1. **Create the Customer table with the following columns.**

**CustomerId Number(5)**

**Cust\_Name varchar2(20)**

**Address1 Varchar2(30)**

**Address2 Varchar2(30)**

SQL> create table customer\_189136(customerid number(5), cust\_name varchar2(20),

address1 varchar2(20), address2 varchar2(30));

Table created.

1. **Modify the Customer table Cust\_Name column of datatype with Varchar2(30), rename the column to CustomerName and it should not accept Nulls.**

SQL> alter table customer\_189136 rename column cust\_name to customername;

Table altered.

SQL> alter table customer\_189136 modify customername varchar2(30) not null;

Table altered.

1. **a) Add the following Columns to the Customer table.**

**Gender Varchar2(1)**

**Age Number(3)**

**PhoneNo Number(10)**

**b) Rename the Customer table to Cust\_Table**

SQL> alter table customer\_189136 add (gender varchar2(1), age number(3), phonen

o number(10));

Table altered.

SQL> rename customer\_189136 to cust\_table;

Table renamed.

1. **Insert rows with the following data in to the Customer table.**

**Insert into customer values: (1000, ‘Allen’, ‘#115 Chicago’, ‘#115 Chicago’, ‘M’, ‘25, 7878776’)**

**In similar manner, add the below records to the Customer table:**

**1001, George, #116 France, #116 France, M, 25, 434524**

**1002, Becker, #114 New York, #114 New York, M, 45, 431525**

SQL> insert into cust\_table values(1000,'Allen','#115 Chicago','#115 Chicago','M

','25',7878776);

1 row created.

SQL> insert into cust\_table values(1001,'George','#116 France','#116 France','M'

,'25',434524);

1 row created.

SQL> insert into cust\_table values(1002,'Becker','#114 New York','#114 New York'

,'M','45',431525);

1 row created.

1. **Add the Primary key constraint for Customerld with the name Custld\_Prim.**

SQL> alter table cust\_table add constraint CustId\_Prim primary key(customerid);

Table altered.

1. **Insert the row given below in the Customer table and see the message generated by the Oracle server.**

**1002, John, #114 Chicago, #114 Chicago, M, 45, 439525**

SQL> insert into cust\_table values(1002,'John','#114 Chicago','#114 Chicago','M',45,439525);

insert into cust\_table values(1002,'John','#114 Chicago','#114 Chicago','M',45,439525)

\*

ERROR at line 1:

ORA-00001: unique constraint (LAB2ETRG20.CUSTID\_PRIM) violated

1. **Disable the constraint on CustomerId, and insert the following data:**

**1002, Becker, #114 New York, #114 New york , M, 45, 431525**

**1003, Nanapatekar, #115 India, #115 India , M, 45, 431525**

SQL> alter table cust\_table disable constraint custid\_prim;

Table altered.

SQL> insert into cust\_table values(1002,'Becker','#114 New York','#114 New York','M',45,431525);

1 row created.

SQL> insert into cust\_table values(1003,'Nanapatekar','#115 India','#115 India','M',45,431525);

1 row created.

1. **Enable the constraint on CustomerId of the Customer table, and see the message generated by the Oracle server.**

SQL> alter table cust\_table enable constraint custid\_prim;

alter table cust\_table enable constraint custid\_prim;

ERROR at line 1:

ORA-02437: cannot validate (LAB2ETRG20.CUSTID\_PRIM) - primary key violated

1. **Drop the constraint Custld\_Prim on CustomerId and insert the following Data. Alter Customer table, drop constraint Custid\_Prim.**

**1002, Becker, #114 New York, #114 New york , M, 45, 431525, 15000.50**

**1003, Nanapatekar, #115 India, #115 India , M, 45, 431525, 20000.50**

SQL> alter table cust\_table drop constraint custid\_prim;

Table altered.

SQL> insert into cust\_table values(1002,'Becker','#114 New York','#114 New York'

,'M','45',431525);

1 row created.

SQL> insert into cust\_table values(1003,'Nanapatekar','#115 India','#115 India',

'M',45,431525);

1 row created.

1. **Delete all the existing rows from Customer table, and let the structure remain itself using TRUNCATE statement.**

SQL> truncate table cust\_table;

Table truncated.

1. **In the Customer table, add a column E\_mail.**

SQL> alter table cust\_table add e\_mail varchar2(20);

Table altered.

1. **Drop the E\_mail column from Customer table.**

SQL> alter table cust\_table drop column e\_mail;

Table altered.

1. **Create the Suppliers table based on the structure of the Customer table. Include only the CustomerId, CustomerName, Address1, Address2, and phoneno columns.**

**Name the columns in the new table as SuppID, SName, Addr1, Addr2, and Contactno respectively.**

SQL> create table suppliers as select customerid as "suppid",customername as "sname", address1 as "addr1",address2 as "addr2",phoneno as "contactno" from cust\_table;

Table created.

1. **Drop the above table and recreate the following table with the name CustomerMaster.**

**CustomerId Number(5) Primary key(Name of constraint is CustId\_PK)**

**CustomerName Varchar2(30) Not Null**

**Addressl Varchar2(30) Not Null**

**Address2 Varchar2(30)**

**Gender Varchar2(l)**

**Age Number(3)**

**PhoneNo Number(10)**

SQL> create table customer\_master(customerid number(5), customername varchar2(30) not null, address1 varchar2(30), address2 varchar2(30), gender varchar2(1), age number(3), phoneno number(10), constraint custid\_pk primary key(customerid));

Table created.

1. **Create the AccountsMaster table with the following Columns. Use sequence to generate Account number**

**Customerld Number(5)**

**AccountNumber Number(10,2) Primary key(Name of constraint is Acc\_PK)**

**AccountType Char(3)**

**LedgerBalance Number(10,2) Not Null**

SQL> create table accounts\_master (customerid number(5), accountnumber number(10,2), accounttype char(3), ledgerbalance number(10,2) not null, constraint acc\_pk primary key(accountnumber));

Table created.

1. **Relate AccountsMaster table and CustomerMaster table through Customerld column with the constraint name Cust\_acc.**

SQL> alter table accounts\_master add constraints cust\_acc foreign key(customerid) references customer\_master(customerid);

Table altered.

1. **Insert the following rows to the CustomerMaster table:**

**1000, Allen, #115 Chicago, #115 Chicago, M, 25, 7878776**

**1001, George, #116 France, #116 France, M, 25, 434524**

**1002, Becker, #114 New York, #114 New York, M, 45, 431525**

SQL> insert into customer\_master values(1000,'Allen','#115 Chicago','#115 Chicago','M',25,7878776);

1 row created.

SQL> insert into customer\_master values(1001,'George','#115 France','#115 France','M',25,434524);

1 row created.

SQL> insert into customer\_master values(1002,'Becker','#114 New York', '#114 New York','M',45,431525);

1 row created.

1. **Modify the AccountMaster table with the Check constraint to ensure AccountType should be either NRI or IND.**

SQL> alter table accounts\_master add constraints ckh\_cst check(accounttype = 'NRI' or accounttype = 'IND');

Table altered.

1. **Modify the AccountsMaster table keeping a Check constraint with the name Balance\_Check for the Minimum Balance which should be greater than 5000.**

SQL> alter table accounts\_master add constraints balance\_check check(ledgerbalance>5000);

Table altered.

1. **Modify the AccountsMaster table such that if Customer is deleted from Customer table then all his details should be deleted from AccountsMaster table.**

SQL> alter table accounts\_master add constraints cust\_acc foreign key(customerid) references customer\_master(customerid) on delete cascade;

Table altered.

1. **Create Backup copy for the AccountsMaster table with the name ‘AccountDetails’.**

SQL> create table acccountdetails as select \* from accounts\_master;

Table created.

1. **Create a view ‘Acc\_view’ with columns Customerld, CustomerName, AccountNumber, AccountType, and LedgerBalance from AccountsMaster. In the view Acc\_view, the column names should be CustomerCode, AccountHolderName, AccountNumber, Type, and Balance for the respective columns from AccountsMaster table.**

SQL> create view acc\_view(customercode, accountnumber, type, balance) as select customerid,accountnumber,accounttype,ledgerbalance from accounts\_master;

View created.

1. **Create a view on AccountsMaster table with name vAccs\_Dtls. This view should list all customers whose AccountType is ‘IND’ and their balance amount should not be less than 10000. Using this view any DML operation should not violate the view**

SQL> create view vAccs\_Dtls as select \* from accounts\_master where accounttype = 'IND' and ledgerbalance >= 10000 with check option constraint cn;

View created**.**

1. **Create a view accsvw10 which will not allow DML statement against it.**

SQL> create view accsvw10 as select \* from accounts\_master with read only;

View created.

1. **Create a Sequence with the name Seq\_Dept on Deptno column of Department\_Masters table. It should start from 40 and stop at 200. Increment parameter for the sequence Seq\_Dept should be in step of 10.**

SQL> create sequence seq\_dept minvalue 40 maxvalue 200 start with 40 increment by 10 cache 20;

Sequence created.

1. **Insert three sample rows by using the above sequence in Department\_Masters table.**

SQL> insert into departmentmaster values(seq\_dept.nextVal,'Computer','PUNE');

1 row created.

SQL> insert into departmentmaster values(seq\_dept.nextVal,'Electronics','MUMBAI');

1 row created.

SQL> insert into departmentmaster values(seq\_dept.nextVal,'IT','BANGALORE');

1. row created.
2. **Drop the Seq\_Dept sequence**.

SQL> drop sequence seq\_dept;

Sequence dropped.

1. **Get information on the index No\_Name from the Data Dictionary.**
2. **Create synonym synEmp for the EMP table.**

SQL> create synonym synemp for emp;

Synonym created.

1. **Get Information on synonym synEmp from the Data Dictionary.**

SQL> select \* from synemp;

1. **Note: Perform this after creating the Employee Table mentioned in the next Lab assignment. Create Index on HireDate column and give the name as idx\_emp\_hiredate for this object.**

SQL> create index inx\_emp\_hiredate on emp(hiredate);

Index created**.**

1. **Create a Sequence with the name Seq\_Emp on Empno column of Employee table. It should start from 1001. Try to set Minimum value for this sequence which is less than / greater than 1001, use the sequence to generate Empno while inserting records in Employee table and check the values generated.**

SQL> create sequence seq\_emp minvalue 1001 start with 1001;

Sequence created.