* from hr.employees where job\_id='AD\_PR' and first\_name='Steven'

--select distinct last\_name from hr.employees;

select \* from hr.employees where employee\_id between 100 and 150;

arithmetic - \*,/,+,-

conditional-

= single value comparision

In- multiple value comparision

<> single value not comparision

Not in

between and

<

<=

>

>=

SingleRowFunctions : Operate on every row and result is also for each row

MultiRowFunctions: Operate on multiple rows and gives a single result

DateFormat:

dd-mon-rr - this is default date format

12-02-17 – 2017?1917?

todays date is in between 0-49 of current century – means we are in first half of century

and you are trying to insert 12-01-95 to hire\_date then it will take prev

century.

so o/p here is - 12-01-1995

to\_char( datedatatype, ‘format which we want see in o/p’);

to\_char(sysdate, ‘dd-mm-yyyy’)

to\_date(chardatatype, ‘ format what we are giving in input’)

o/p will be in default date format

to\_date(’12-06-2017’, ‘dd-mm-yyyy’)

null functions:

nvl(columnname, substitutionForNullvalue) - if column value is null then take the substitutionForNullvalue as output.

nvl2(colName, value1, value2) – if col value is null take value 2 in o/p else take value 1 in o/p.

nullif(col1,col2) – if both values of col1 and col2 are equal return null in o/p else return col1 value

coalesce(col1, col2…,..substitutionForNullvalue) – It will take first not null value as o/p from the give set of values