



ADITYA COLLEGE OF ENGINEERING
DEPARTMENT OF COMPUTER SCIENCE AND
ENGINEERING

(Affiliated to JNTUA, Anantapuramu & Approved by AICTE, New Delhi)

Valasapalle (P), Punganur Road, Madanapalle-517 325, Chittoor District, Andhra Pradesh

DATA BASE MANAGEMENT SYSTEMS LABORATORY (20A05401P)

Branch -CSE

Year & Sem- II-II

OBJECTIVES AND OUTCOMES

Objectives:

- To implement the basic knowledge of SQL queries and relational algebra.
- To construct database models for different database applications
- To apply normalization techniques for refining of databases.
- To practice various triggers, procedures, and cursors using PL/SQL.
- To design and implementation of a database for an organization

Course Outcomes: After completion of the course, students will be able to

- Design database for any real world problem
- Implement PL/SQL programs
- Define SQL queries
- Decide the constraints
- Investigate for data inconsistency

RECOMMENDED SYSTEM / SOFTWARE REQUIREMENTS:

1. Intel based desktop PC of 166MHz or faster processor with at least 64 MB RAM and 100 MB free disk space.
2. Oracle Database 11g Software Express Edition.

LIST OF EXPERIMENTS

- 1. Perform Installation of Oracle 11g Software with neat steps.**
- 2. Creation of tables in SQL**
- 3. Implementation of DDL commands for roadway travels**
- 4. Implementation of DML commands for roadway travels**
- 5. To create user account using SQL.**
- 6. Prepare college student database using SQL.**
- 7. Prepare Airlines database using SQL.**
- 8. Preparing SQL Queries**
- 9. Implementation of SQL Queries for Employee database (from Question 8 continuous) and Passenger Database (newly added Database)**
- 10. Perform SQL operations on using views.**
- 11. Creation of Procedures Using SQL.**
- 12. PL/SQL Program using SQL commands.**
- 13. Perform Table creation with required constraints**
- 14. To Create Data Base Using Integrated Development Environment.**
- 15. Implementation of Cursors using SQL.**
- 16. Write a Case Study of Book Publishing Company Using ER Diagram**
- 17. Write a Case Study of General Hospital Using ER Diagram**
- 18. Write a Case Study of Car Rental Company Using ER Diagram**
- 19. Write a Case Study of Student Progress Monitoring System Using ER Diagram**

USEFUL TEXT BOOKS / REFERENCES :

1. Ramez Elmasri, Shamkant, B. Navathe, "Database Systems", Pearson Education, 6th Edition, 2013.
2. Peter Rob, Carles Coronel, "Database System Concepts", Cengage Learning, 7th Edition, 2008.

INTRODUCTION TO ORACLE

- ⊕ Oracle Database (commonly referred to as Oracle DBMS, Oracle Autonomous Database, or simply as Oracle) is a multi-model database management system produced and marketed by Oracle Corporation.
- ⊕ It is a database commonly used for running online transaction processing (OLTP), data warehousing (DW) and mixed (OLTP & DW) database workloads.
- ⊕ Oracle Database is available by several service providers on-prem, on-cloud, or as a hybrid cloud installation. It may be run on third party servers as well as on Oracle hardware.
- ⊕ **MYSQL Database** is a fully-managed database service, powered by the integrated Heat Wave in-memory query accelerator. It is the only cloud-native database service that combines transactions, analytics, and machine learning services into MYSQL Database, delivering real-time, secure analytics without the complexity, latency, and cost of ETL duplication.
- ⊕ It is developed, managed, and supported by the MYSQL team in Oracle.
- ⊕ MYSQL Database Service is available on Oracle Cloud Infrastructure, Amazon Web Service, and Oracle Database Service in Azure (ODSA).

DATA BASE MANAGEMENT SYSTEMS LAB

EXPERIMENTS

1.AIM OF THE EXPERIMENT: To Perform Installation of Oracle 11g Software with neat steps.

DESCRIPTION : Oracle was the first database product to run on a huge variety of hardware from micro to mainframe, giving it a major competitive advantage in the 1980s. Version 11g of the Oracle Database, which included built-in testing for changes, the capability of viewing tables back in time, superior compression of all types of data and enhanced disaster recovery functions. The "g" stands for "grid computing," which supports clusters of servers that are treated as a single unit.

Steps for Installation of Oracle

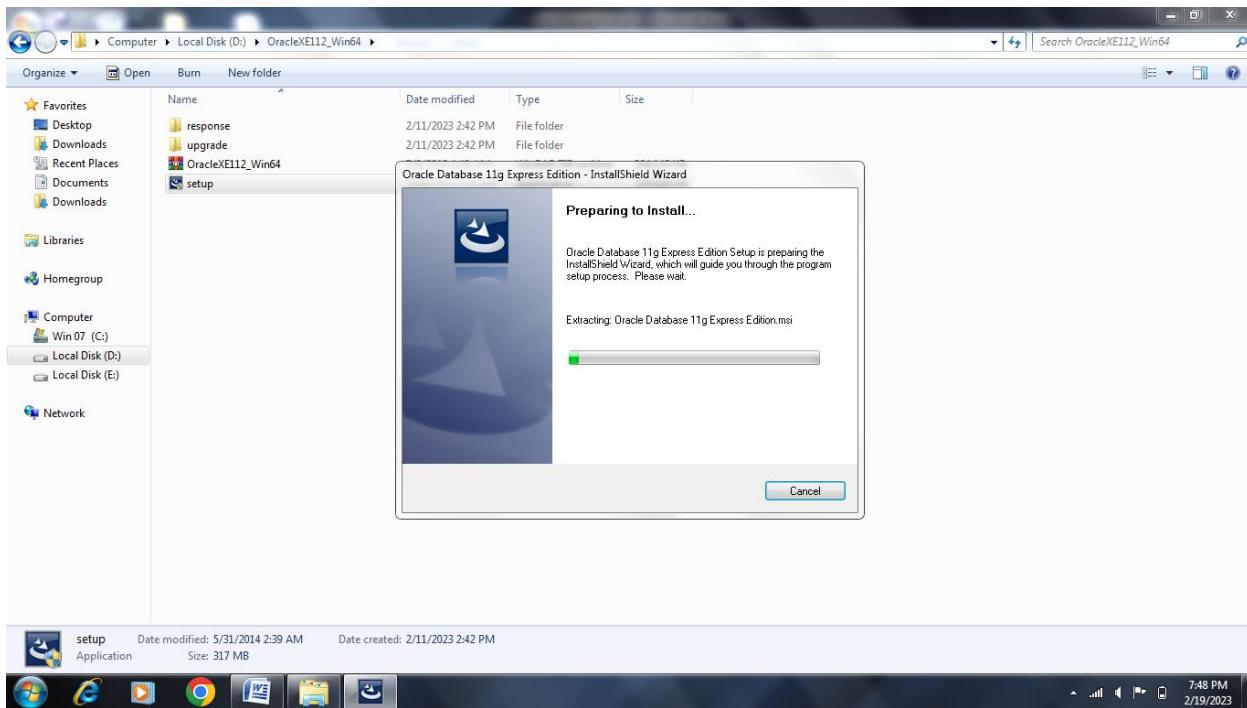
Step 1: Download Oracle Database from

<https://www.oracle.com/ke/database/technologies/xe-downloads.html>

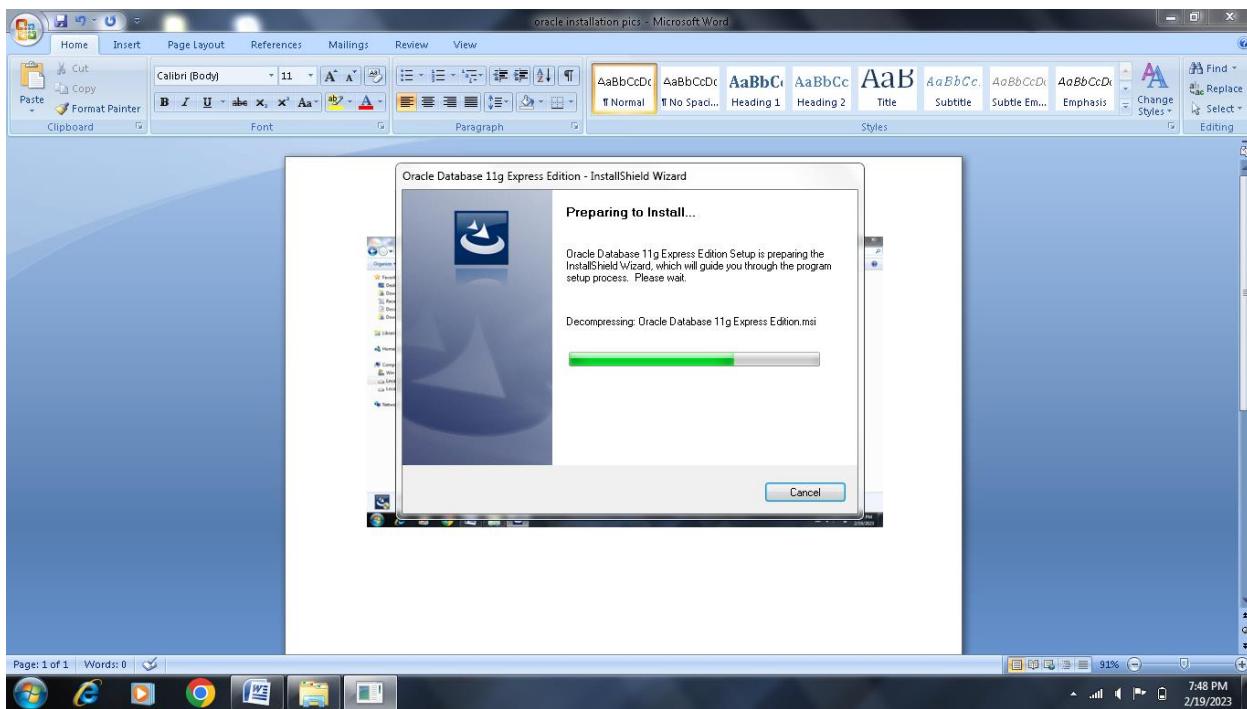
Download	Description
Oracle Database 21c Express Edition for Windows x64	(1,967,615,483 bytes - October 08, 2021) [Sha256sum: 939742c3305c466566a55f607638621b6aa7033a183175f6bcd6cffb48e6bc3f]
Oracle Database 21c Express Edition for Linux x64 (OL8)	(2,339,651,768 bytes - September 08, 2021) [Sha256sum: f8357b432de33478549a76557e8c5220ec243710ed86115c65b0c2bc00a848db]
Oracle Database 21c Express Edition for Linux x64 (OL7)	(2,339,017,432 bytes - September 08, [Sha256sum: 4c8f40a19d4d1a2f00e4] Chat with sales Contact or call

DATA BASE MANAGEMENT SYSTEMS LAB

Step 2: Start installing the software into the computer

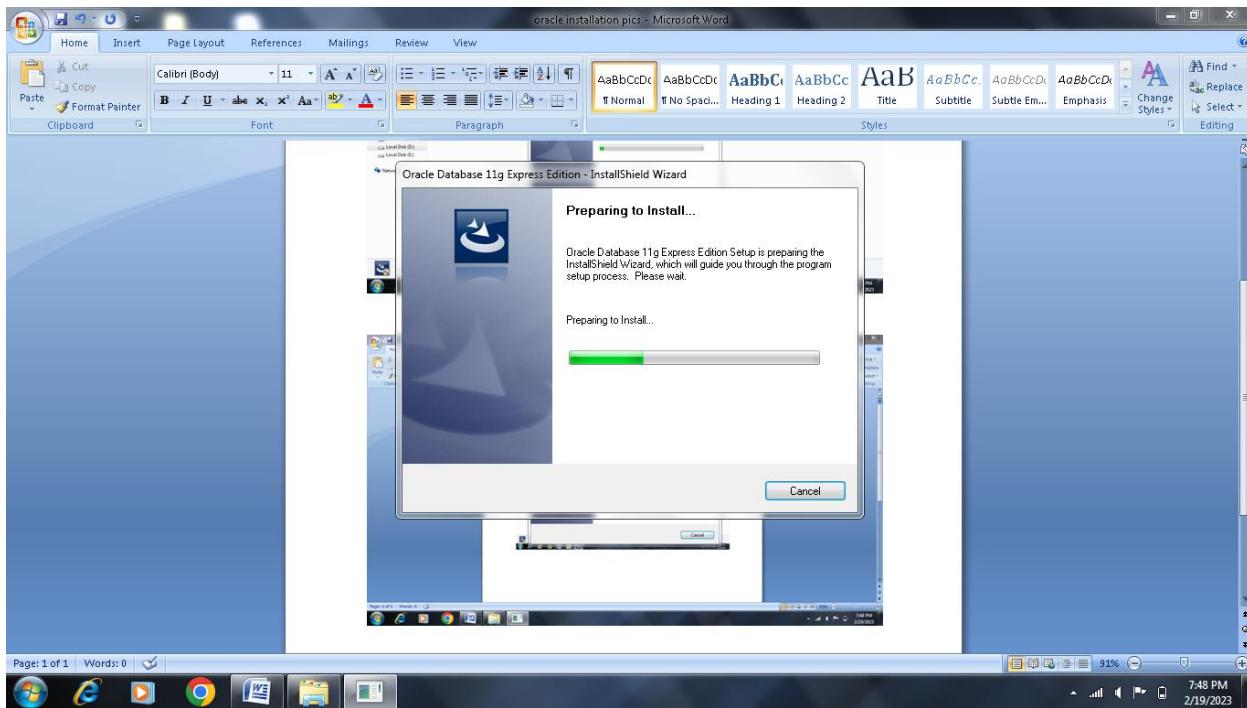


Step 3: Decompress the Oracle database

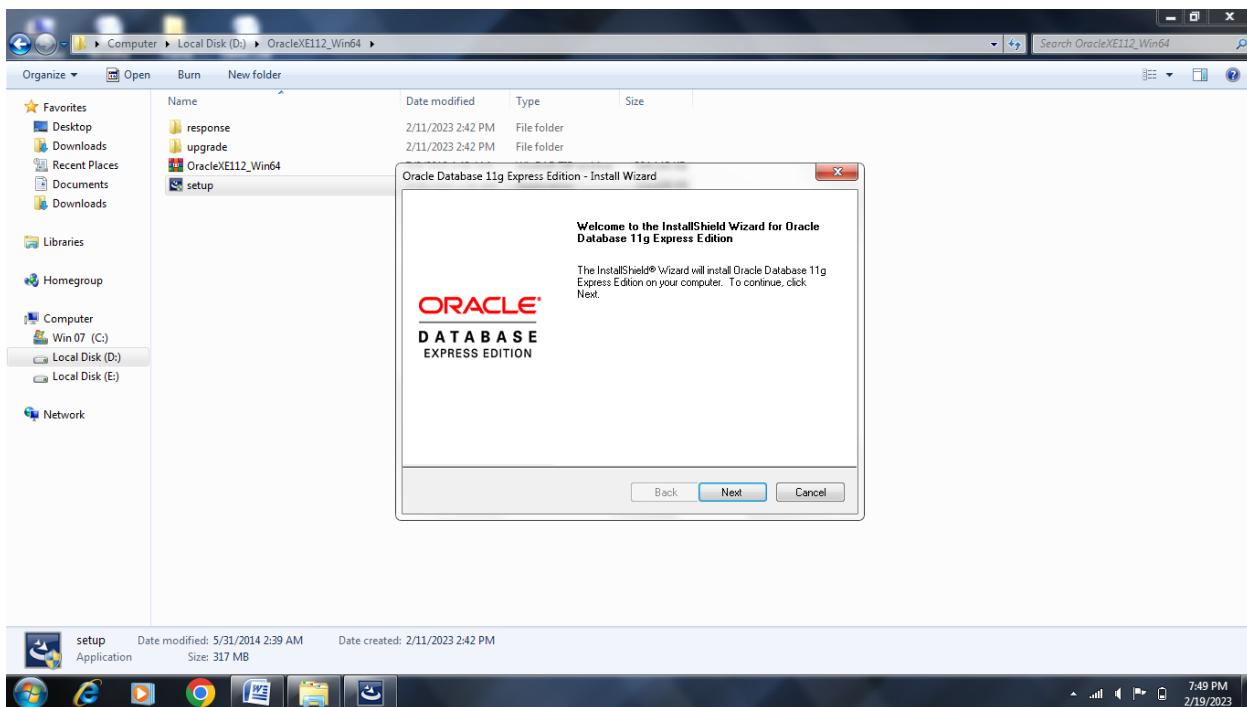


DATA BASE MANAGEMENT SYSTEMS LAB

Step 4: A Install Shield Wizard is going to be created

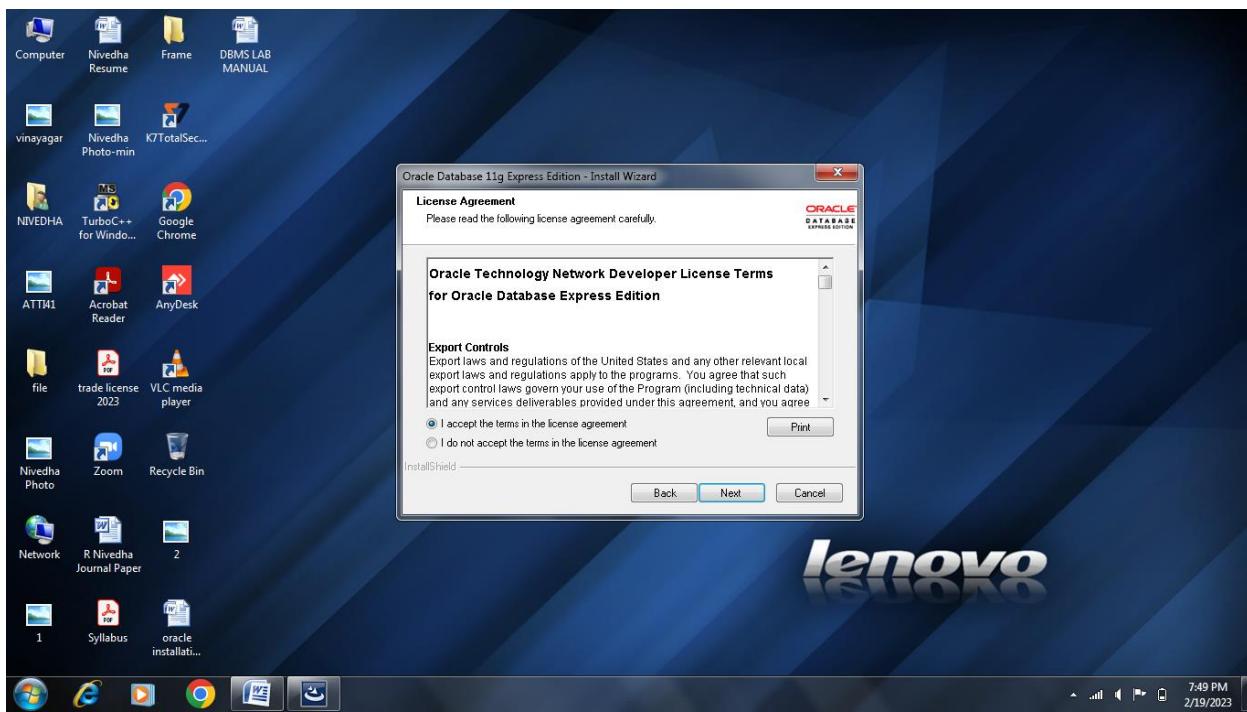


Step 5: Click on Next Button

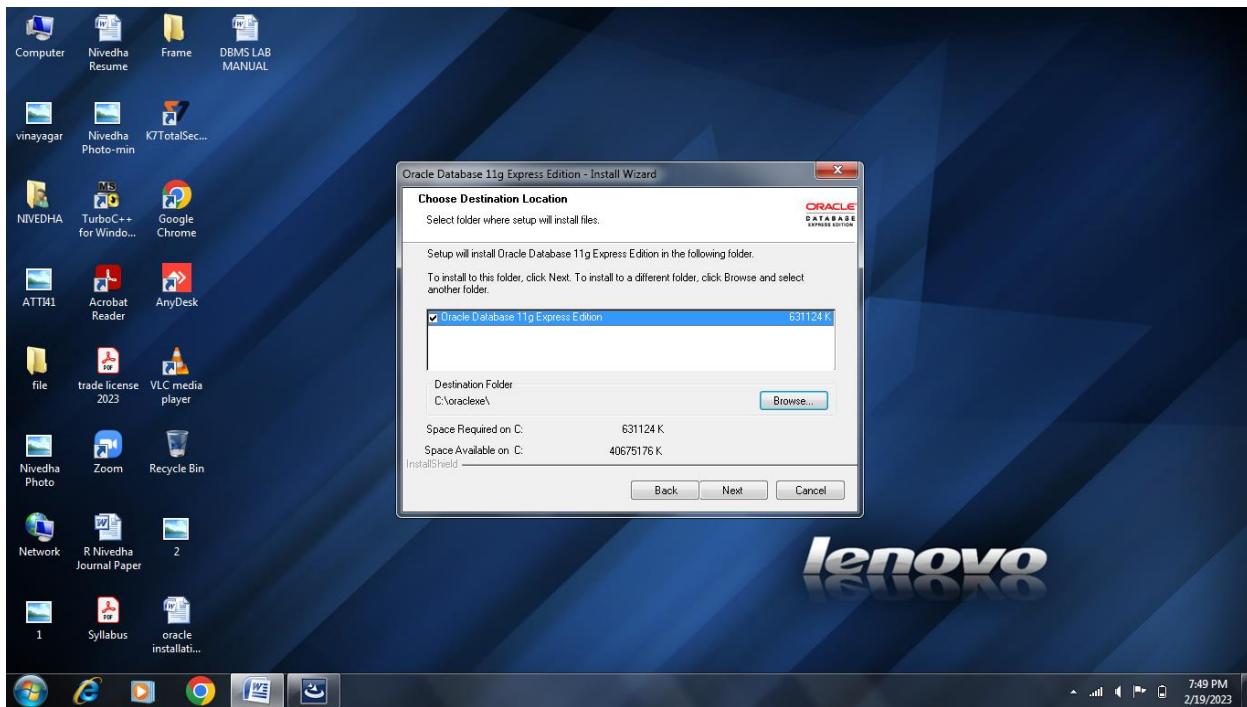


DATA BASE MANAGEMENT SYSTEMS LAB

Step 6: Accept the License Agreement by clicking on the dialog box

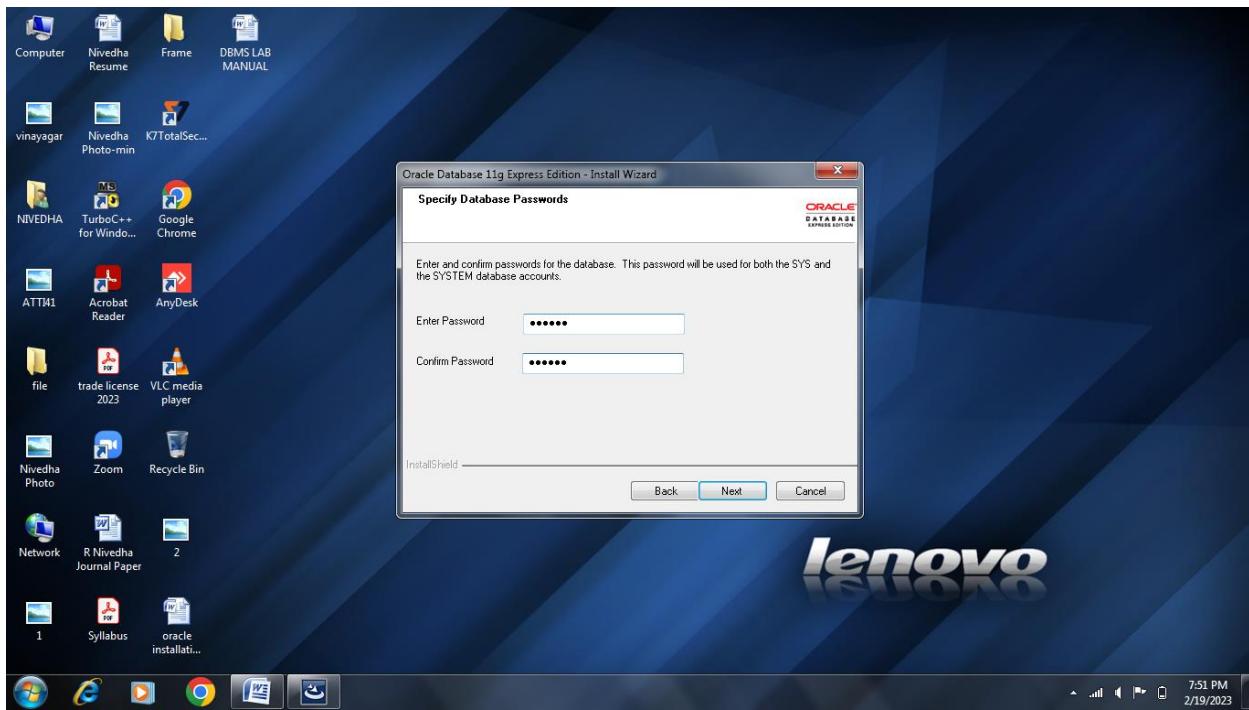


Step 7: Disk Storage space has been allotted in either c drive or d drive.

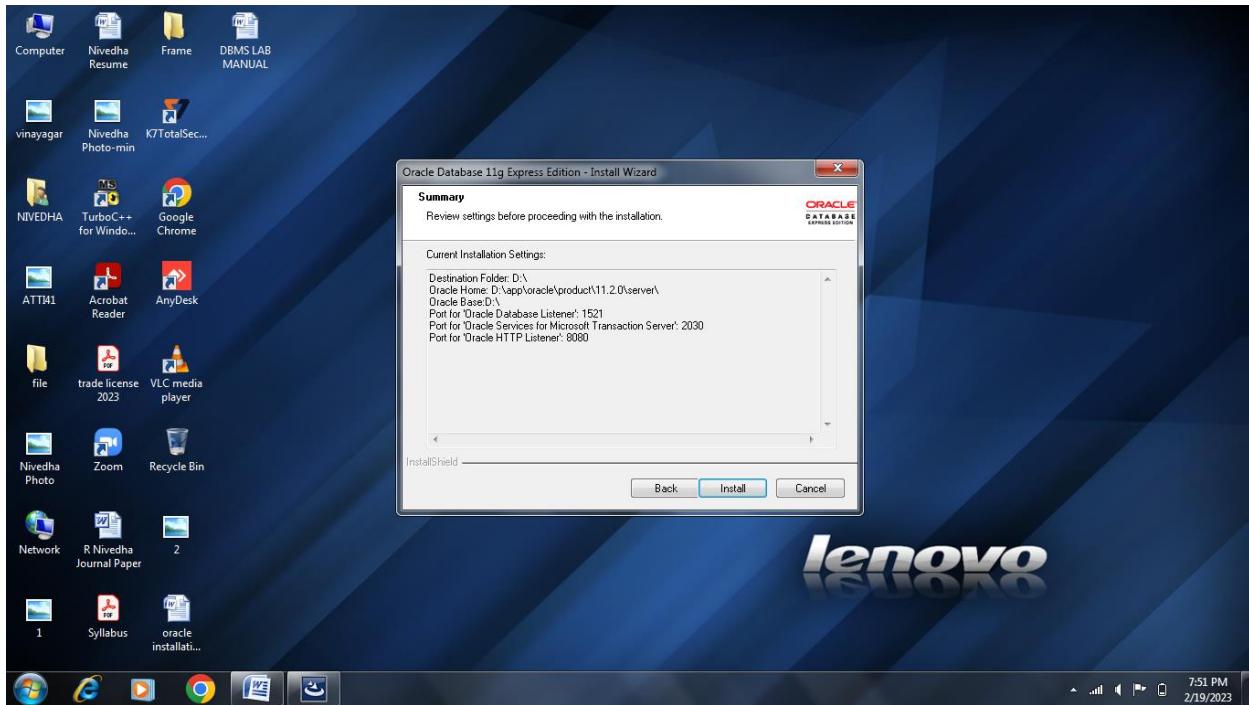


DATA BASE MANAGEMENT SYSTEMS LAB

Step 8: Give password as oracle for installation proceeding.

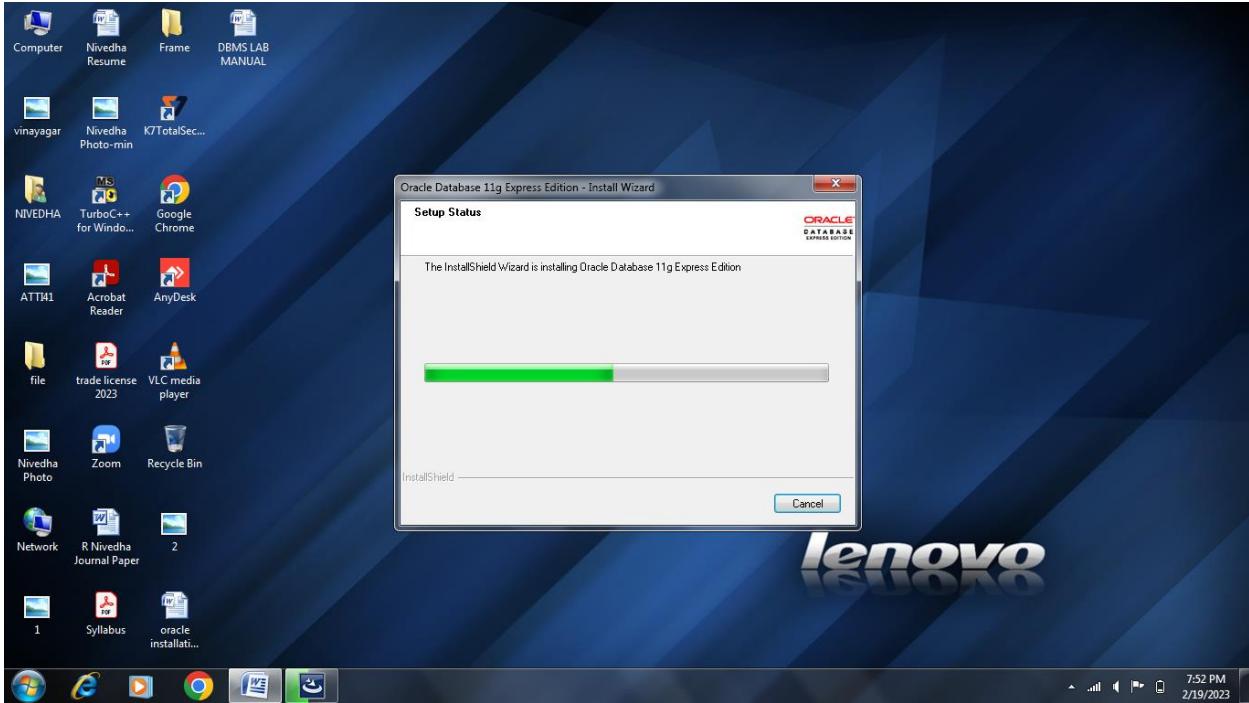


Step 9: Click on the install button

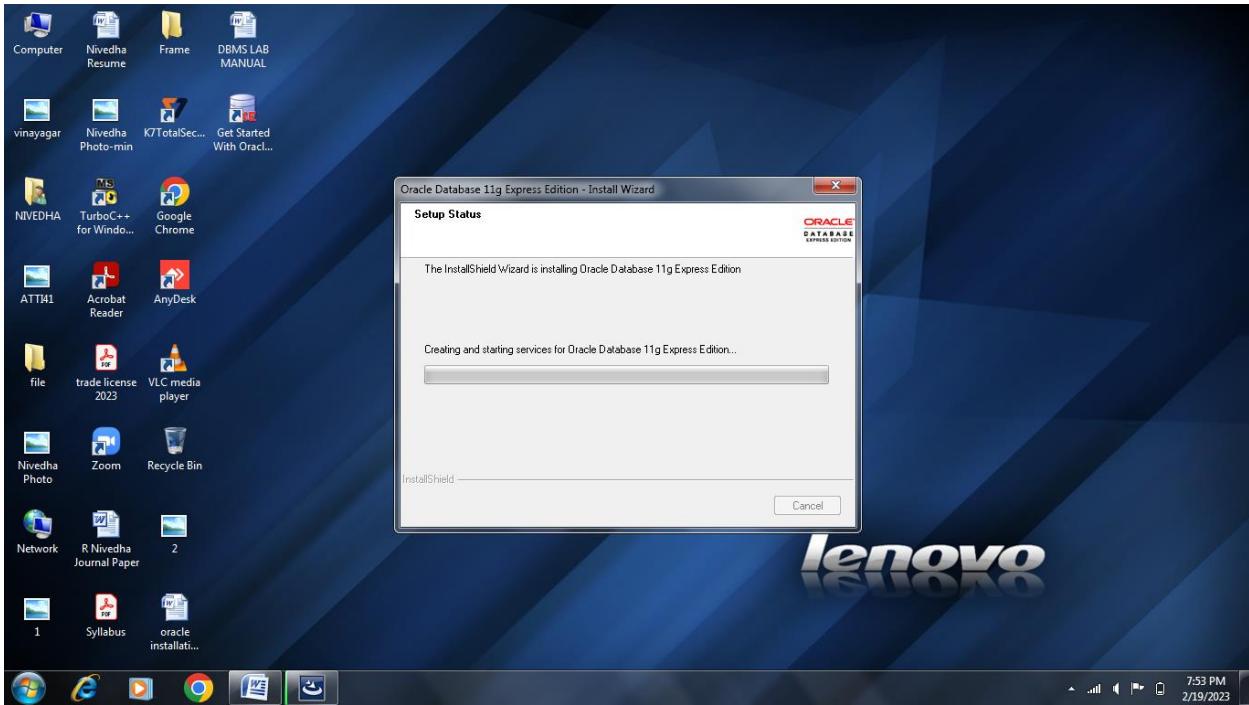


Step 10: Install Wizard is installing oracle software.

DATA BASE MANAGEMENT SYSTEMS LAB

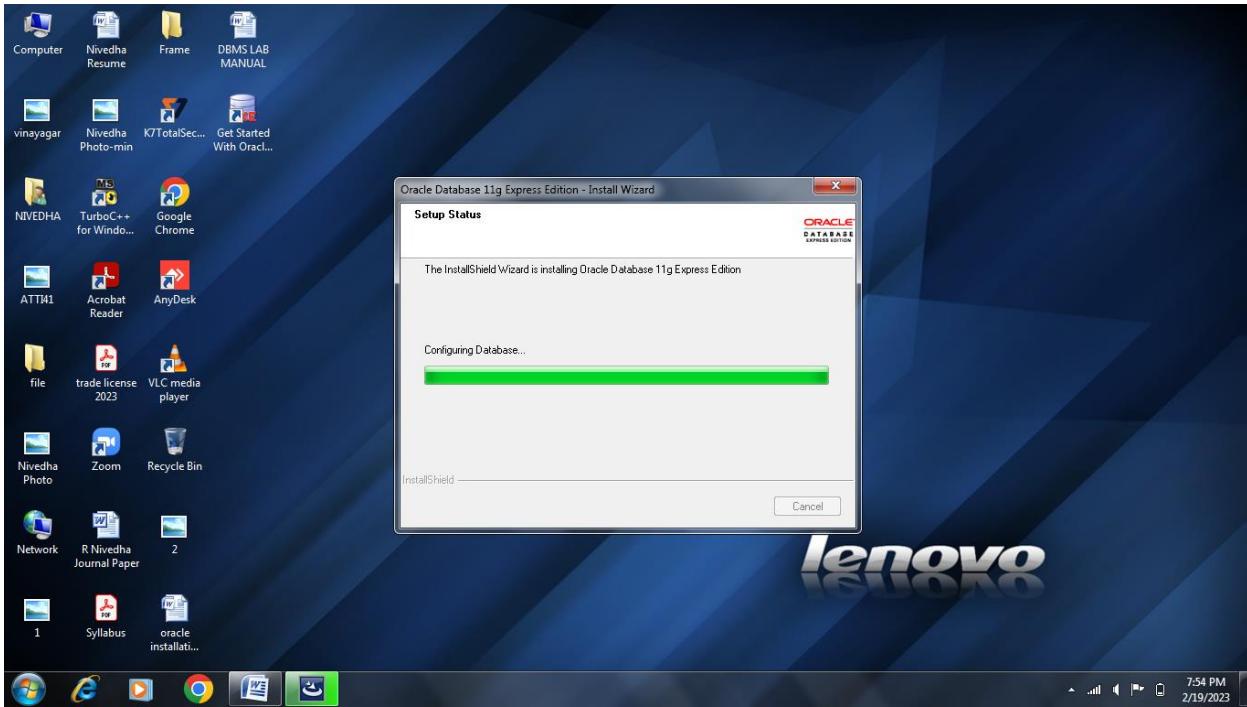


Step 11: The data base Services is created and started.

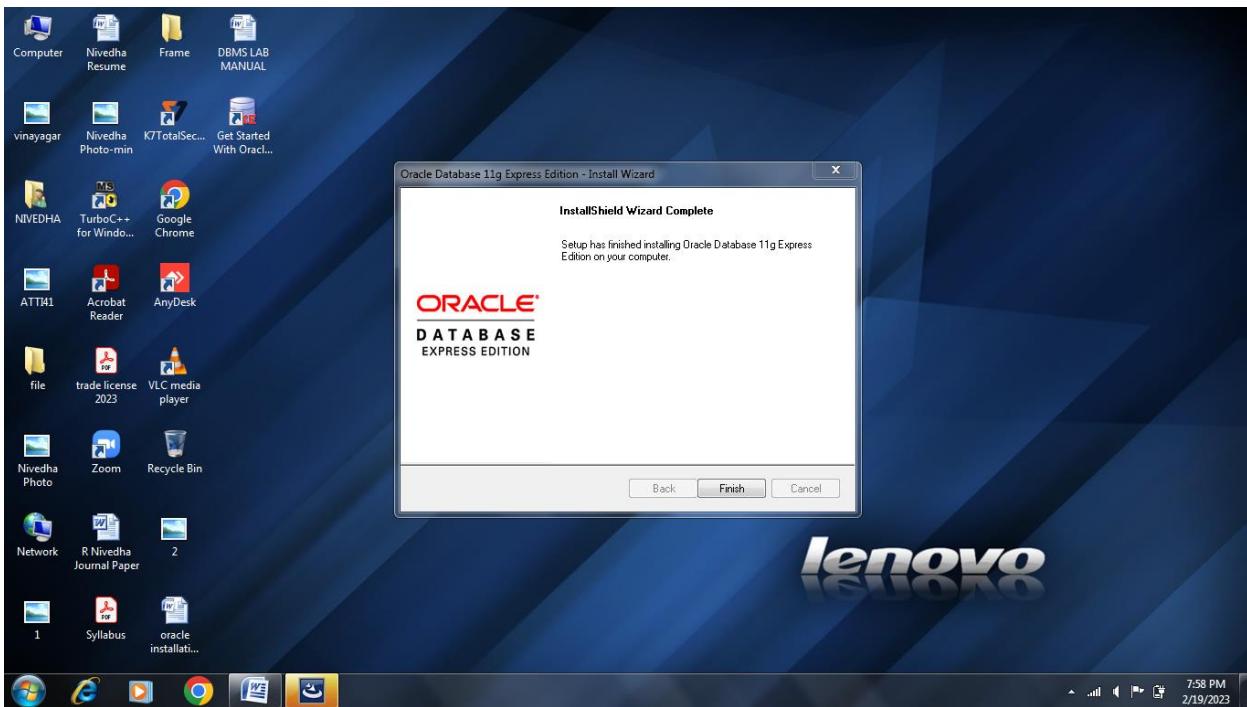


DATA BASE MANAGEMENT SYSTEMS LAB

Step 12: Perform Configuration of Data base.

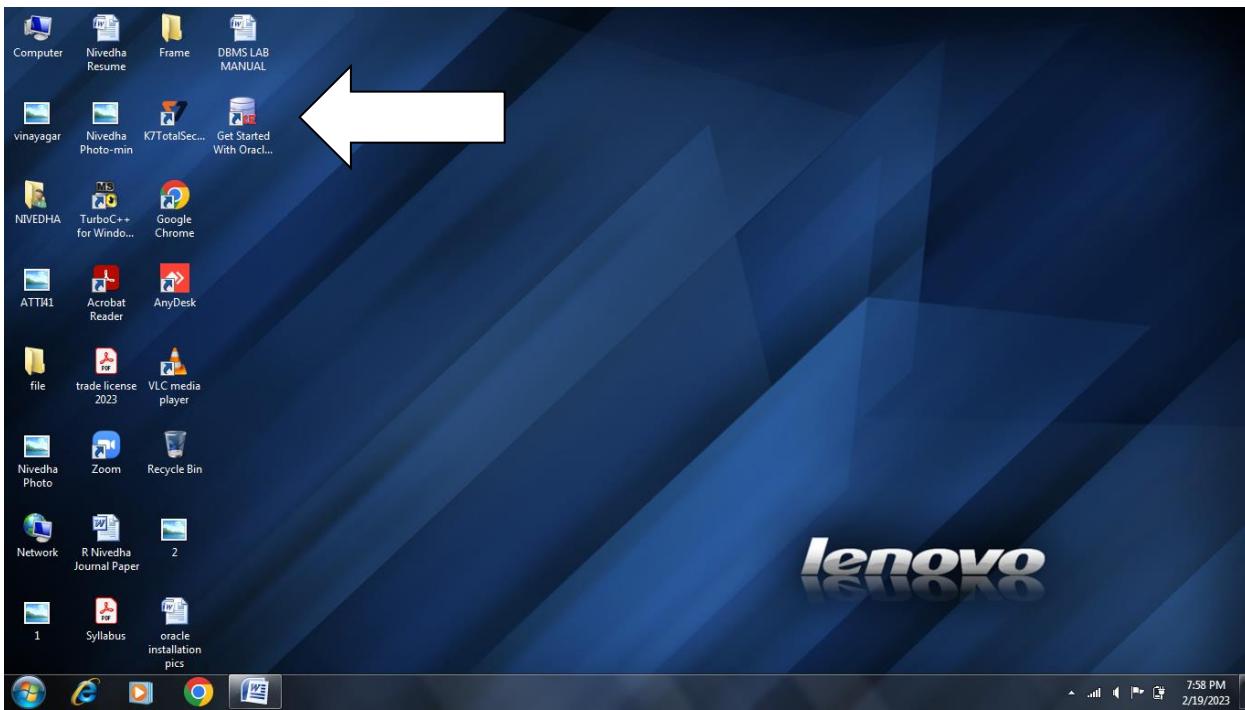


Step 13: Click on finish button



DATA BASE MANAGEMENT SYSTEMS LAB

Step 14: An icon is created on desktop stating oracle 11g software



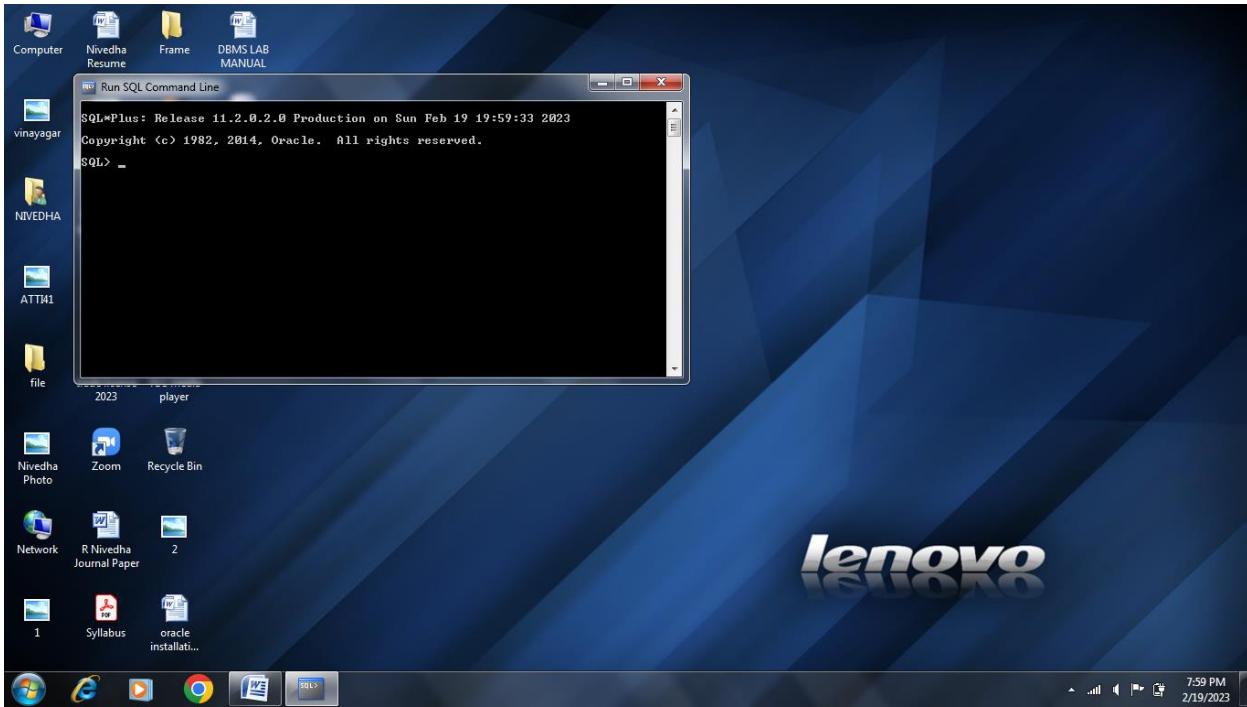
How to Open Oracle software in Computer

Step 1: Click on Windows Button

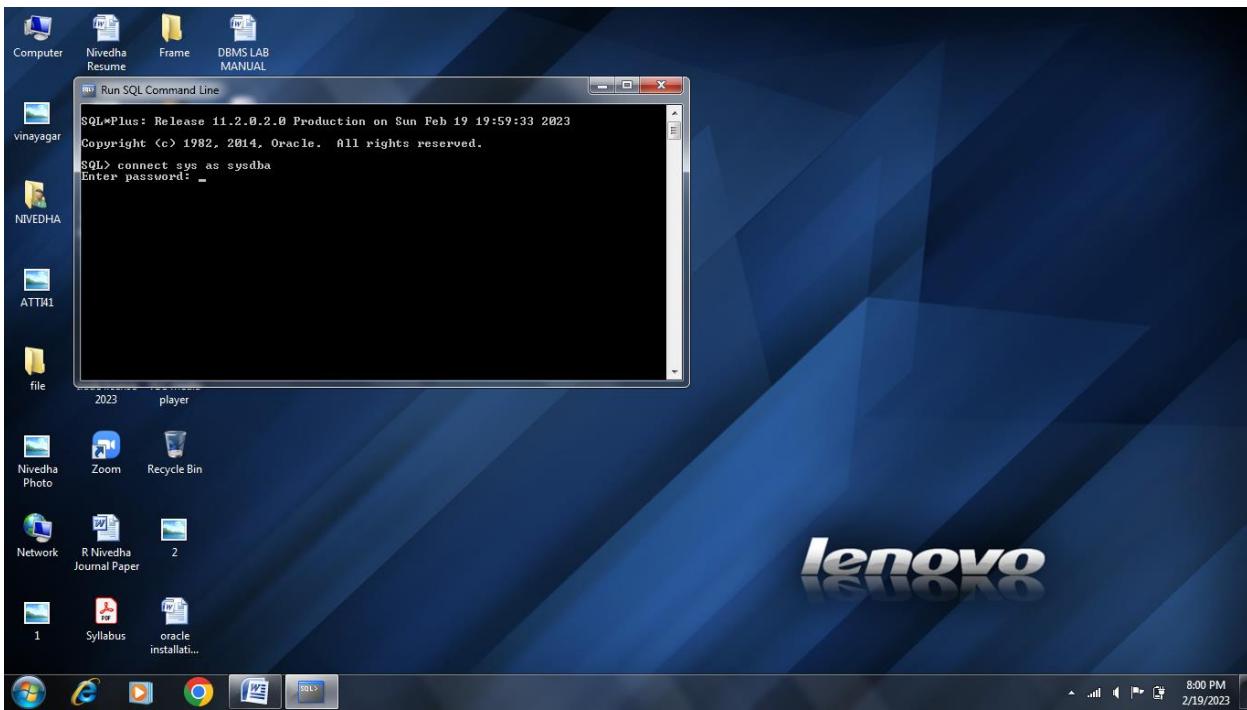


DATA BASE MANAGEMENT SYSTEMS LAB

Step 2: Click on Run SQL Command Line

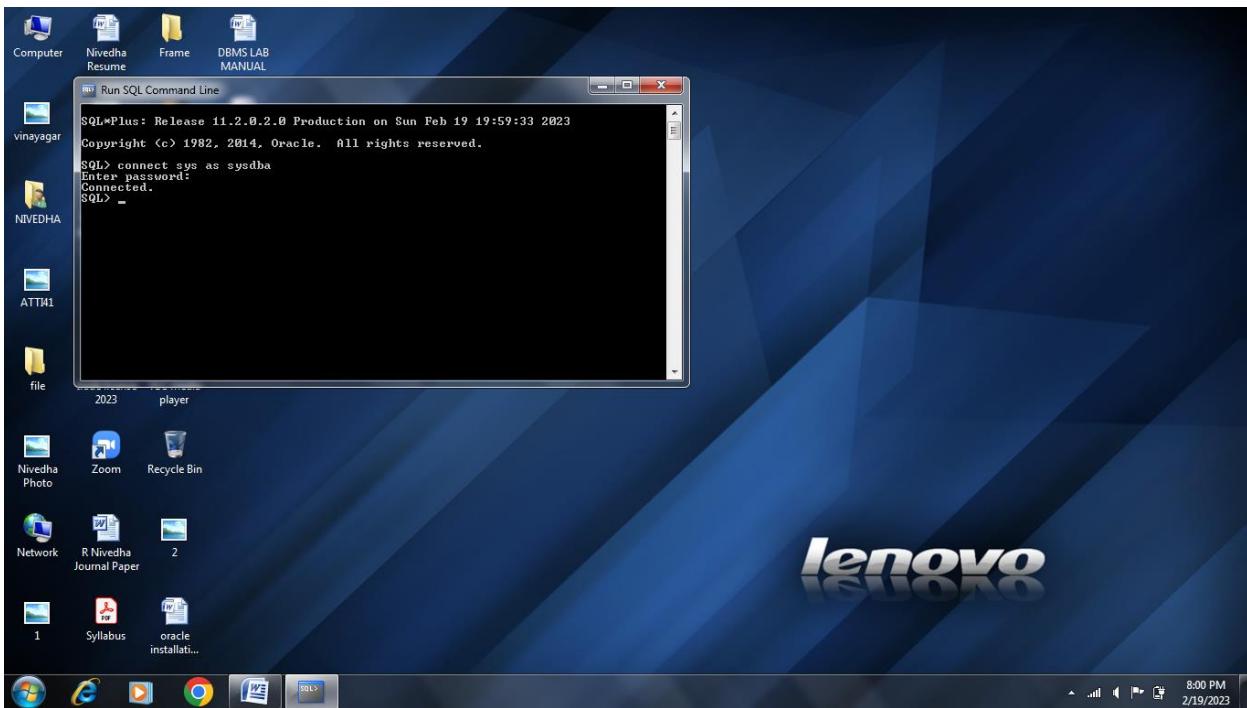


Step 3: The screen is opened now . Type the following Commands
connect sys as sysdba



DATA BASE MANAGEMENT SYSTEMS LAB

Step 4: Type the password as 123456 and it displays as connected.



Step 5: Now type the commands and perform operations of Data base.

Result: Hence The installation of oracle 11g software has been executed successfully.

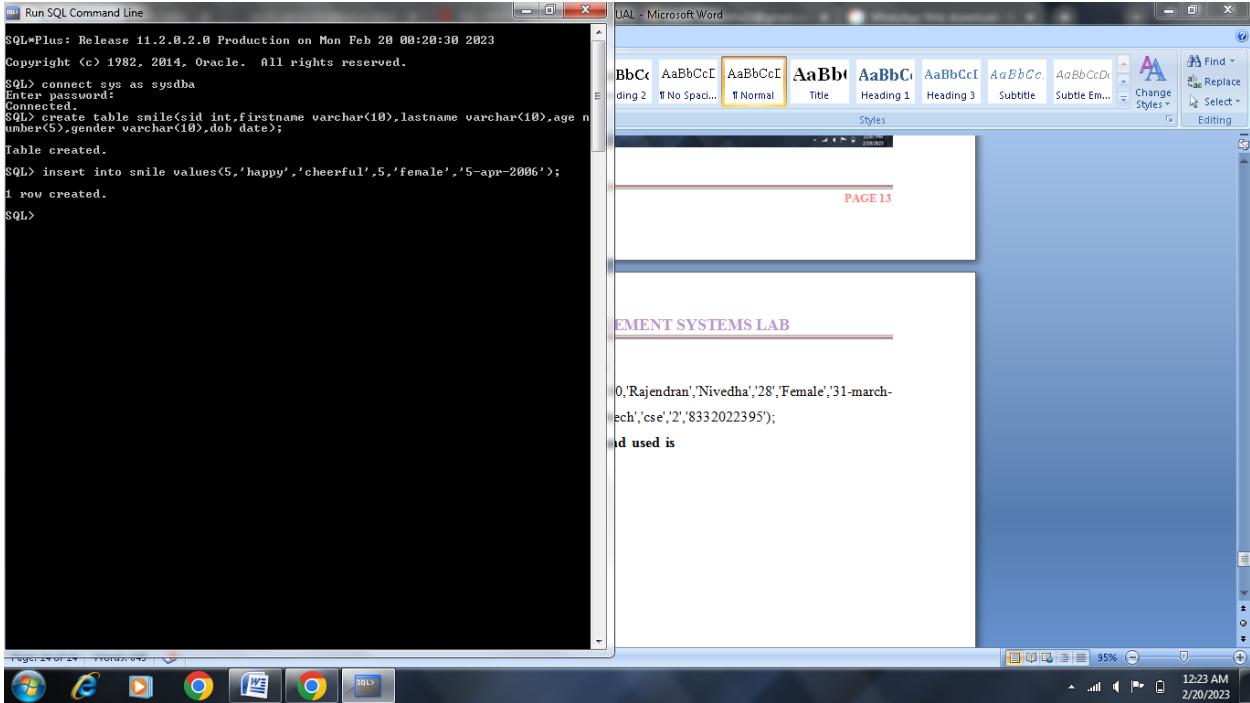
2.AIM OF THE EXPERIMENT: To Perform creation of tables in SQL for table names smile, student, employee, customer, branch with certain fields.

DESCRIPTION : SQL stands for Structured Query Language. SQL lets you access and manipulate databases. SQL became a standard of the American National Standards Institute (ANSI) in 1986, and of the International Organization for Standardization (ISO) in 1987.

SOURCE CODE:

Create table name as smile with fields sid, first name, last name, age, gender, dob(date of birth)

DATA BASE MANAGEMENT SYSTEMS LAB



Now, to check whether table smile is created or not the command used is

SQL>desc smile;

Now, Insert the values into smile as

SQL>insert into smile values('5','happy','cheerful','17','female','5-apr-2006');



lenovo

DATA BASE MANAGEMENT SYSTEMS LAB

To see the Output & display of data , the command used is

Select * from smile;



A screenshot of a Lenovo laptop screen. On the left, a window titled "Run SQL Command Line" shows Oracle SQL*Plus output. The session connects to sys as sysdba, desc's the smile table, inserts a row ('5', 'happy', 'cheerful', 17, 'female', '5-apr-2006'), and selects all columns from the smile table, showing the inserted row. On the right, the laptop's desktop background features a blue geometric pattern with the word "lenovo" in white.

```
SQL*Plus: Release 11.2.0.2.0 Production on Mon Feb 20 00:31:44 2023
Copyright (c) 1982, 2014, Oracle. All rights reserved.

SQL> connect sys as sysdba
Enter password:
Connected.
SQL> desc smile;
Name          Null?    Type
-----          ----     -----
SID           NUMBER(38)
FIRSTNAME    VARCHAR2(10)
LASTNAME     VARCHAR2(10)
AGE          NUMBER(5)
GENDER       VARCHAR2(10)
DOB          DATE

SQL> insert into smile values('5','happy','cheerful',17,'female','5-apr-2006');
1 row created.

SQL> select * from smile;
      SID FIRSTNAME LASTNAME      AGE GENDER      DOB
      ---  -----   -----  -----  -----  -----
      5    happy     cheerful    17   female  05-APR-06

SQL>
```

Now insert in the same way 5 different records for table smile and write the value.



A screenshot of a Lenovo laptop screen. On the left, a window titled "Run SQL Command Line" shows Oracle SQL*Plus output. The session connects to sys as sysdba, desc's the smile table, inserts multiple rows ('5', 'happy', 'cheerful', 17, 'female', '5-apr-2006'), ('6', 'joy', 'laugh', 18, 'male', '6-may-2008'), ('7', 'tender', 'pleased', 19, 'female', '7-jun-2008'), ('8', 'delight', 'amused', 20, 'male', '8-july-2009'), and ('9', 'gracious', 'smirk', 21, 'female', '9-aug-2010'). It also attempts to insert a row with a quoted string error. On the right, the laptop's desktop background features a blue geometric pattern with the word "lenovo" in white.

```
SQL*Plus: Release 11.2.0.2.0 Production on Mon Feb 20 00:31:44 2023
Copyright (c) 1982, 2014, Oracle. All rights reserved.

SQL> connect sys as sysdba
Enter password:
Connected.
SQL> desc smile;
Name          Null?    Type
-----          ----     -----
SID           NUMBER(38)
FIRSTNAME    VARCHAR2(10)
LASTNAME     VARCHAR2(10)
AGE          NUMBER(5)
GENDER       VARCHAR2(10)
DOB          DATE

SQL> insert into smile values('5','happy','cheerful',17,'female','5-apr-2006');
1 row created.

SQL> select * from smile;
      SID FIRSTNAME LASTNAME      AGE GENDER      DOB
      ---  -----   -----  -----  -----  -----
      5    happy     cheerful    17   female  05-APR-06
      6    joy       laugh      18   male    06-MAY-08
      7    tender    pleased    19   female  07-JUN-08
      8    delight   amused    20   male    08-JULY-09
      9    gracious  smirk     21   female  09-AUG-10

SQL> insert into smile values('7','tender','pleased',19,'female','7-jun-2008');
ERROR:
ORA-01756: quoted string not properly terminated

SQL> insert into smile values('7','tender','pleased',19,'female','7-jun-2008');
1 row created.

SQL> insert into smile values('8','delight','amused',20,'male','8-july-2009');
1 row created.

SQL> insert into smile values('9','gracious','smirk',21,'female','9-aug-2010');
1 row created.

SQL> insert into smile values('10','charm','rejoice',22,'male','10-sep-2011');
1 row created.

SQL>
```

DATA BASE MANAGEMENT SYSTEMS LAB

The resultant table output for smile is

A screenshot of a Windows desktop. On the left, a 'Run SQL Command Line' window is open, displaying SQL queries and their results. The queries involve inserting data into a 'smile' table and selecting all rows from it. The results show six rows with columns SID, FIRSTNAME, LASTNAME, AGE, GENDER, and DOB. On the right, the desktop background features a blue geometric pattern with the word 'lenovo' in white. The taskbar at the bottom shows various icons, and the system tray indicates the date as 2/20/2023 and the time as 12:53 AM.

```
1 row created.  
SQL> insert into smile values<7,'tender','pleased',19,'female','7-jun-2008';  
ERROR:  
ORA-01756: quoted string not properly terminated  
  
SQL> insert into smile values<7,'tender','pleased',19,'female','7-jun-2008';  
1 row created.  
SQL> insert into smile values<8,'delight','amused',20,'male','8-july-2009';  
1 row created.  
SQL> insert into smile values<9,'gracious','smirk',21,'female','9-aug-2010';  
1 row created.  
SQL> insert into smile values<10,'charm','rejoice',22,'male','10-sep-2011';  
1 row created.  
SQL> select * from smile;  
-----  
SID FIRSTNAME LASTNAME AGE GENDER DOB  
5 happy cheerful 17 female 05-APR-06  
6 joy laugh 18 male 06-MAY-07  
7 tender pleased 19 female 07-JUN-08  
8 delight amused 20 male 08-JUL-09  
9 gracious smirk 21 female 09-AUG-10  
10 charm rejoice 22 male 10-SEP-11  
6 rows selected.  
SQL> -
```

Student Table of SQL

Create table student(email varchar(20),address varchar(5),city varchar(10),bloodgroup varchar(5),course varchar(5),branch varchar(5),year varchar(5),mobilenumber varchar(10));

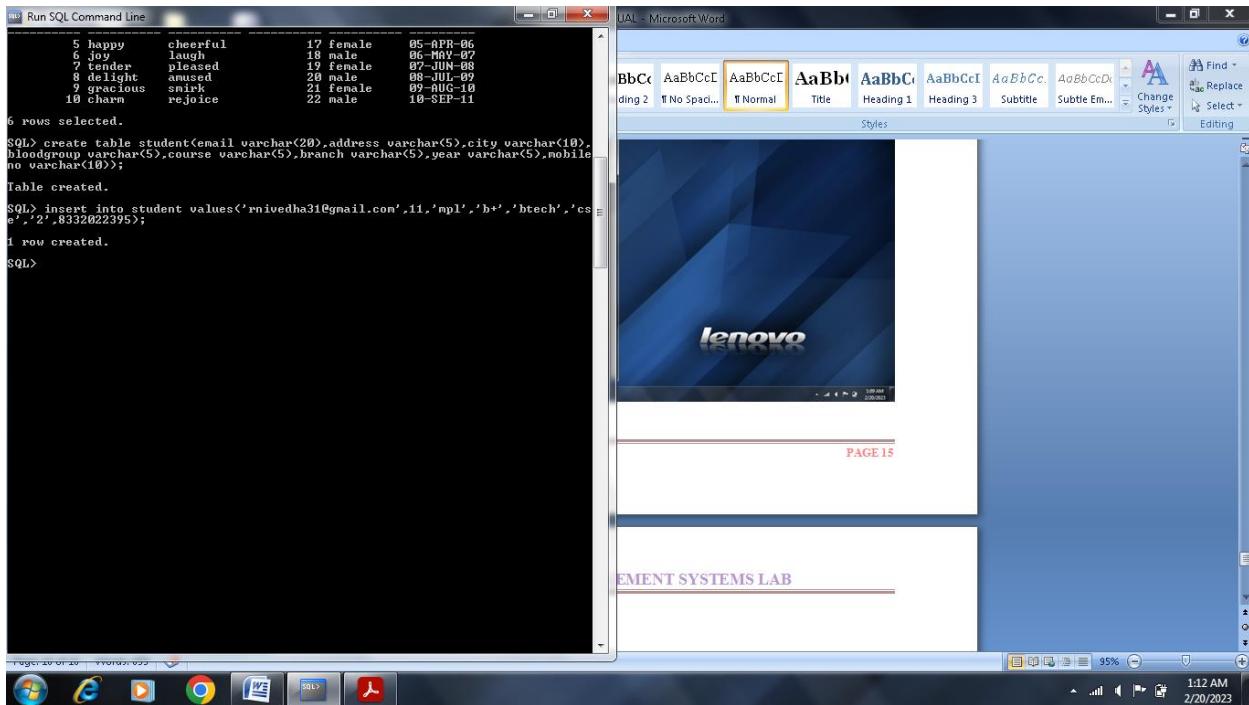
A screenshot of a Windows desktop. On the left, a 'Run SQL Command Line' window is open, displaying SQL commands to create a 'student' table and insert data into it. The table structure includes columns for email, address, city, bloodgroup, course, branch, year, and mobilenumber. The data inserted includes six rows with columns SID, FIRSTNAME, LASTNAME, AGE, GENDER, and DOB. On the right, the desktop background features a blue geometric pattern with the word 'lenovo' in white. The taskbar at the bottom shows various icons, and the system tray indicates the date as 2/20/2023 and the time as 1:09 AM.

```
5 happy cheerful 17 female 05-APR-06  
6 joy laugh 18 male 06-MAY-07  
7 tender pleased 19 female 07-JUN-08  
8 delight amused 20 male 08-JUL-09  
9 gracious smirk 21 female 09-AUG-10  
10 charm rejoice 22 male 10-SEP-11  
6 rows selected.  
SQL> create table student<email varchar(20),address varchar(5),city varchar(10),bloodgroup varchar(5),course varchar(5),branch varchar(5),year varchar(5),mobilenumber varchar(10)>;  
Table created.  
SQL> -
```

DATA BASE MANAGEMENT SYSTEMS LAB

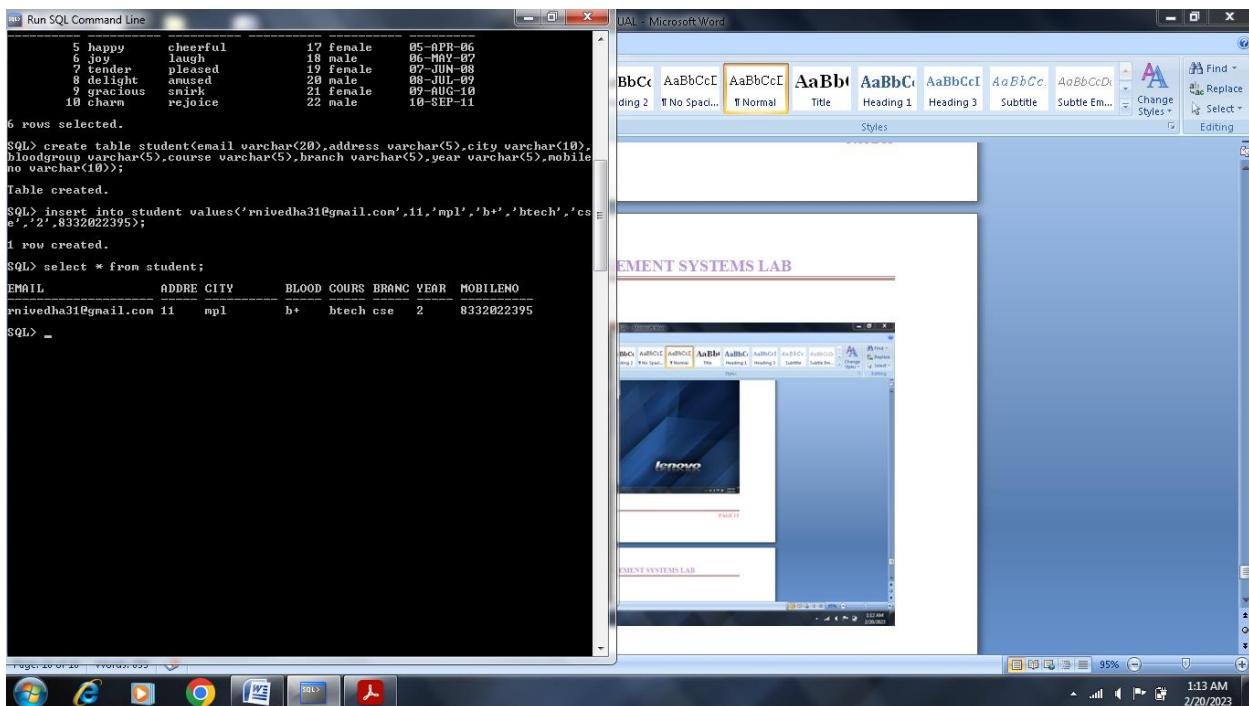
Now insert the values into table student:

insert into student values ('rnivedha31@gmail.com',11,'mpl','b+','btech','cse',2,8332022395);



To see the output the command is

select * from student;



DATA BASE MANAGEMENT SYSTEMS LAB

Insert 5 records and write the output here

OUTPUT : The output of table student is as follows

The screenshot shows a Windows desktop environment. On the left, a 'Run SQL Command Line' window is open, displaying SQL queries and their results. The queries insert five records into a 'student' table, and then select all records from the table. The results show five students with details like name, address, city, blood group, course, branch, year, and mobile number. On the right, the Lenovo logo is visible on the desktop background. The taskbar at the bottom shows various application icons.

```
SQL> insert into student values('happy@gmail.com',13,'ctr','ab+','btech','cse','4','8005419742');
1 row created.

SQL> insert into student values('wishes@gmail.com',14,'tpt','o+','btech','cse','5','8415623094');
1 row created.

SQL> insert into student values('cheerful@gmail.com',15,'hyd','o-','btech','cse','1','9162458625');
1 row created.

SQL> select * from student;
EMAIL      ADDRE CITY      BLOOD COURS BRANC YEAR    MOBILENO
rnivedha31@gmail.com 11   mpl     b+    btech cse  2      8332022395
Shivam@gmail.com    12   mln     a+    btech cse  3      98985419740
happy@gmail.com     13   ctr     ab+   btech cse  4      8005419742
wishes@gmail.com    14   tpt     o+    btech cse  5      8415623094
cheerful@gmail.com  15   hyd     o-    btech cse  1      9162458625

SQL>
```

Employee Table of SQL

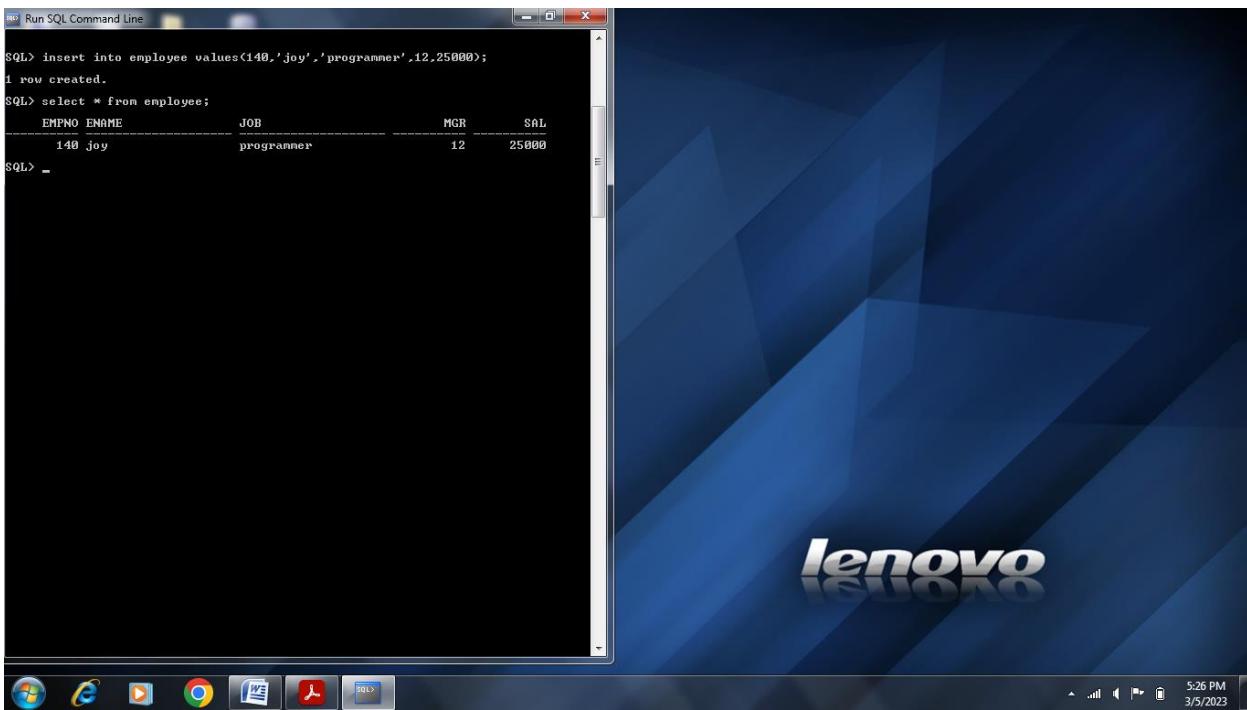
Create table employee(empno number, ename varchar2(20), job varchar(20), mgr number, sal number);

Insert into employee values(140,'joy','programmer',12,25000);

Now insert 10 records and write the output here.

OUTPUT : The output of table employee is as follows

DATA BASE MANAGEMENT SYSTEMS LAB



Department Table of SQL

```
create table department1(deptno number, deptname varchar2(20), location varchar2(20));
insert into department1 values(1,'cse','mpl');
```

In the same way insert 10 records and write the output

OUTPUT : The output of table department1 is as follows

DATA BASE MANAGEMENT SYSTEMS LAB

```
SQL*Plus: Release 11.2.0.2.0 Production on Sun Mar 5 17:19:25 2023
Copyright (c) 1982, 2014, Oracle. All rights reserved.

SQL> connect sys as sysdba
Enter password:
Connected.
SQL> desc department1;
Name          Null?    Type
DEPTNO        NUMBER
DEPTNAME      VARCHAR2(20)
LOCATION       VARCHAR2(20)

SQL> select * from department1;
no rows selected
SQL> insert into department1 values(1,'cse','mpl');

1 row created.

SQL> select * from department1;
DEPTNO DEPTNAME      LOCATION
      1 cse            mpl

SQL>
```

Customer Table of SQL

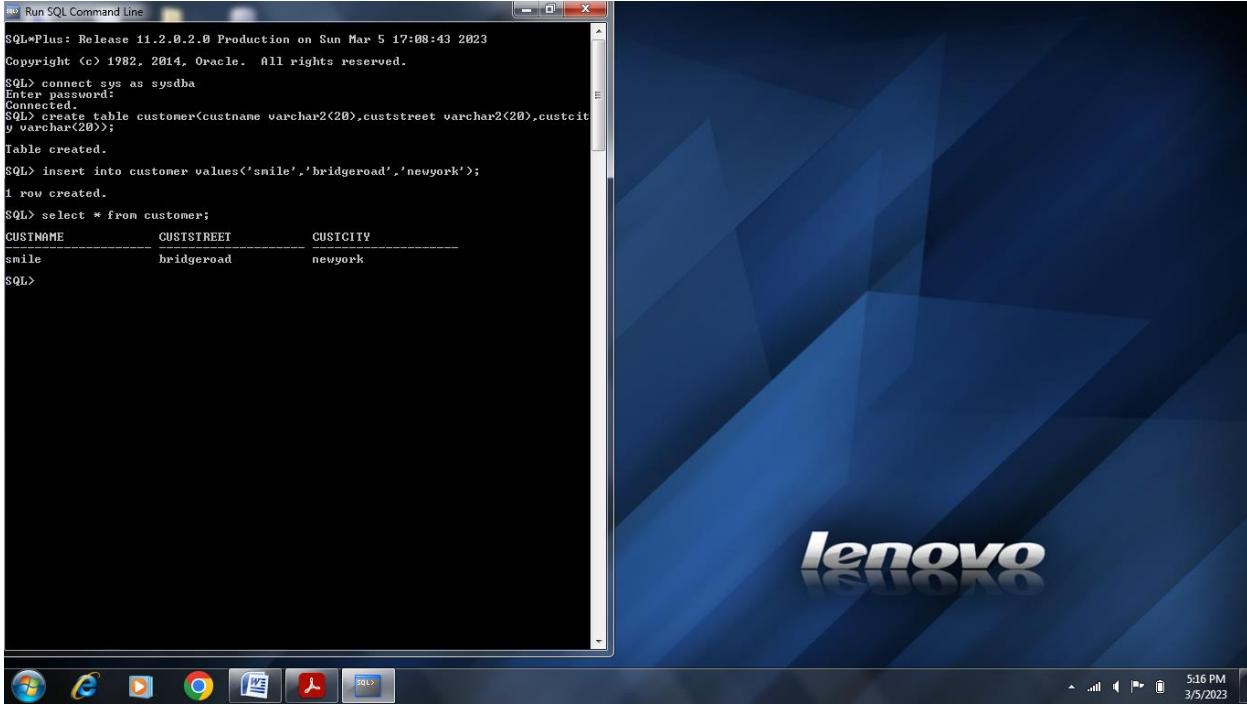
```
create table customer(custname varchar2(20), custstreet varchar2(20), custcity varchar(20));
```

```
insert into customer values('smile','bridgeroad','newyork');
```

Now insert 10 records and write the output.

OUTPUT : The output of table customer is as follows

DATA BASE MANAGEMENT SYSTEMS LAB



Run SQL Command Line

```
SQL*Plus: Release 11.2.0.2.0 Production on Sun Mar 5 17:08:43 2023
Copyright (c) 1982, 2014, Oracle. All rights reserved.

SQL> connect sys as sysdba
Enter password:
Connected.
SQL> create table customer(custname varchar2(20),custstreet varchar2(20),custcity
y varchar2(20));
Table created.

SQL> insert into customer values('smile','bridgeroad','newyork');

1 row created.

SQL> select * from customer;
CUSTNAME          CUSTSTREET      CUSTCITY
smile              bridgeroad      newyork

SQL>
```

lenovo

Windows taskbar icons: File Explorer, Internet Explorer, File, PDF, SQL*Plus.

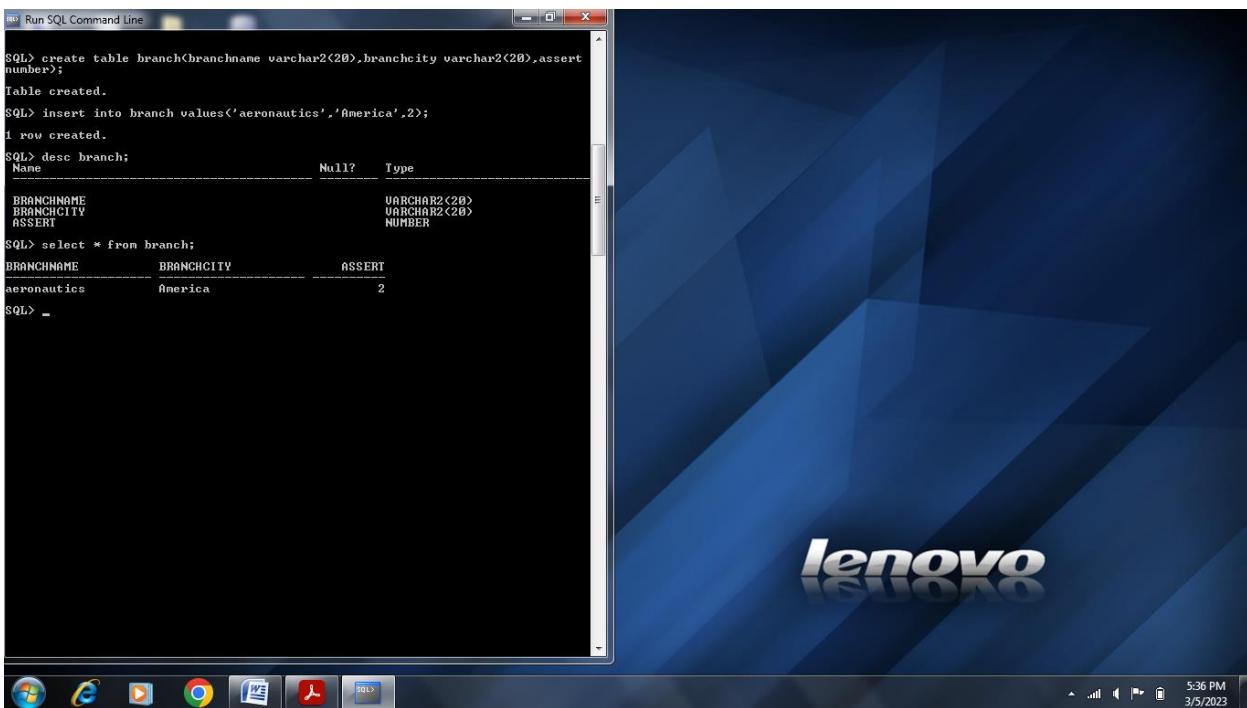
System tray: 5:16 PM, 3/5/2023

Branch Table of SQL

```
create table branch(branchname varchar2(20), branchcity varchar2(20), assert number);
insert into branch values('aeronautics','America',2);
```

Now insert 10 records and write the output.

OUTPUT:



```
Run SQL Command Line
```

```
SQL> create table branch(branchname varchar2(20), branchcity varchar2(20), assert
number);
Table created.

SQL> insert into branch values('aeronautics','America',2);

1 row created.

SQL> desc branch;
Name          Null?    Type
BRANCHNAME          VARCHAR2(20)
BRANCHCITY          VARCHAR2(20)
ASSERT            NUMBER

SQL> select * from branch;
BRANCHNAME          BRANCHCITY      ASSERT
aeronautics          America          2

SQL>
```

lenovo

Windows taskbar icons: File Explorer, Internet Explorer, File, PDF, SQL*Plus.

System tray: 5:36 PM, 3/5/2023

DATA BASE MANAGEMENT SYSTEMS LAB

Result: Hence implementation of SQL commands are successfully applied in creation of tables.

3.AIM OF THE EXPERIMENT: To practice DDL commands for create table for roadway travels

DESCRIPTION: Data Definition Language(DDL) is a subset of SQL and a part of DBMS(Database Management System). DDL consist of Commands to commands like CREATE, ALTER, TRUNCATE and DROP. These commands are used to create or modify the tables in SQL.

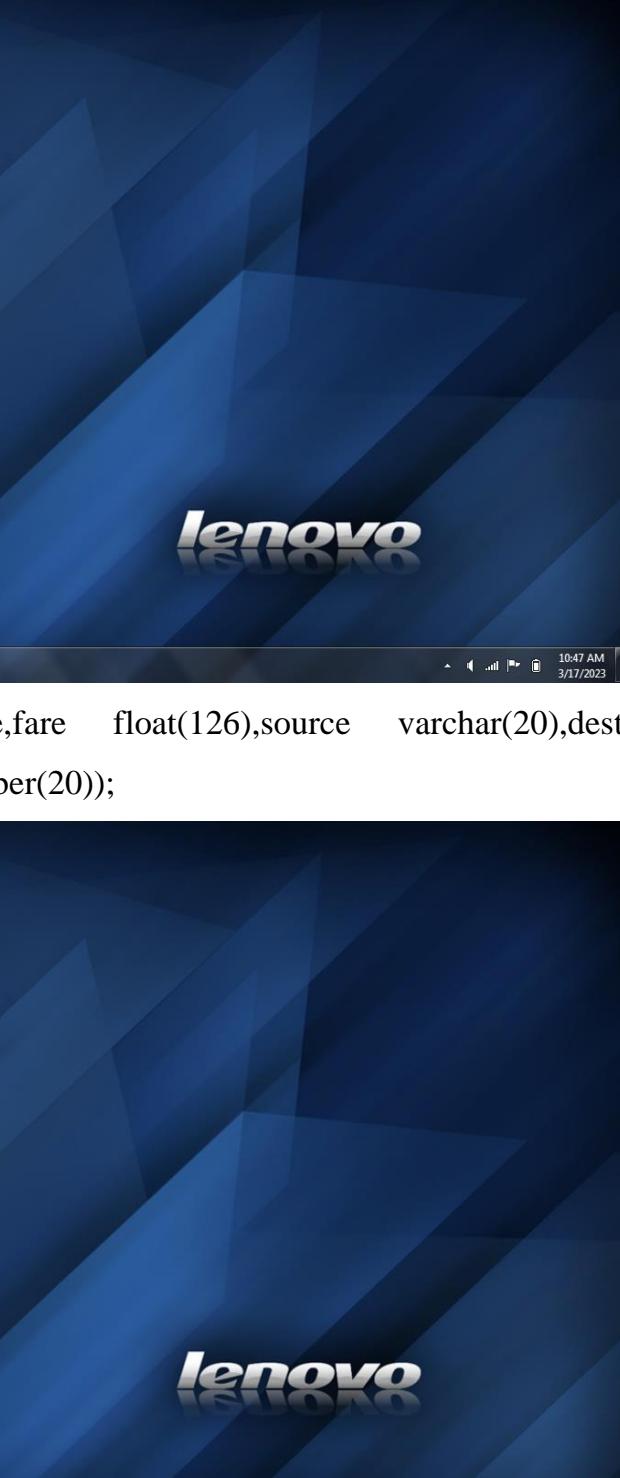
SOURCE CODE:

```
create table bus(bno number(20),source varchar(20),destination varchar(20),startingtime  
number(10), arrivaltime number(10));
```

```
Run SQL Command Line  
SQL*Plus: Release 11.2.0.2.0 Production on Fri Mar 17 10:20:02 2023  
Copyright (c) 1982, 2014, Oracle. All rights reserved.  
SQL> connect  
Enter user-name: system  
Enter password:  
ERROR:  
ORA-01017: invalid username/password; logon denied  
  
SQL> connect sys as sysdba  
Enter password:  
Connected.  
SQL> rollback;  
Rollback complete.  
SQL> create table bus(bno number<20>,source varchar<20>,destination varchar<20>,  
startingtime number<20>,arrivaltime number<20>);  
Table created.  
SQL> desc bus;  
Name Null? Type  
BNO NUMBER<20>  
SOURCE VARCHAR2<20>  
DESTINATION VARCHAR2<20>  
STARTINGTIME NUMBER<20>  
ARRIVALTIME NUMBER<20>  
SQL>
```

```
create table ticket(ticketno number(20),busno number(20),doj date,fare float(126));
```

DATA BASE MANAGEMENT SYSTEMS LAB



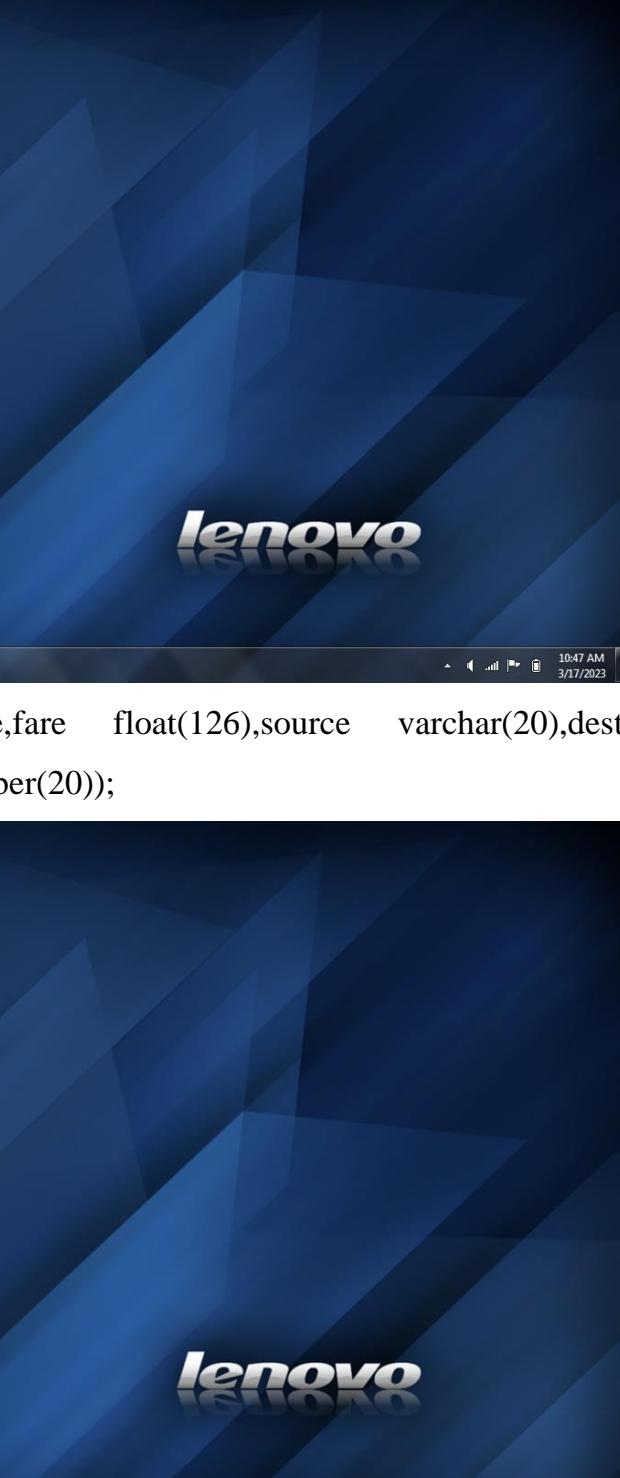
Run SQL Command Line

```
Table created.  
SQL> desc bus;  
Name Null? Type  
  
BNO NUMBER(20)  
SOURCE VARCHAR2(20)  
DESTINATION VARCHAR2(20)  
STARTINGTIME NUMBER(20)  
ARRIVALTIME NUMBER(20)  
  
SQL> create table ticket(ticketno number<10>,busno number<20>,doj date, fare float(126));  
Table created.  
SQL> desc ticket;  
Name Null? Type  
  
TICKETNO NUMBER(10)  
BUSNO NUMBER(20)  
DOJ DATE  
FARE FLOAT(126)  
  
SQL>
```

Windows taskbar icons: File Explorer, Internet Explorer, File Manager, Google Chrome, SQL Server Management Studio, Microsoft Word, Microsoft Excel.

System tray: 10:47 AM, 3/17/2023.

```
create table reservation(rescdate date,fare float(126),source varchar(20),dest varchar(20),busno number(20),ticketno number(20));
```



Run SQL Command Line

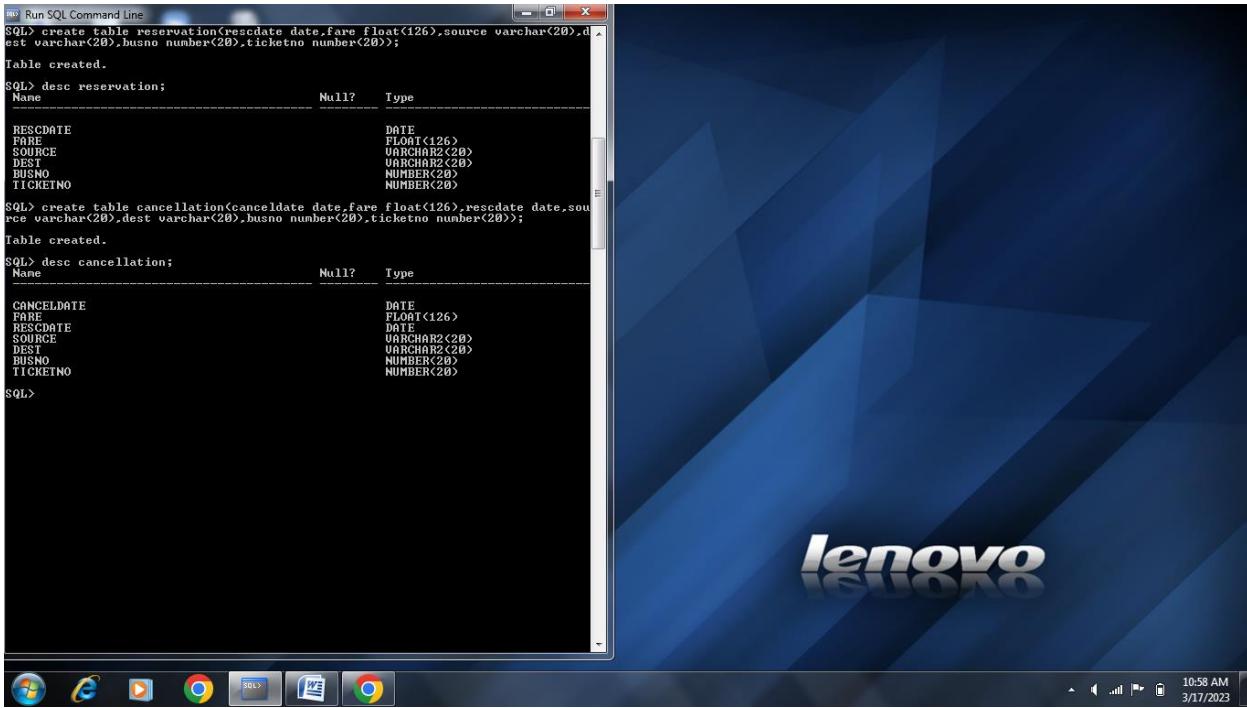
```
SQL> create table ticket(ticketno number<10>,busno number<20>,doj date, fare float(126));  
Table created.  
SQL> desc ticket;  
Name Null? Type  
  
TICKETNO NUMBER(10)  
BUSNO NUMBER(20)  
DOJ DATE  
FARE FLOAT(126)  
  
SQL> create table reservation(rescdate date,fare float(126),source varchar(20),dest varchar(20),busno number(20),ticketno number(20));  
Table created.  
SQL> desc reservation;  
Name Null? Type  
  
RESCDATE DATE  
FARE FLOAT(126)  
SOURCE VARCHAR2(20)  
DEST VARCHAR2(20)  
BUSNO NUMBER(20)  
TICKETNO NUMBER(20)  
  
SQL> -
```

Windows taskbar icons: File Explorer, Internet Explorer, File Manager, Google Chrome, SQL Server Management Studio, Microsoft Word, Microsoft Excel.

System tray: 10:52 AM, 3/17/2023.

```
create table cancellation(canceldate date,fare float(126),rescdate date,source varchar(20),dest varchar(20),busno number(20),ticketno number(20));
```

DATA BASE MANAGEMENT SYSTEMS LAB



Run SQL Command Line

```
SQL> create table reservation(resdate date,fare float(126),source varchar(20),dest varchar(20),busno number(20),ticketno number(20));
Table created.

SQL> desc reservation;
Name Null? Type
RESDATE DATE
FARE FLOAT(126)
SOURCE VARCHAR2(20)
DEST VARCHAR2(20)
BUSNO NUMBER(20)
TICKETNO NUMBER(20)

SQL> create table cancellation(canceldate date,fare float(126),resdate date,source varchar(20),dest varchar(20),busno number(20),ticketno number(20));
Table created.

SQL> desc cancellation;
Name Null? Type
CANCELDATE DATE
FARE FLOAT(126)
RESDATE DATE
SOURCE VARCHAR2(20)
DEST VARCHAR2(20)
BUSNO NUMBER(20)
TICKETNO NUMBER(20)

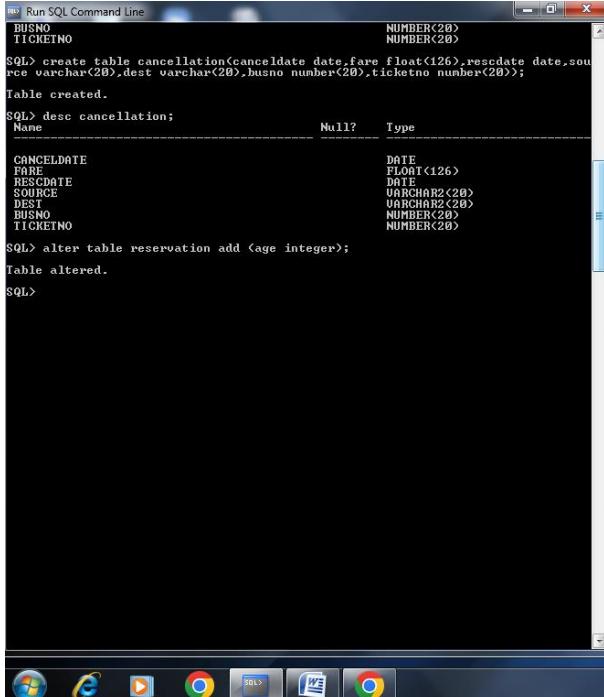
SQL>
```

Alter Syntax

now to alter the table the command used is alter table table name add(values);

- Now alter the table reservation using command

SQL>alter table reservation add (age integer);



Run SQL Command Line

```
SQL> create table cancellation(canceldate date,fare float(126),resdate date,source varchar(20),dest varchar(20),busno number(20),ticketno number(20));
Table created.

SQL> desc cancellation;
Name Null? Type
CANCELDATE DATE
FARE FLOAT(126)
RESDATE DATE
SOURCE VARCHAR2(20)
DEST VARCHAR2(20)
BUSNO NUMBER(20)
TICKETNO NUMBER(20)

SQL> alter table reservation add (age integer);
Table altered.

SQL>
```

check the output

SQL>desc reservation;

The screenshot shows a Windows desktop environment. In the center is a 'Run SQL Command Line' window displaying SQL queries and their results. The queries include creating tables 'reservation' and 'cancellation', and altering the 'reservation' table to add a column 'age'. The results show the table structures with columns like RESCDATE, FARE, SOURCE, DEST, BUSNO, TICKETNO, and age. The desktop background is a dark blue geometric pattern with a prominent 'lenovo' logo. Taskbar icons for various applications like Internet Explorer, Google Chrome, and Microsoft Word are visible at the bottom. The system tray shows the date and time as 3/17/2023 11:05 AM.

```
SQL> desc reservation;
Table created.
SQL> desc cancellation;
Table created.
SQL> alter table reservation add (age integer);
Table altered.
SQL> desc reservation;
Name          Null?    Type
RESCDATE      DATE
FARE          FLOAT(126)
SOURCE        VARCHAR2(20)
DEST          VARCHAR2(20)
BUSNO         NUMBER(20)
TICKETNO      NUMBER(20)
AGE           NUMBER(30)
SQL>
```

Drop Syntax :

To drop any particular column in SQL table the command used is
drop tablename;

Now write the command as

SQL> drop reservation;

DATA BASE MANAGEMENT SYSTEMS LAB

```
Run SQL Command Line
ORA-02210: no options specified for ALTER TABLE

SQL> drop table reservation;
Table dropped.

SQL>
```



```
Run SQL Command Line
ORA-02210: no options specified for ALTER TABLE

SQL> drop table reservation;
Table dropped.

SQL> desc reservation;
ERROR:
ORA-04043: object reservation does not exist

SQL>
```

Result: Hence Implementation of DDL commands are successfully applied.

DATA BASE MANAGEMENT SYSTEMS LAB

4.AIM OF THE EXPERIMENT: To implement DML commands for roadway travels.

Description: DML is an abbreviation of Data Manipulation Language. The DML commands in Structured Query Language change the data present in the SQL database. Now access, store, modify, update and delete the existing records from the database using DML commands.

SOURCE CODE:

Insert into bus values(1,'madanapalle','bangalore',10:10,1:00);

The screenshot shows a Windows desktop environment. In the foreground, there is a 'Run SQL Command Line' window. The window displays the following SQL session:

```
SQL> insert into bus values(1,'madanapalle','bangalore',10:10,01:00);
ERROR:
ORA-01756: quoted string not properly terminated

SQL> insert into bus values(1,'madanapalle','bangalore',10:10,01:00);
SP2-0552: Bind variable "00" not declared.
SQL> insert into bus values(1,'madanapalle','bangalore',10,1);

1 row created.

SQL> select * from bus;
      BNO SOURCE          DESTINATION      STARTINGTIME ARRIVALTIME
-----  -----          -----          -----        -----
           1 madanapalle      bangalore            10             1

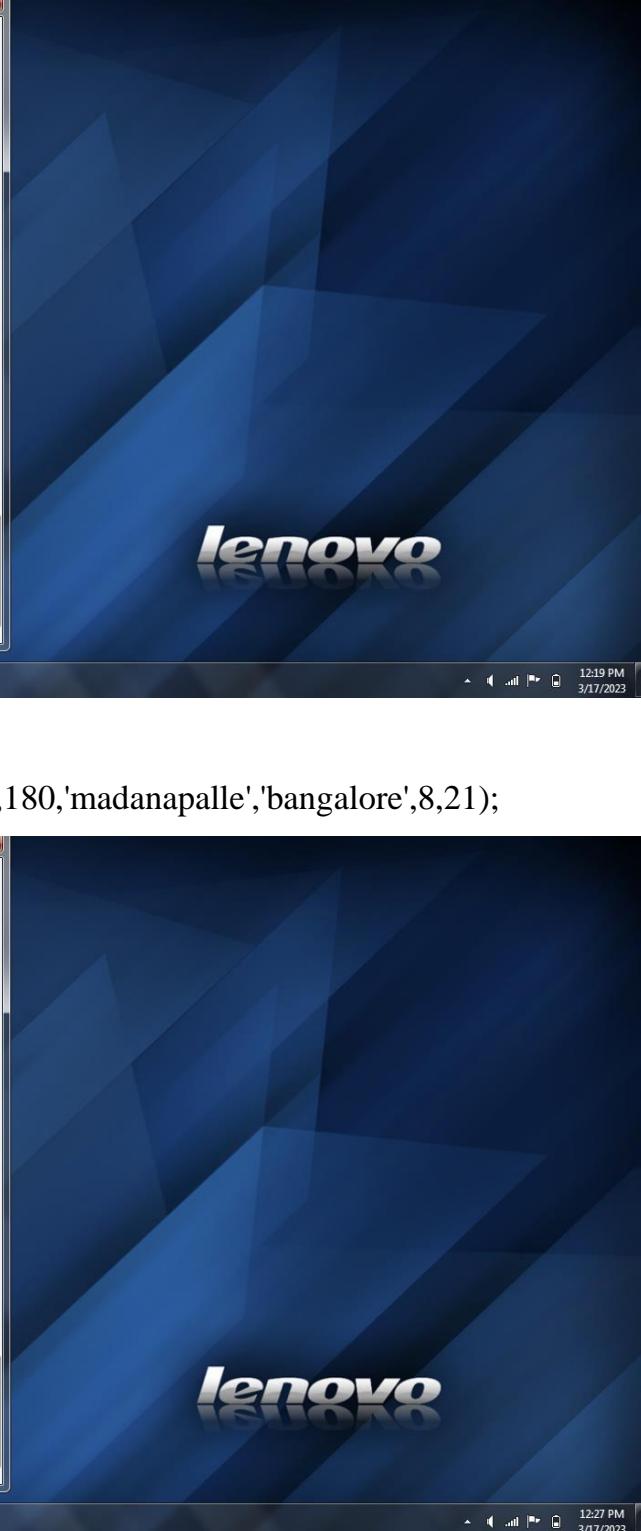
SQL>
```

The window has a dark blue background with a geometric pattern. On the right side of the screen, the 'lenovo' logo is visible. The taskbar at the bottom shows several icons, including the Start button, Internet Explorer, File Explorer, and Google Chrome. The system tray indicates the date as 3/17/2023 and the time as 11:55 AM.

insert 10 records and write output.

insert into ticket values(12,6,18 mar 2023,180);

DATA BASE MANAGEMENT SYSTEMS LAB



Run SQL Command Line

```
SQL> insert into bus values(1,'madanapalle','bangalore',10:10,01:00);
ERROR:
ORA-01756: quoted string not properly terminated

SQL> insert into bus values(1,'madanapalle','bangalore',10:10,01:00);
SP2-0552: Bind Variable "#0" not declared.
SQL> insert into bus values(1,'madanapalle','bangalore',10,1);

1 row created.

SQL> select * from bus;
  BNO SOURCE          DESTINATION      STARTINGTIME ARRIVALTIME
-----  -----
    1 madanapalle        bangalore           10            1

SQL> insert into ticket values(12,6,18 mar 2023,180);
Insert into ticket values(12,6,18 mar 2023,180)
ERROR at line 1:
ORA-00917: missing comma

SQL> insert into ticket values(12,6,'18mar2023',180);
1 row created.

SQL> select * from ticket values;
select * from ticket values
*
ERROR at line 1:
ORA-00933: SQL command not properly ended

SQL> select * from ticket;
  TICKENTNO      BUSNO DOJ          FARE
-----  -----
     12             6 18-MAR-23       180

SQL>
```

Windows taskbar icons: File Explorer, Internet Explorer, File Manager, SQL, Word, Google Chrome.

System tray: 12:19 PM, 3/17/2023

insert 10 records and write the output here.

insert into reservation values('10 mar 2023',180,'madanapalle','bangalore',8,21);



Run SQL Command Line

```
SQL> select * from ticket;
  TICKENTNO      BUSNO DOJ          FARE
-----  -----
     12             6 18-MAR-23       180

SQL> insert into reservation values('10 mar 2023',180,'madanapalle','bangalore',
8,21);
insert into reservation values('10 mar 2023',180,'madanapalle','bangalore',8,21)

*
ERROR at line 1:
ORA-00942: table or view does not exist

SQL> create table reservation(rescdate date,fare float(126),source varchar
(20),dest varchar(20),busno number(20),ticketno number(20));
create table reservation values(rescdate date,fare float(126),source varchar(20),
dest varchar(20),busno number(20),ticketno number(20))
*
ERROR at line 1:
ORA-00922: missing or invalid option

SQL> create table reservation values(rescdate date,fare float(126),source varchar
(20),dest varchar(20),busno number(20),ticketno number(20));
create table reservation values(rescdate date,fare float(126),source varchar(20),
dest varchar(20),busno number(20),ticketno number(20))
*
ERROR at line 1:
ORA-00922: missing or invalid option

SQL> create table reservation(rescdate date,fare float(126),source varchar(20),
dest varchar(20),busno number(20),ticketno number(20));
Table created.

SQL> insert into reservation values('10 mar 2023',180,'madanapalle','bangalore',
8,21);
SP2-0734: unknown command beginning "inser into..." - rest of line ignored.
SQL> insert into reservation values('10 mar 2023',180,'madanapalle','bangalore',
8,21);

1 row created.

SQL> select * from reservation;
  RESCDATE      FARE SOURCE          DEST          BUSNO
-----  -----
10-MAR-23      180  madanapalle    bangalore        8
21

SQL>
```

Windows taskbar icons: File Explorer, Internet Explorer, File Manager, SQL, Word, Google Chrome.

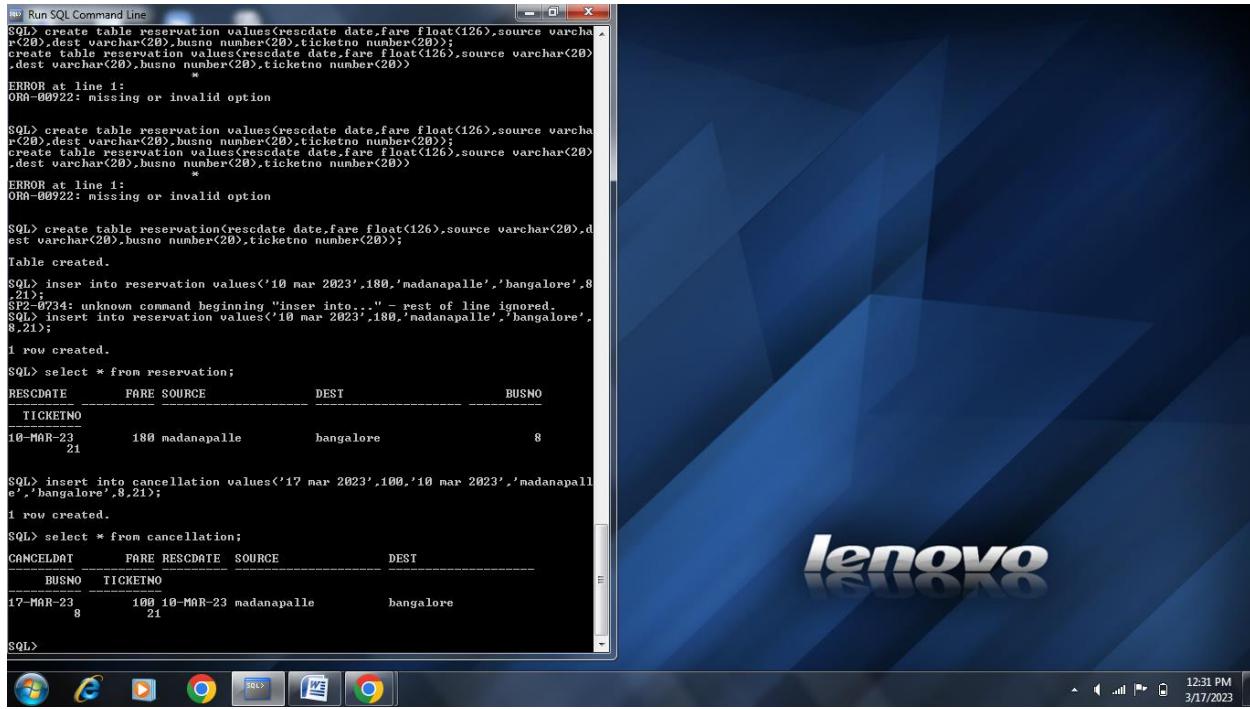
System tray: 12:27 PM, 3/17/2023

insert 10 records and write the output.

insert into cancellation values('17 mar 2023',100,'10 mar

DATA BASE MANAGEMENT SYSTEMS LAB

2023,'madanapalle','bangalore',8,21);



```
Run SQL Command Line
SQL> create table reservation values(rescdate date,fare float(126),source varchar(20),dest varchar(20),busno number(20),ticketno number(20));
create table reservation values(rescdate date,fare float(126),source varchar(20),dest varchar(20),busno number(20),ticketno number(20))
*ERROR at line 1:
ORA-00922: missing or invalid option

SQL> create table reservation values(rescdate date,fare float(126),source varchar(20),dest varchar(20),busno number(20),ticketno number(20));
create table reservation values(rescdate date,fare float(126),source varchar(20),dest varchar(20),busno number(20),ticketno number(20))
*ERROR at line 1:
ORA-00922: missing or invalid option

SQL> create table reservation(rescdate date,fare float(126),source varchar(20),dest varchar(20),busno number(20),ticketno number(20));
Table created.

SQL> insert into reservation values('10 mar 2023',180,'madanapalle','bangalore',8,21);
SP2-0734: unknown command beginning "inser into.."- rest of line ignored.
SQL> insert into reservation values('10 mar 2023',180,'madanapalle','bangalore',8,21);
1 row created.

SQL> select * from reservation;
RESCDATE      FARE SOURCE          DEST           BUSNO
TICKETNO
10-MAR-23     180 madanapalle    bangalore        8
21

SQL> insert into cancellation values('17 mar 2023',100,'10 mar 2023','madanapalle','bangalore',8,21);
1 row created.

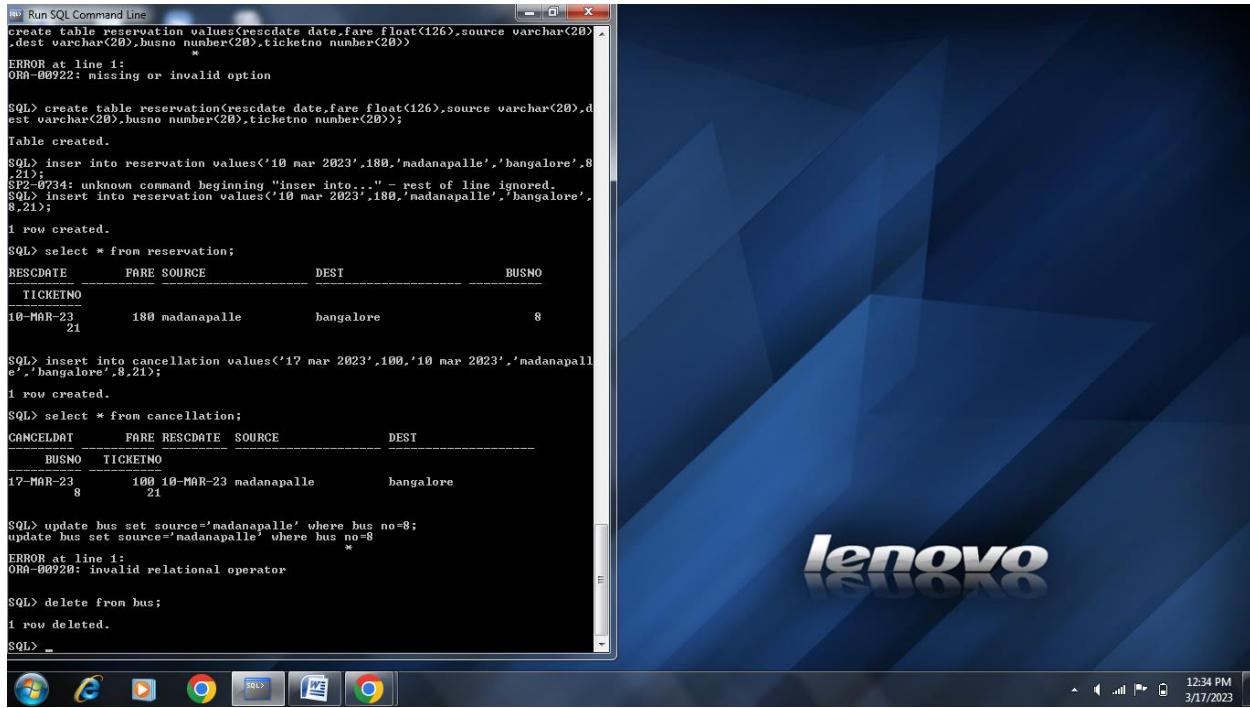
SQL> select * from cancellation;
CANCELDAT     FARE RESCDATE   SOURCE          DEST
BUSNO TICKETNO
17-MAR-23     100 10-MAR-23 madanapalle    bangalore
8       21

SQL>
```

insert 10 records and write the output here.

To delete bus table the command used is

SQL>delete bus;



```
Run SQL Command Line
create table reservation values(rescdate date,fare float(126),source varchar(20),dest varchar(20),busno number(20),ticketno number(20))
*ERROR at line 1:
ORA-00922: missing or invalid option

SQL> create table reservation(rescdate date,fare float(126),source varchar(20),dest varchar(20),busno number(20),ticketno number(20));
Table created.

SQL> insert into reservation values('10 mar 2023',180,'madanapalle','bangalore',8,21);
SP2-0734: unknown command beginning "inser into.."- rest of line ignored.
SQL> insert into reservation values('10 mar 2023',180,'madanapalle','bangalore',8,21);
1 row created.

SQL> select * from reservation;
RESCDATE      FARE SOURCE          DEST           BUSNO
TICKETNO
10-MAR-23     180 madanapalle    bangalore        8
21

SQL> insert into cancellation values('17 mar 2023',100,'10 mar 2023','madanapalle','bangalore',8,21);
1 row created.

SQL> select * from cancellation;
CANCELDAT     FARE RESCDATE   SOURCE          DEST
BUSNO TICKETNO
17-MAR-23     100 10-MAR-23 madanapalle    bangalore
8       21

SQL> update bus set source='madanapalle' where bus no=8;
update bus set source='madanapalle' where bus no=8
*ERROR at line 1:
ORA-00920: invalid relational operator

SQL> delete from bus;
1 row deleted.

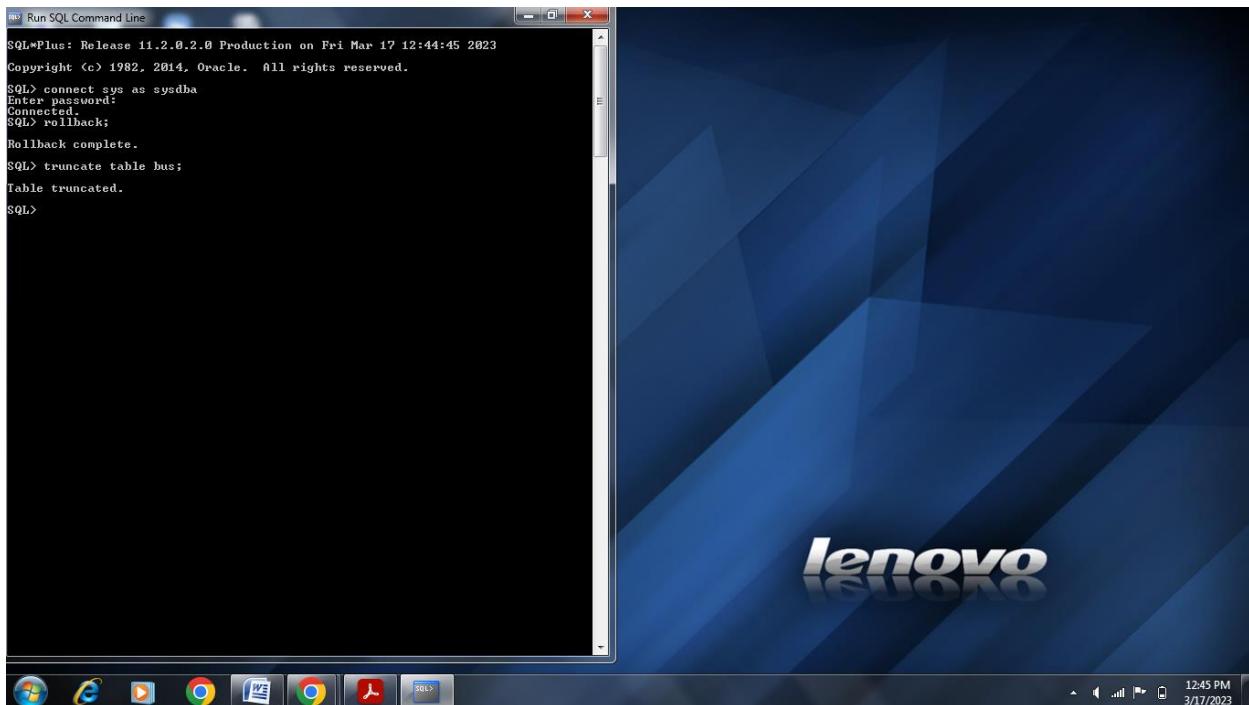
SQL>
```

perform roll back & truncate commands .The syntax is

DATA BASE MANAGEMENT SYSTEMS LAB

SQL> rollback;

SQL>truncate table bus;



Result: Hence Implementation of DML commands are successfully applied

5.AIM OF THE EXPERIMENT: To create user account using SQL .

DESCRIPTION: A user is an account that you can use to access the SQL server. To create user SQL server, you can use any of the following two ways: Using T-SQL & Using SQL Server Management Studio.

SOURCE CODE:

SQL>connect system/oracle;

SQL>show user

SQL>create user Nivedha1 identified by pass;

SQL>grant connect,resource to Nivedha1;

SQL>show user

SQL>disconnect

SQL>connect Nivedha1/pass;

SQL>show user;

DATA BASE MANAGEMENT SYSTEMS LAB

user is Nivedha1

OUTPUT :

A screenshot of a Windows desktop. On the left, there is a 'Run SQL Command Line' window with the following text:

```
SQL> create user Nivedhai identified by pass;
User created.

SQL> grant create session,
grant create session
*
ERROR at line 1:
ORA-00905: missing keyword

SQL> grant connect,resource to Nivedhai;
Grant succeeded.

SQL> show user
USER is "SYSTEM"
SQL> disconnect
SP2-0042: unknown command "disconnect" - rest of line ignored.
SQL> disconnect
Disconnected from Oracle Database 11g Express Edition Release 11.2.0.2.0 - 64bit
Prouction
SQL> connect Nivedhai/pass;
Connected.
SQL> show user
USER is "NIVEDHAI"
SQL>
```

The desktop background is blue with a geometric pattern and a 'lenovo' logo. The taskbar at the bottom shows various icons, including the Start button, Internet Explorer, Google Chrome, File Explorer, and the SQL Command Line icon. The system tray shows the date and time as 3/17/2023 and 1:02 PM.

RESULT: Hence User account has been created using SQL successfully.

6. AIM OF THE EXPERIMENT: To prepare college student database using SQL.

DESCRIPTION: College student database consists of student database, class, marks.

Create table for this and insert the values to the table.

SOURCE CODE:

```
create table student(sname varchar(20),address varchar(20),mobileno number(20),gender
varchar(10));
```

```
insert into student values('Nivedha','mpl','8332022395','female');
```

OUTPUT:

DATA BASE MANAGEMENT SYSTEMS LAB

```
Run SQL Command Line
SQL*Plus: Release 11.2.0.2.0 Production on Thu Mar 23 06:55:52 2023
Copyright (c) 1982, 2014, Oracle. All rights reserved.

SQL> create table student(name varchar(20),address varchar(20),mobileno number(20),gender varchar(10));
ERROR at line 1:
ORA-00955: name is already used by an existing object

SQL> create table student1(sname varchar(20),address varchar(20),mobileno number(20),gender varchar(10));
Table created.

SQL> insert into student1 values('Nivedha','mpl','8332022395','female');
1 row created.

SQL> select * from student1;
SNAME          ADDRESS      MOBILENO GENDER
Nivedha        mpl           8332022395 female
SQL>
```

insert 10 records and write output here.

```
create table semester(semno number(10),subjectname varchar(20),internalmarks number(20),externalmarks number(20),labinternalmarks number(20),labexternalmarks number(20));

insert into semester values('3','dbms','15','18','14','18');
```

DATA BASE MANAGEMENT SYSTEMS LAB



```
Run SQL Command Line
SQL*Plus: Release 11.2.0.2.0 Production on Thu Mar 23 10:45:09 2023
Copyright (c) 1982, 2014, Oracle. All rights reserved.

SQL> connect
Enter user name: connect sys as sysdba
SP2-038C: Invalid option.
Usage: CONNECT[!] [<logon>][<proxy>] [AS <SYSDBA|SYSOPER|SYSASM>] [edition=<value>]
where <logon> ::= <username>[/<password>][!]<connect_identifier>
      <proxy> ::= <proxyuser>[<username>][/<password>][!]<connect_identifier>
SQL> 10:45:09 SP2-0223: No lines in SQL buffer.
SQL> connect sys as sysdba
Enter password:
Connected.
SQL> create table semester(semno number<10>,subjectname varchar<20>,internalmarks number<20>,externalmarks number<20>,labinternalmarks number<20>,labexternalmarks number<20>);

create table semester(semno number<10>,subjectname varchar<20>,internalmarks number<20>,externalmarks number<20>,labinternalmarks number<20>,labexternalmarks number<20>);

SQL> *
ERROR at line 1:
ORA-00902: invalid datatype

SQL> create table semester(semno number<10>,subjectname varchar<20>,internalmarks number<20>,externalmarks number<20>,labinternalmarks number<20>,labexternalmarks number<20>);

Table created.

SQL>
```



```
Run SQL Command Line
SQL*Plus: Release 11.2.0.2.0 Production on Thu Mar 23 10:57:47 2023
Copyright (c) 1982, 2014, Oracle. All rights reserved.

SQL> desc semester1;
SP2-0640: Not connected
SP2-0641: "DESCRIBE" requires connection to server
SQL> connect sys as sysdba
Enter password:
Connected.
SQL> desc semester1;
ERROR:
ORA-04043: object semester1 does not exist

SQL> desc semester;
Name          Null?    Type
SEMNO        NUMBER(10)
SUBJECTNAME  VARCHAR2(20)
INTERNALMARKS NUMBER(20)
EXTERNALMARKS NUMBER(20)
LABINTERNALMARKS NUMBER(20)
LABEXTERNALMARKS NUMBER(20)

SQL> insert into semester values('3','dbms','15','18','14','18');

1 row created.

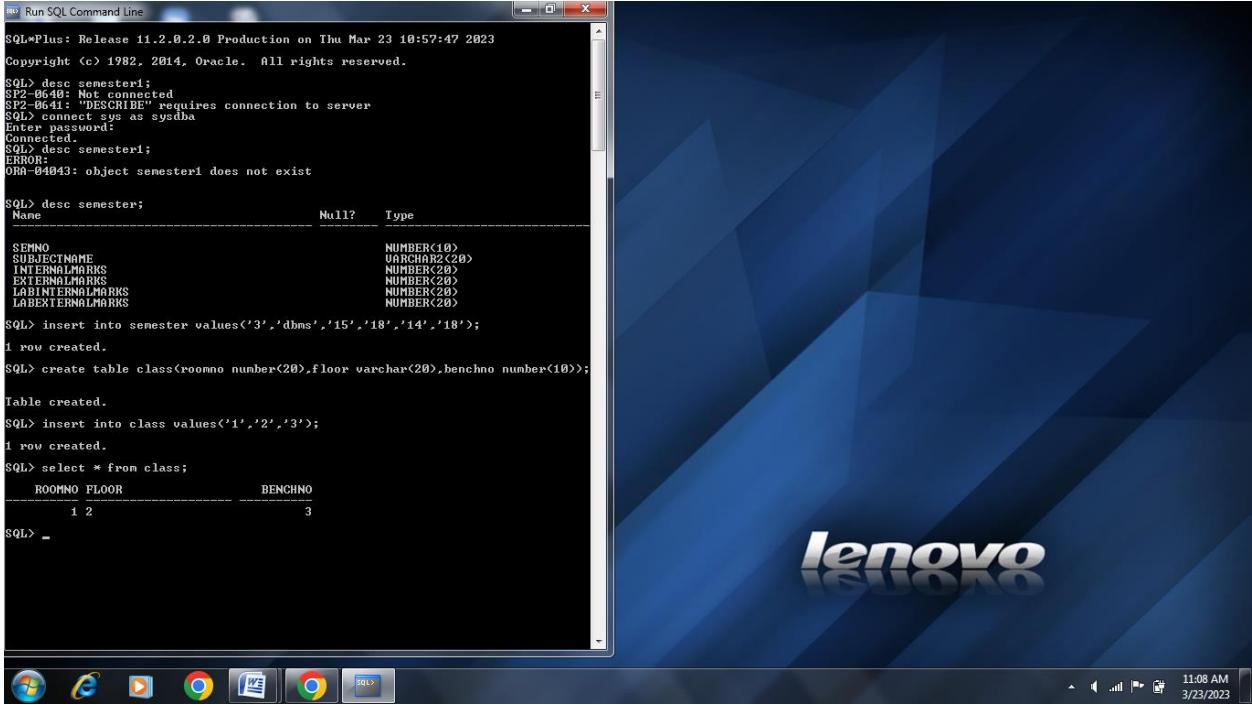
SQL> -
```

insert 10 records and write output.

create table class(roomno number(20),floor varchar(20),benchno number(10));

insert into class values('1','2','3');

DATA BASE MANAGEMENT SYSTEMS LAB



Run SQL Command Line

```
SQL*Plus: Release 11.2.0.2.0 Production on Thu Mar 23 10:57:47 2023
Copyright (c) 1982, 2014, Oracle. All rights reserved.

SQL> desc semester1;
SQL> 0 rows selected
SQL> 441: "DESCRIBE requires connection to server
SQL> connect sys as sysda
Enter password:
Connected.
SQL> desc semester1;
ERROR:
ORA-04043: object semester1 does not exist

SQL> desc semester;
Name          Null?    Type
-----  -----
SEMINO          NUMBER(10)
SUBJECTNAME    VARCHAR2(20)
INTERNALMARKS  NUMBER(20)
EXTERNALMARKS  NUMBER(20)
LINTERNALMARKS NUMBER(20)
LEXTERNALMARKS NUMBER(20)

SQL> insert into semester values('3','dbms','15','18','14','18');
1 row created.

SQL> create table class(roomno number<20>,floor varchar<20>,benchno number<10>);

Table created.

SQL> insert into class values('1','2','3');
1 row created.

SQL> select * from class;
ROOMNO FLOOR        BENCHNO
-----  -----  -----
1       2             3

SQL> -
```

Lenovo logo

Windows taskbar icons: Start, Internet Explorer, File Explorer, Google Chrome, and SQL*Plus.

System tray: 11:08 AM, 3/23/2023

insert 10 records and write the output.

```
create table studentdetails(age number(20),course varchar(20),branch varchar(20),dob date,bloodgroup varchar(20),adharno number(20),bankacctno number(20),bankbranch varchar(20));
```

```
insert into studentdetails values('20','btech','cse','31-mar-1994','8','2','mpl');
```

OUTPUT:

DATA BASE MANAGEMENT SYSTEMS LAB



```
Run SQL Command Line
SQL*Plus: Release 11.2.0.2.0 Production on Thu Mar 23 12:16:52 2023
Copyright (c) 1982, 2014, Oracle. All rights reserved.

SQL> create table studentdetails(age number(20),course varchar(20),branch varchar(20),dob date,bloodgroup varchar(20),adharo number(20),bankacctno number(20),bankbranch varchar(20));
SP2-0640: Not connected
SQL> connect sys as sysdba
Enter password:
SQL>
SQL> insert into studentdetails values('20','btech','cse','31-mar-94','b+','8','2','mpl');
insert into studentdetails values('20','btech','cse','31-mar-94','b+','8','2','mpl')
*
ERROR at line 1:
ORA-00942: table or view does not exist

SQL> create table studentdetails(age number(20),course varchar(20),branch varchar(20),dob date,bloodgroup varchar(20),adharo number(20),bankacctno number(20),bankbranch varchar(20));
create table studentdetails(age number(20),course varchar(20),branch varchar(20),
,dob date,bloodgroup varchar(20),adharo number(20),bankacctno number(20),branch
,varchar(20))
*
ERROR at line 1:
ORA-00957: duplicate column name

SQL> create table studentdetails(age number(20),course varchar(20),branch varchar(20),dob date,bloodgroup varchar(20),adharo number(20),bankacctno number(20),bankbranch varchar(20));
Table created.

SQL> insert into studentdetails values('20','btech','cse','31-mar-94','b+','8','2','mpl');
1 row created.

SQL> select * from studentdetails;
      AGE COURSE        BRANCH       DOB
BLOODGROUP    ADHARO  BANKACCTNO BANKBRANCH
-----  -----
      20 btech          8     cse        2   mpl
      31-MAR-94

SQL> -
```

insert 10 records and write output.

RESULT : Implementation of Preparing college student database using SQL is applied successfully.

7.AIM OF THE EXPERIMENT : Prepare Airlines database using SQL

DESCRIPTION: Using SQL create database of airlines with fields such as passenger name, source, destination. It includes fields about arrival time and departure time.

SOURCE CODE:

```
create table airlines(passengername varchar(20),age number(20),passportno
varchar(20),visano number(20),source varchar(20),destination varchar(20));
insert into airlines values('Nivedha','28','1','5','blr','shimla');
```

DATA BASE MANAGEMENT SYSTEMS LAB

```
Run SQL Command Line
ERROR at line 1:
ORA-00922: missing or invalid option

SQL> create table airlines(passengername varchar(20),age number(20),passportno v
archar(20),visano number(20),source varchar(20),destination varchar(20),doj dat
e,returnjry date);
create table airlines(passengername varchar(20),age number(20),passportno v
archar(20),visano number(20),source varchar(20),destination varchar(20)),doj date,ret
urnjry date);

ERROR at line 1:
ORA-00922: missing or invalid option

SQL> create table airlines(passengername varchar(20),age number(20),passportno v
archar(20),visano number(20),source varchar(20),destination varchar(20));
Table created.

SQL>
```

```
Run SQL Command Line
ERROR at line 1:
ORA-00922: missing or invalid option

SQL> create table airlines(passengername varchar(20),age number(20),passportno v
archar(20),visano number(20),source varchar(20),destination varchar(20),doj dat
e,returnjry date);
create table airlines(passengername varchar(20),age number(20),passportno v
archar(20),visano number(20),source varchar(20),destination varchar(20)),doj date,ret
urnjry date);

ERROR at line 1:
ORA-00922: missing or invalid option

SQL> create table airlines(passengername varchar(20),age number(20),passportno v
archar(20),visano number(20),source varchar(20),destination varchar(20));
Table created.

SQL> insert into airlines values('Nivedha','28','1','5','blr','shimla');

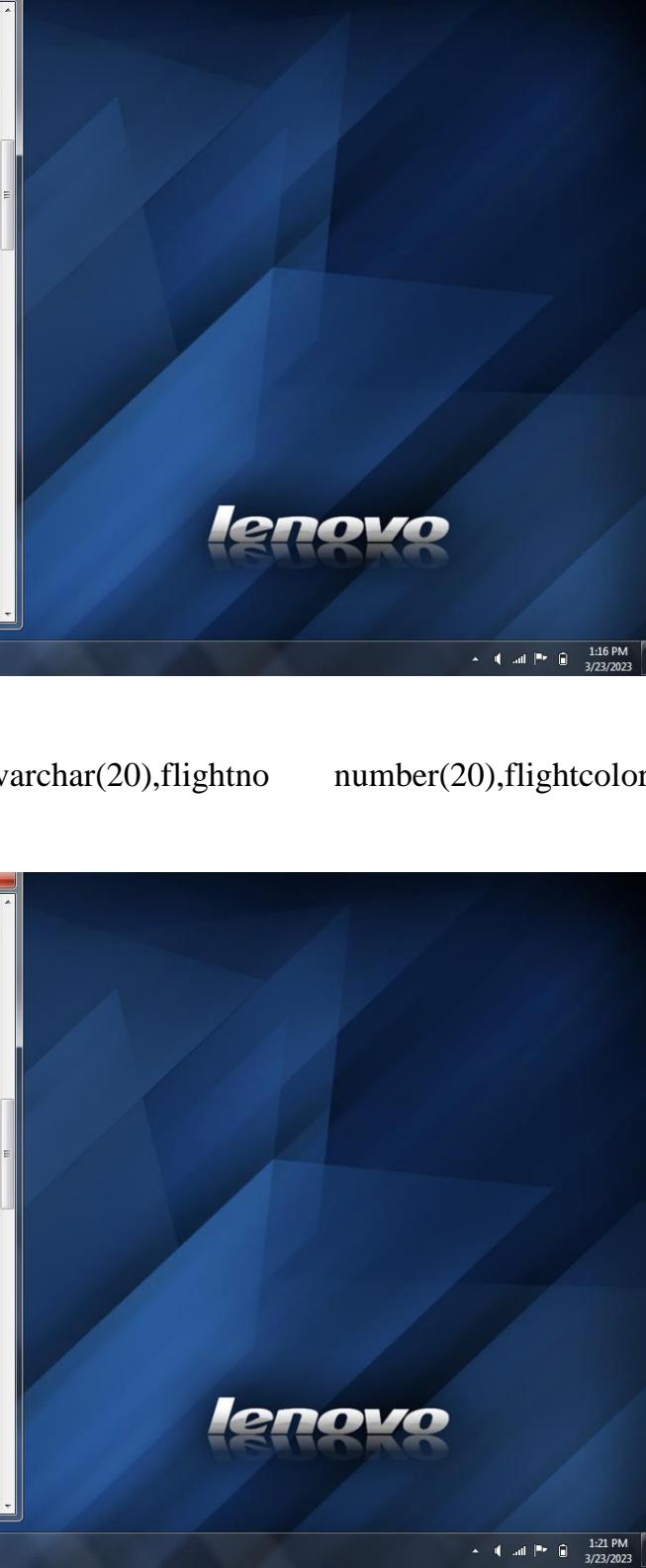
1 row created.

SQL> select * from airlines;
PASSENGERNAME          AGE  PASSPORTNO        VISANO
SOURCE                 DESTINATION
Nivedha                28   1                  5
blr                     shimla

SQL> desc airlines;
Name          Null?    Type
PASSENGERNAME          VARCHAR2(20)
AGE             NUMBER(20)
PASSPORTNO           VARCHAR2(20)
VISANO            NUMBER(20)
SOURCE             VARCHAR2(20)
DESTINATION        VARCHAR2(20)

SQL>
```

DATA BASE MANAGEMENT SYSTEMS LAB



Run SQL Command Line

```
ERROR at line 1:
ORA-00922: missing or invalid option

SQL> create table airlines(passengername varchar(20),age number(20),passportno v
archar(20),visano number(20),source varchar(20),destination varchar(20),doj dat
e,returndate date);
Error report -:
ORA-00922: missing or invalid option

SQL> create table airlines(passengername varchar(20),age number(20),passportno v
archar(20),visano number(20),source varchar(20),destination varchar(20)),doj date,ret
urnary date);

ERROR at line 1:
ORA-00922: missing or invalid option

SQL> create table airlines(passengername varchar(20),age number(20),passportno v
archar(20),visano number(20),source varchar(20),destination varchar(20));
Table created.

SQL> insert into airlines values('Nivedha', '28', '1', '5', 'blr', 'shimla');

1 row created.

SQL> select * from airlines;
  PASSENGERNAME      AGE  PASSPORTNO    VISANO
  SOURCE          DESTINATION
Nivedha            28           1             5
blr                 shimla

SQL>
```

Lenovo logo watermark

insert 10 records and write the output.

```
create table flight(flightname varchar(20),flightno number(20),flightcolor
varchar(20),seatno varchar(20));
```



Run SQL Command Line

```
SQL> desc airlines;
Name          Null?    Type
PASSENGERNAME          VARCHAR2(20)
AGE                  NUMBER(20)
PASSPORTNO           NUMBER(20)
VISANO               NUMBER(20)
SOURCE                VARCHAR2(20)
DESTINATION          VARCHAR2(20)

SQL> create table flight(flightname varchar(20),flightno number(20),flightcolor
varchar(20),seatno varchar(20));
Table created.

SQL> desc flight;
Name          Null?    Type
FLIGHTNAME          VARCHAR2(20)
FLIGHTNO            NUMBER(20)
FLIGHTCOLOR          VARCHAR2(20)
SEATNO              VARCHAR2(20)

SQL>
```

Lenovo logo watermark

DATA BASE MANAGEMENT SYSTEMS LAB

insert into flight values('spacejet','1','red','2');

The screenshot shows a Windows desktop with a blue geometric background. In the foreground, there is a 'Run SQL Command Line' window. The window displays the following SQL session:

```
SQL> desc airlines;
Name          Null?    Type
PASSENGERNAME           VARCHAR2(20)
AGE                     NUMBER(20)
PHSOPORTNO              VARCHAR2(20)
ULRANO                  NUMBER(20)
SOURCE                  VARCHAR2(20)
DESTINATION             VARCHAR2(20)

SQL> create table flight(flightname varchar(20),flightno number(20),flightcolor
varchar(20),seatno varchar(20));
Table created.

SQL> desc flight;
Name          Null?    Type
FLIGHTNAME           VARCHAR2(20)
FLIGHTNO              NUMBER(20)
FLIGHTCOLOR           VARCHAR2(20)
SEATNO                VARCHAR2(20)

SQL> insert into flight values('spacejet','1','red','2');
1 row created.

SQL> select * from flight;
FLIGHTNAME      FLIGHTNO   FLIGHTCOLOR     SEATNO
spacejet        1          red            2

SQL> -
```

The taskbar at the bottom shows several icons, including Internet Explorer, Google Chrome, and File Explorer. The system tray indicates the date as 3/23/2023 and the time as 1:22 PM.

insert 10 records and write the output.

RESULT : Hence Implementation of SQL commands in preparing database for airlines is successfully applied.

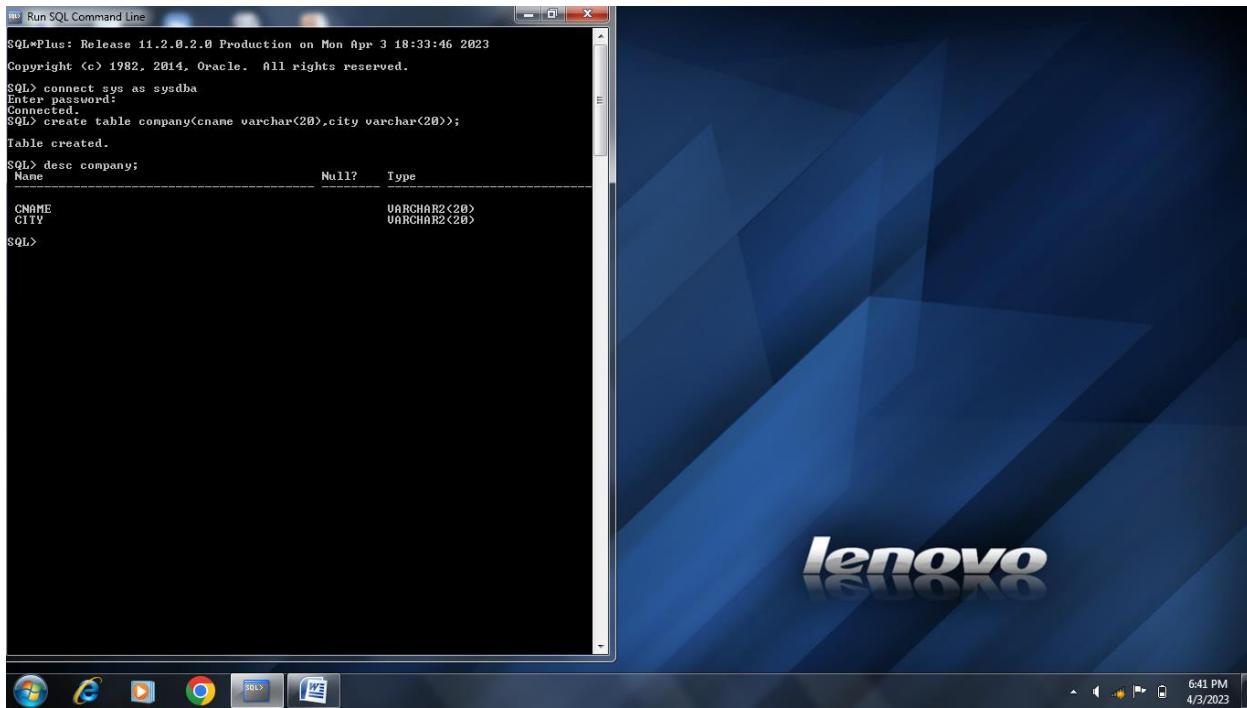
8.AIM OF THE EXPERIMENT : Prepare SQL Queries

DESCRIPTION: SQL means Structured Query Language Using SQL after creating data base of tables ask queries to data base.

DESCRIPTION:

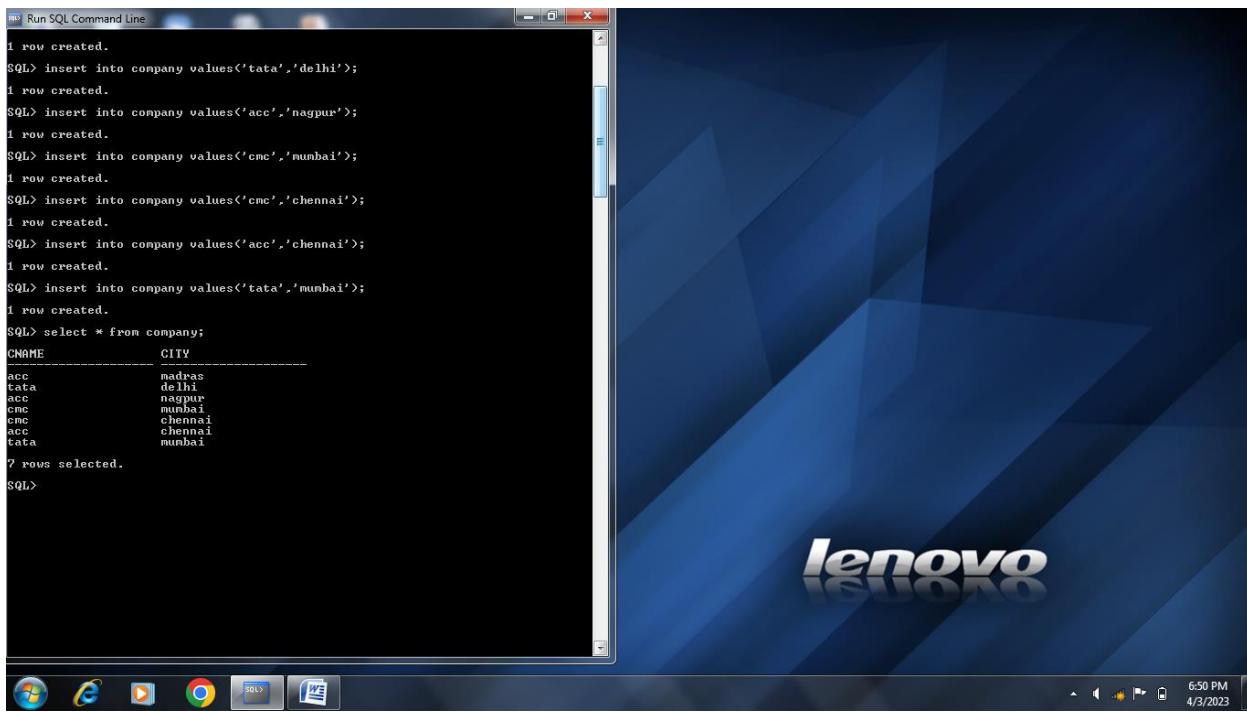
Create table company(cname varchar(20),city varchar(20));

DATA BASE MANAGEMENT SYSTEMS LAB



```
insert into company values('acc','madras');
insert into company values('tata','delhi');
insert into company values('acc','nagpur');
insert into company values('cmc','mumbai');
insert into company values('cmc','chennai');
insert into company values('acc','chennai');
insert into company values('tata','mumbai');
```

DATA BASE MANAGEMENT SYSTEMS LAB



A screenshot of a Windows desktop environment on a Lenovo laptop. The taskbar at the bottom shows icons for the Start button, Internet Explorer, File Explorer, and other applications. The system tray indicates the date as 4/3/2023 and the time as 6:50 PM. A window titled "Run SQL Command Line" is open, displaying the following SQL session:

```
SQL> insert into company values('tata','delhi');
1 row created.

SQL> insert into company values('acc','nagpur');
1 row created.

SQL> insert into company values('cmc','mumbai');
1 row created.

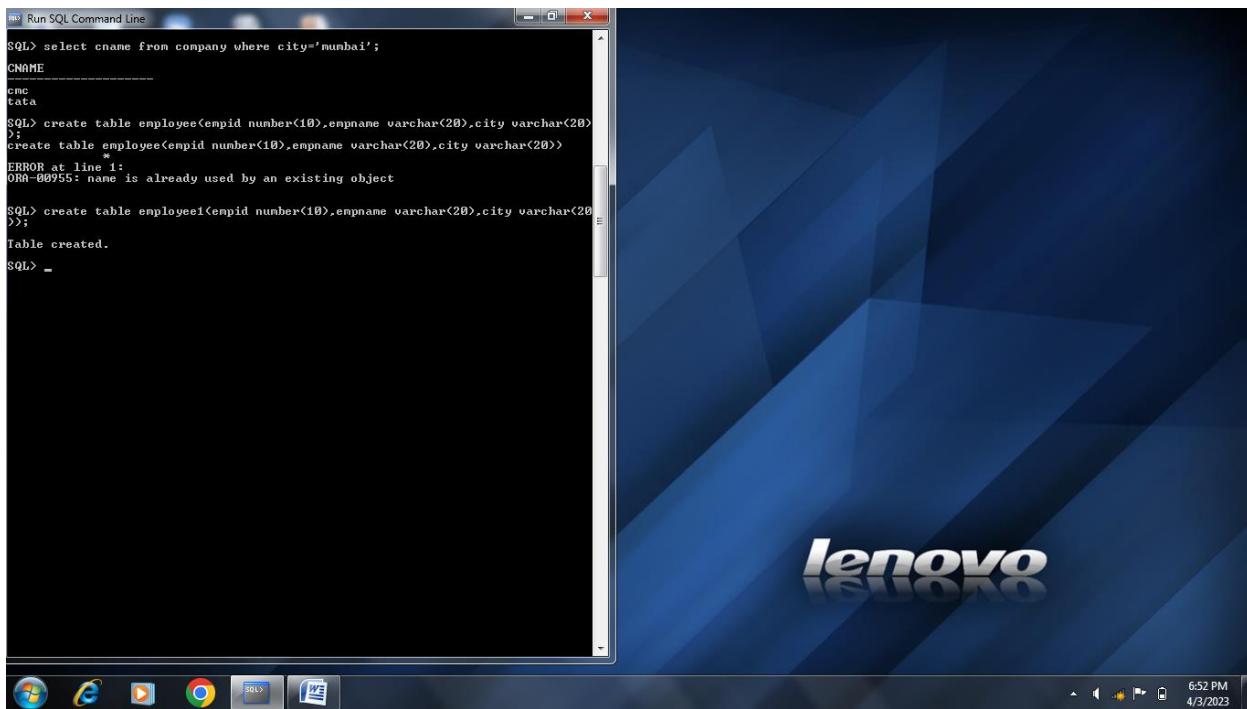
SQL> insert into company values('acc','chennai');
1 row created.

SQL> insert into company values('tata','mumbai');
1 row created.

SQL> select * from company;
CNAME          CITY
-----          -----
acc            madras
tata           delhi
acc            nagpur
cmc            mumbai
cmc            chennai
acc            chennai
tata           mumbai
7 rows selected.

SQL>
```

create table employee(empid number(10),empname varchar(20),city varchar(20));



A screenshot of a Windows desktop environment on a Lenovo laptop, showing a continuation of the SQL session from the previous image. The taskbar and system tray are identical. The "Run SQL Command Line" window now shows the following session:

```
SQL> select cname from company where city='mumbai';
CNAME
-----
acc
tata

SQL> create table employee(empid number(10),empname varchar(20),city varchar(20));
create table employee(empid number(10),empname varchar(20),city varchar(20))
*
ERROR at line 1:
ORA-00955: name is already used by an existing object

SQL> create table employee1(empid number(10),empname varchar(20),city varchar(20));
Table created.

SQL> _
```

DATA BASE MANAGEMENT SYSTEMS LAB

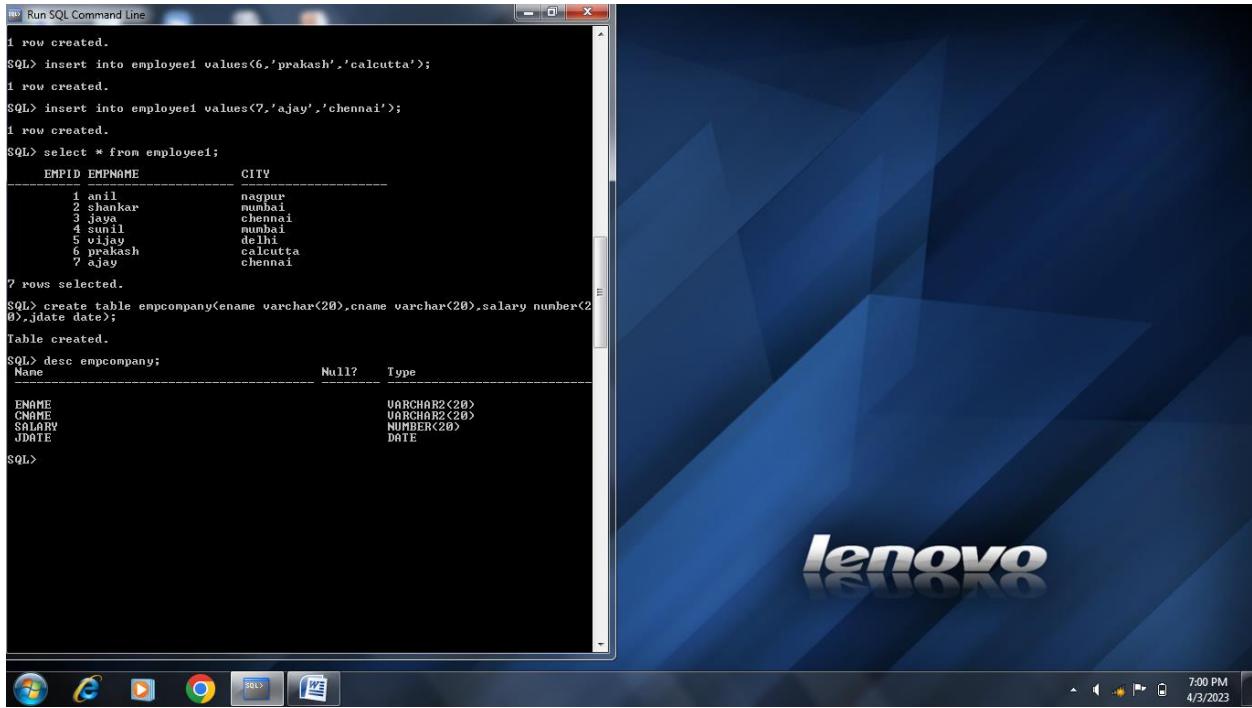
```
insert into employee1 values(1,'anil','nagpur');
insert into employee1 values(2,'shankar','mumbai');
insert into employee1 values(3,'jaya','chennai');
insert into employee1 values(4,'sunil','mumbai');
insert into employee1 values(5,'vijay','delhi');
insert into employee1 values(6,'prakash','calcutta');
insert into employee1 values(7,'ajay','chennai');
```

The screenshot shows a Windows desktop environment. On the left, a 'Run SQL Command Line' window is open, displaying SQL commands for inserting data into a 'employee1' table and then selecting all rows from it. The data inserted includes seven employees with their respective IDs, names, and cities. On the right, a large 'lenovo' logo is visible against a blue background. The taskbar at the bottom shows several icons, including the Start button, Internet Explorer, File Explorer, and others.

```
Run SQL Command Line
SQL> insert into employee1 values(1,'anil','nagpur');
1 row created.
SQL> insert into employee1 values(2,'shankar','mumbai');
1 row created.
SQL> insert into employee1 values(3,'jaya','chennai');
1 row created.
SQL> insert into employee1 values(4,'sunil','mumbai');
1 row created.
SQL> insert into employee1 values(5,'vijay','delhi');
1 row created.
SQL> insert into employee1 values(6,'prakash','calcutta');
1 row created.
SQL> insert into employee1 values(7,'ajay','chennai');
1 row created.
SQL> select * from employee1;
EMPID EMPNAME          CITY
----- 
 1 anil               nagpur
 2 shankar            mumbai
 3 jaya               chennai
 4 sunil              mumbai
 5 vijay              delhi
 6 prakash            calcutta
 7 ajay               chennai
7 rows selected.
SQL> -
```

```
create table empcompany(ename varchar(20),cname varchar(20),salary number(20),jdate
date);
```

DATA BASE MANAGEMENT SYSTEMS LAB



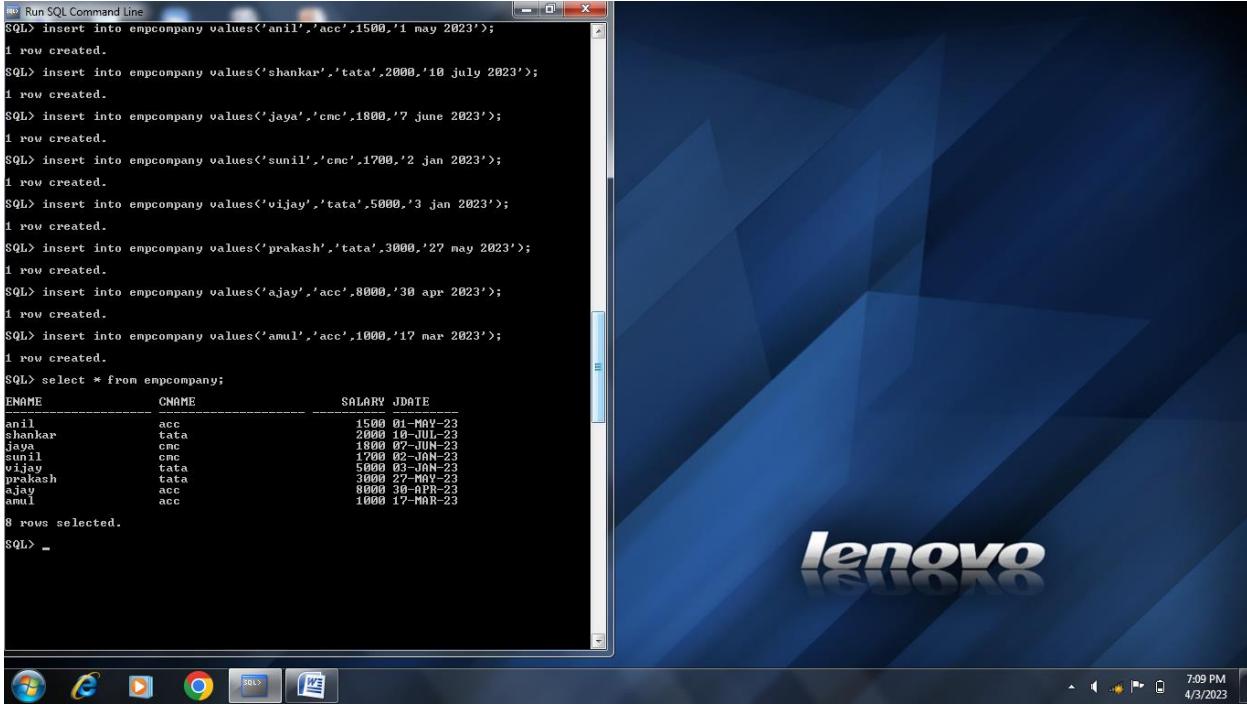
The screenshot shows a Windows desktop with a blue geometric background. A Lenovo logo is visible in the center. On the desktop, there is a window titled "Run SQL Command Line". The window contains the following SQL session:

```
i row created.  
SQL> insert into employee1 values(6,'prakash','calcutta');  
1 row created.  
SQL> insert into employee1 values(7,'ajay','chennai');  
1 row created.  
SQL> select * from employee1;  
EMPID EMPNAME CITY  
-----  
1 anil nashik  
2 shankar mumbai  
3 jaya chennai  
4 sunil mumbai  
5 vijay delhi  
6 prakash calcutta  
7 ajay chennai  
7 rows selected.  
SQL> create table empcompany(ename varchar(20),cname varchar(20),salary number(20),jdate date);  
Table created.  
SQL> desc empcompany;  
Name Null? Type  
-----  
ENAME VARCHAR2(20)  
CNAME VARCHAR2(20)  
SALARY NUMBER(20)  
JDATE DATE  
SQL>
```

The taskbar at the bottom shows icons for Internet Explorer, Google Chrome, and the SQL Command Line window. The system tray indicates the date as 4/3/2023 and the time as 7:00 PM.

```
insert into empcompany values('anil','acc',1500,'1 may 2023');  
insert into empcompany values('shankar','tata',2000,'10 july 2023');  
insert into empcompany values('jaya','cmc',1800,'7 jun 2023');  
insert into empcompany values('sunil','cmc',1700,'2 jan 2023');  
insert into empcompany values('vijay','tata',5000,'3 jan 2023');  
insert into empcompany values('prakash','tata',3000,'27 may 2023');  
insert into empcompany values('ajay','acc',8000,'30 apr 2023');  
insert into empcompany values('amul','acc',1000,'17 mar 2023');
```

DATA BASE MANAGEMENT SYSTEMS LAB



Run SQL Command Line

```
SQL> insert into empcompany values('anil','acc',1500,'1 may 2023');
1 row created.

SQL> insert into empcompany values('shankar','tata',2000,'10 july 2023');
1 row created.

SQL> insert into empcompany values('jaya','cmc',1800,'7 june 2023');
1 row created.

SQL> insert into empcompany values('sunil','cmc',1700,'2 jan 2023');
1 row created.

SQL> insert into empcompany values('vijay','tata',5000,'3 jan 2023');
1 row created.

SQL> insert into empcompany values('prakash','tata',3000,'27 may 2023');
1 row created.

SQL> insert into empcompany values('ajay','acc',8000,'30 apr 2023');
1 row created.

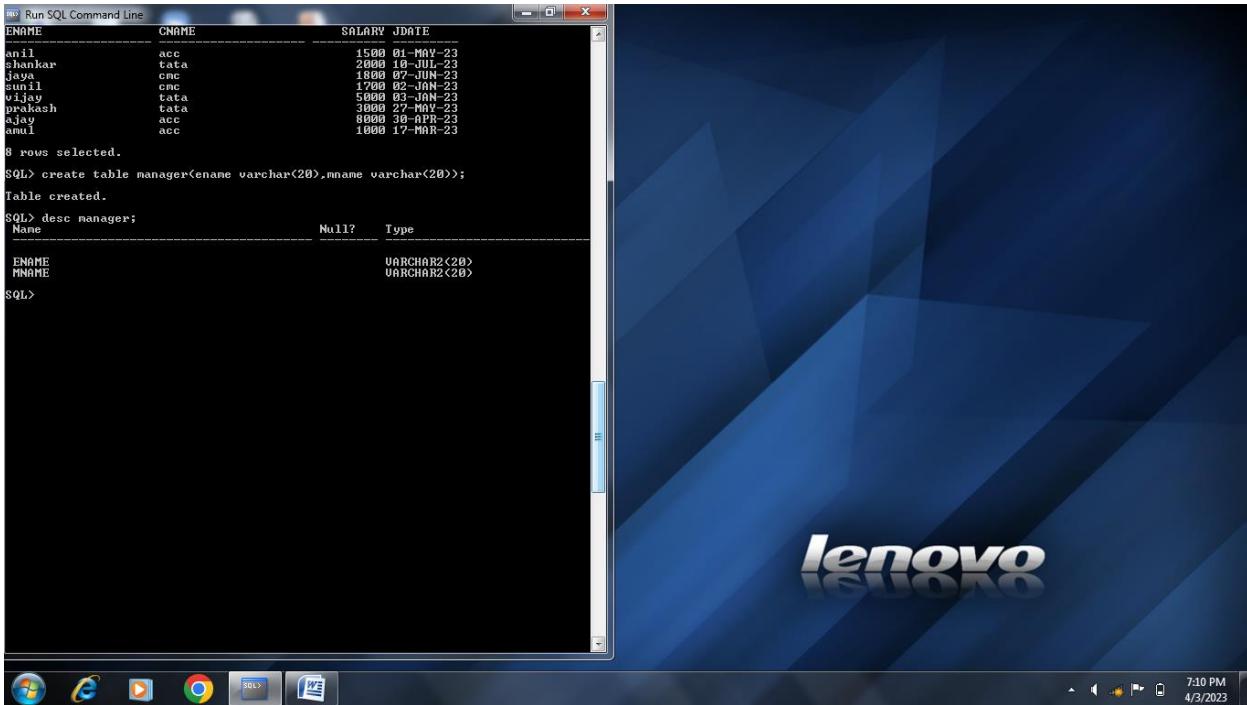
SQL> insert into empcompany values('amul','acc',1000,'17 mar 2023');
1 row created.

SQL> select * from empcompany;
+-----+-----+-----+-----+
| ENAME | CNAME | SALARY | JDATE   |
+-----+-----+-----+-----+
| anil  | acc   | 1500  | 01-MAY-23 |
| shankar | tata | 2000  | 10-JUL-23 |
| jaya  | cmc   | 1800  | 07-JUN-23 |
| sunil  | cmc   | 1700  | 02-JAN-23 |
| vijay  | tata | 5000  | 03-JAN-23 |
| prakash | tata | 3000  | 27-MAY-23 |
| ajay  | acc   | 8000  | 30-APR-23 |
| amul  | acc   | 1000  | 17-MAR-23 |
+-----+-----+-----+-----+
8 rows selected.

SQL>
```

lenovo

create table manager(ename varchar(20),mname varchar(20));



Run SQL Command Line

```
SQL> select * from empcompany;
+-----+-----+-----+-----+
| ENAME | CNAME | SALARY | JDATE   |
+-----+-----+-----+-----+
| anil  | acc   | 1500  | 01-MAY-23 |
| shankar | tata | 2000  | 10-JUL-23 |
| jaya  | cmc   | 1800  | 07-JUN-23 |
| sunil  | cmc   | 1700  | 02-JAN-23 |
| vijay  | tata | 5000  | 03-JAN-23 |
| prakash | tata | 3000  | 27-MAY-23 |
| ajay  | acc   | 8000  | 30-APR-23 |
| amul  | acc   | 1000  | 17-MAR-23 |
+-----+-----+-----+-----+
8 rows selected.

SQL> create table manager(ename varchar(20),mname varchar(20));
Table created.

SQL> desc manager;
Name          Null?    Type
-----+-----+-----+
ENAME        NOT NULL VARCHAR2(20)
MNAME        NOT NULL VARCHAR2(20)

SQL>
```

lenovo

DATA BASE MANAGEMENT SYSTEMS LAB

```
insert into manager values('anil','ajay');
insert into manager values('shankar','ajay');
insert into manager values('jaya',' ');
insert into manager values('sunil','jaya');
insert into manager values('vijay',' ');
insert into manager values('prakash','shankar');
insert into manager values('ajay',' ');
```

A screenshot of a Windows desktop environment. On the left, there is a 'Run SQL Command Line' window with a black background. It contains the following SQL commands and their results:

```
SQL> insert into manager values('shankar','vijay');
1 row created.
SQL> insert into manager values('jaya',' ');
1 row created.
SQL> insert into manager values('sunil','jaya');
1 row created.
SQL> insert into manager values('vijay',' ');
1 row created.
SQL> insert into manager values('prakash','shankar');
1 row created.
SQL> insert into manager values('ajay',' ');
1 row created.
SQL> select * from manager;
ENAME          MNAME
anil           ajay
shankar        vijay
jaya           jaya
sunil          jaya
vijay          shankar
prakash        shankar
ajay           ajay
7 rows selected.
SQL> -
```

The desktop background is blue with a geometric pattern. A large 'lenovo' logo is visible in the center. At the bottom of the screen, the taskbar shows several icons: Start, Internet Explorer, File Explorer, Task View, and a folder icon. The system tray on the right shows the date and time as 7:15 PM, 4/3/2023.

```
create table empshift(ename varchar(20),shift varchar(10));
```

DATA BASE MANAGEMENT SYSTEMS LAB

```
Run SQL Command Line  
SQL> insert into manager values('prakash','shankar');  
1 row created.  
SQL> insert into manager values('ajay','');  
1 row created.  
SQL> select * from manager;  
ENAME      MNAME  
anil          ajay  
shankar       vijay  
jaya          sunil  
sunil          jaya  
vijay          shankar  
prakash       ajay  
ajay           
2 rows selected.  
SQL> create table empshift(ename varchar<20>,shift varchar<10>);  
Table created.  
SQL> desc empshift;  
Name          Null?    Type  
ENAME          VARCHAR2<20>  
SHIFT          VARCHAR2<10>  
SQL>
```

```
insert into empshift values('anil','A');  
insert into empshift values('sunil','B');  
insert into empshift values('vijay','B');  
insert into empshift values('prakash','C');
```

```
Run SQL Command Line  
ENAME      SHIFT  
sunil       A  
vijay       B  
prakash     C  
ajay            
2 rows selected.  
SQL> create table empshift(ename varchar<20>,shift varchar<10>);  
Table created.  
SQL> desc empshift;  
Name          Null?    Type  
ENAME          VARCHAR2<20>  
SHIFT          VARCHAR2<10>  
SQL> insert into empshift values('anil','A');  
1 row created.  
SQL> insert into empshift values('sunil','B');  
1 row created.  
SQL> insert into empshift values('vijay','B');  
1 row created.  
SQL> insert into empshift values('prakash','C');  
1 row created.  
SQL> select * from empshift;  
ENAME      SHIFT  
anil       A  
sunil      B  
vijay      B  
prakash    C  
SQL>
```

DATA BASE MANAGEMENT SYSTEMS LAB

Now Queries should be written

1. Display names of companies located in mumbai.

select cname from company where city='mumbai';

The screenshot shows a Windows desktop environment. On the left, there is a 'Run SQL Command Line' window titled 'ajay'. It displays the following SQL session:

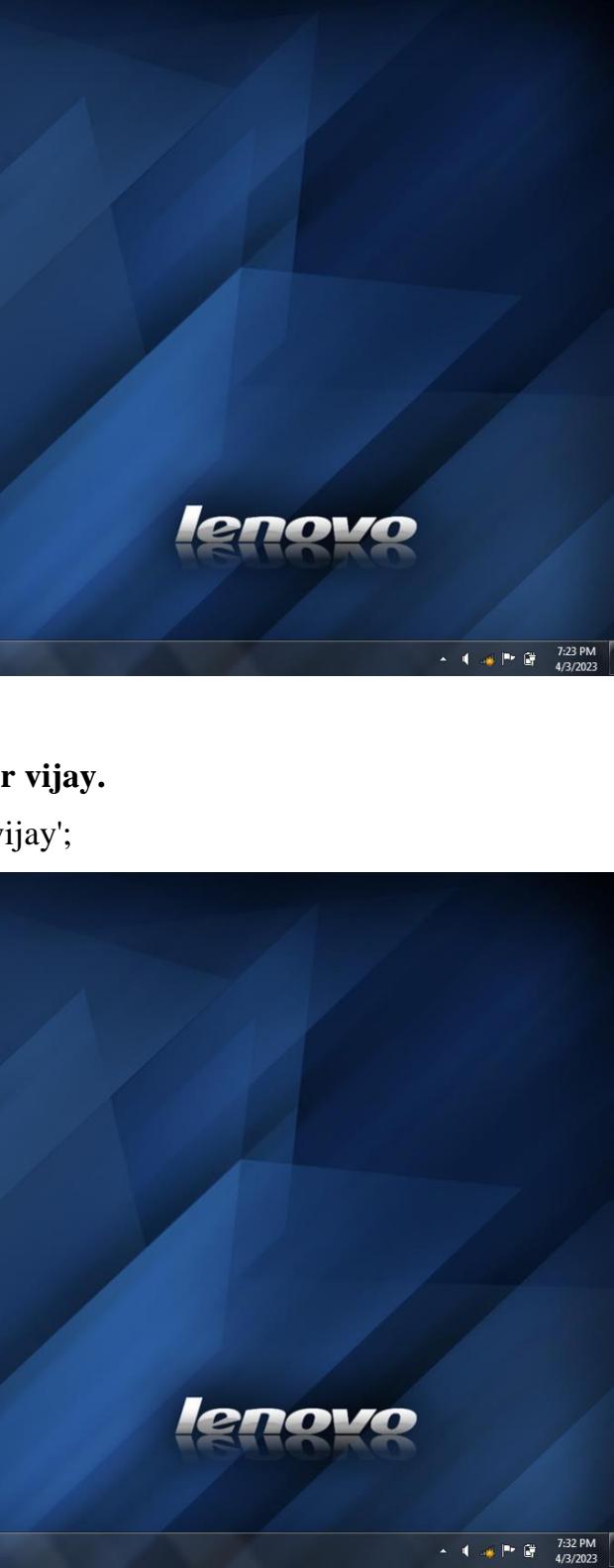
```
SQL> Run SQL Command Line
ajay
? rows selected.
SQL> create table empshift(ename varchar<20>,shift varchar<10>);
Table created.
SQL> desc empshift;
Name          Null?    Type
ENAME          VARCHAR2<20>
SHIFT          VARCHAR2<10>
SQL> insert into empshift values('anil','A');
1 row created.
SQL> insert into empshift values('sunil','B');
1 row created.
SQL> insert into empshift values('vijay','B');
1 row created.
SQL> insert into empshift values('prakash','C');
1 row created.
SQL> select * from empshift;
ENAME          SHIFT
anil           A
sunil          B
vijay          B
prakash        C
SQL> select cname from company where city='mumbai';
CNAME
cmc
tata
SQL>
```

The desktop background is a blue geometric pattern with the 'lenovo' logo. The taskbar at the bottom shows several icons, including the Start button, Internet Explorer, File Explorer, and the SQL Command Line icon. The system tray indicates the date as 4/3/2023 and the time as 7:21 PM.

2. Display names of employees leaving in city nagpur.

select empname from employee1 where city='nagpur';

DATA BASE MANAGEMENT SYSTEMS LAB



Run SQL Command Line
Table created.
SQL> desc empshift;
Name Null? Type
ENAME VARCHAR2(20)
SHIFT VARCHAR2(10)
SQL> insert into empshift values('anil','A');
1 row created.
SQL> insert into empshift values('sunil','B');
1 row created.
SQL> insert into empshift values('vijay','B');
1 row created.
SQL> insert into empshift values('prakash','C');
1 row created.
SQL> select * from empshift;
ENAME SHIFT
anil A
sunil B
vijay B
prakash C
SQL> select cname from company where city='mumbai';
CNAME
cmc
tata
SQL> select ename from employee1 where city='nagpur';
select ename from employee1 where city='nagpur'
ERROR at line 1:
ORA-00904: "ENAME": invalid identifier
SQL> select empname from employee1 where city='nagpur';
EMPNAME
anil
SQL>
SQL>

3. Give names of employee having manager vijay.

select ename from manager where mname='vijay';



Run SQL Command Line
SQL> select * from empcompany;
ENAME CNAME SALARY JDATE
anil acc 1500 01-MAY-23
shankar tata 2000 10-JUL-23
jaya cmc 1800 07-JUN-23
sunil cmc 1700 02-JAN-23
vijay tata 3500 20-APR-23
prakash tata 3000 27-MAY-23
ajay acc 8000 30-APR-23
anul acc 1000 17-MAR-23
8 rows selected.
SQL> select ename from empcompany where cname='ACC' and salary=1000;
no rows selected
SQL> select ename from manager where mname='vijay';
ENAME
shankar
SQL>

DATA BASE MANAGEMENT SYSTEMS LAB

4. Give Manager of employee Anil.

```
select mname from manager where ename='Anil';
```

A screenshot of a Windows desktop. On the left, there is a black terminal window titled "Run SQL Command Line". The window displays the following SQL query and its results:

```
SQL> select mname from manager where ename='anil';
MNAME
-----
ajay
SQL>
```

The desktop background is a dark blue geometric pattern with the "lenovo" logo in the center. The taskbar at the bottom shows several icons, including the Start button, Internet Explorer, File Explorer, and the SQL Command Line icon. The system tray shows the date and time as 4/3/2023 and 7:35 PM.

5. Give cities in which tata is located

```
select city from company where cname='tata';
```

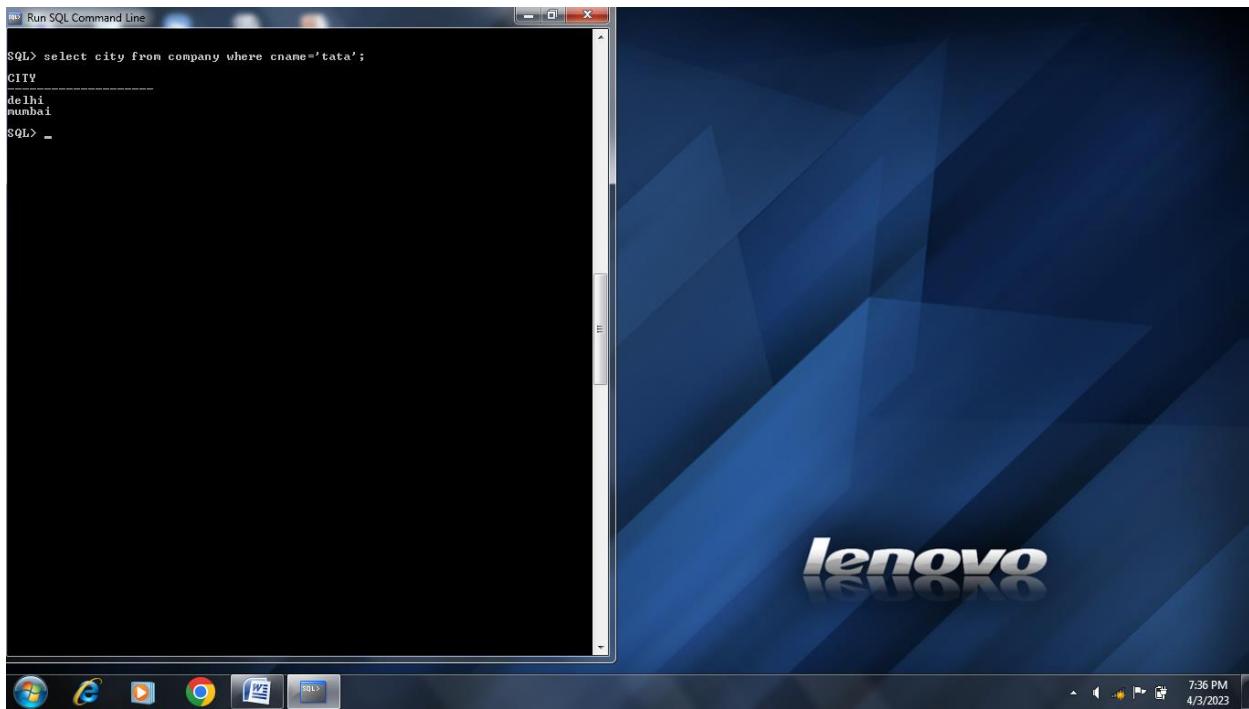
A screenshot of a Windows desktop. On the left, there is a black terminal window titled "Run SQL Command Line". The window displays the following SQL query and its results:

```
SQL> select city from company where cname='tata';
CITY
-----
delhi
mumbai
SQL> -
```

The desktop background is a dark blue geometric pattern with the "lenovo" logo in the center. The taskbar at the bottom shows several icons, including the Start button, Internet Explorer, File Explorer, and the SQL Command Line icon. The system tray shows the date and time as 4/3/2023 and 7:36 PM.

6.Give names of employees having salary greater than 2000 and less than 6000

select ename from empcompany where salary>2000 and salary<6000;



RESULT : Hence Preparation of SQL Queries for above database has been successfully completed.

9. AIM OF THE EXPERIMENT: Implementation of SQL Queries for Employee database (from Question 8 continuous) and Passenger Database (newly added Database).

DESCRIPTION: SQL is used mainly to question the database. When there is more amount of database it will be difficult to search the data. So to make work easier Queries is asked to get the information from database. Passenger database consists of data about journey,date,ticket number etc.,

SOURCE CODE:

Queries continuous for Experiment 8 Data base.

1. Display names of employees working with company acc and receiving salary greater than 1000.

select ename from empcompany where cname='acc' and salary=1000;

DATA BASE MANAGEMENT SYSTEMS LAB

A screenshot of a Windows desktop. On the left, a black terminal window titled "Run SQL Command Line" displays the following SQL query and its results:

```
SQL> select ename from empcompany where cname='acc' and salary=1000;
ENAME
anu1
SQL> -
```

The desktop background is blue with a large "lenovo" logo. The taskbar at the bottom shows several icons, including the Start button, Internet Explorer, File Explorer, and others. The system tray indicates the date as 4/8/2023 and the time as 10:00 PM.

2. Display names of employees from companies acc or tata

```
select ename from empcompany where cname='acc' or cname='tata';
```

A screenshot of a Windows desktop. On the left, a black terminal window titled "Run SQL Command Line" displays the following SQL queries and their results:

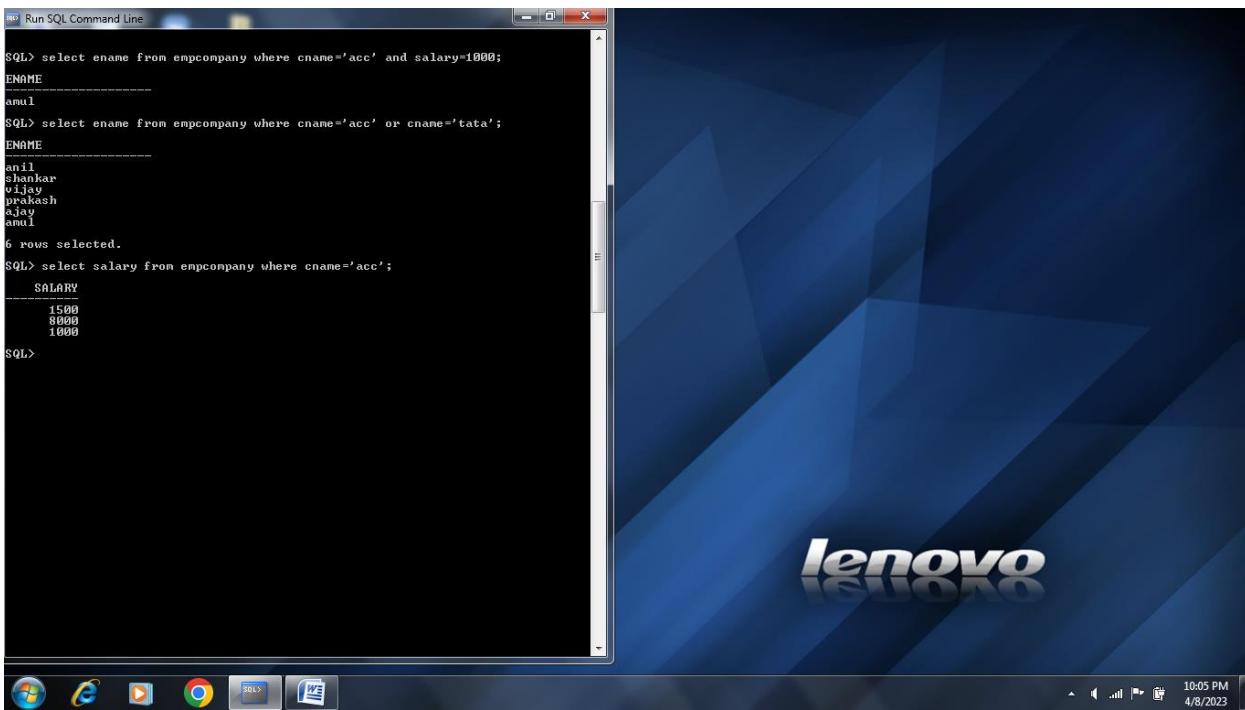
```
SQL> select ename from empcompany where cname='acc' and salary=1000;
ENAME
anu1
SQL> select ename from empcompany where cname='acc' or cname='tata';
ENAME
anil
shankar
vijay
manish
ajay
anu1
6 rows selected.
SQL>
```

The desktop background is blue with a large "lenovo" logo. The taskbar at the bottom shows several icons, including the Start button, Internet Explorer, File Explorer, and others. The system tray indicates the date as 4/8/2023 and the time as 10:02 PM.

3. Give salary of employee of acc.

```
select salary from empcompany where cname='acc';
```

DATA BASE MANAGEMENT SYSTEMS LAB



A screenshot of a Lenovo laptop screen. The desktop background is blue with the word "lenovo" in white. A Windows taskbar is at the bottom, showing icons for Start, Internet Explorer, File Explorer, and others. An open window titled "Run SQL Command Line" is in the foreground, displaying the following SQL queries and results:

```
SQL> select ename from empcompany where cname='acc' and salary=1000;
ENAME
-----
anil

SQL> select ename from empcompany where cname='acc' or cname='tata';
ENAME
-----
anil
shankar
vijay
prakash
ajay
anil

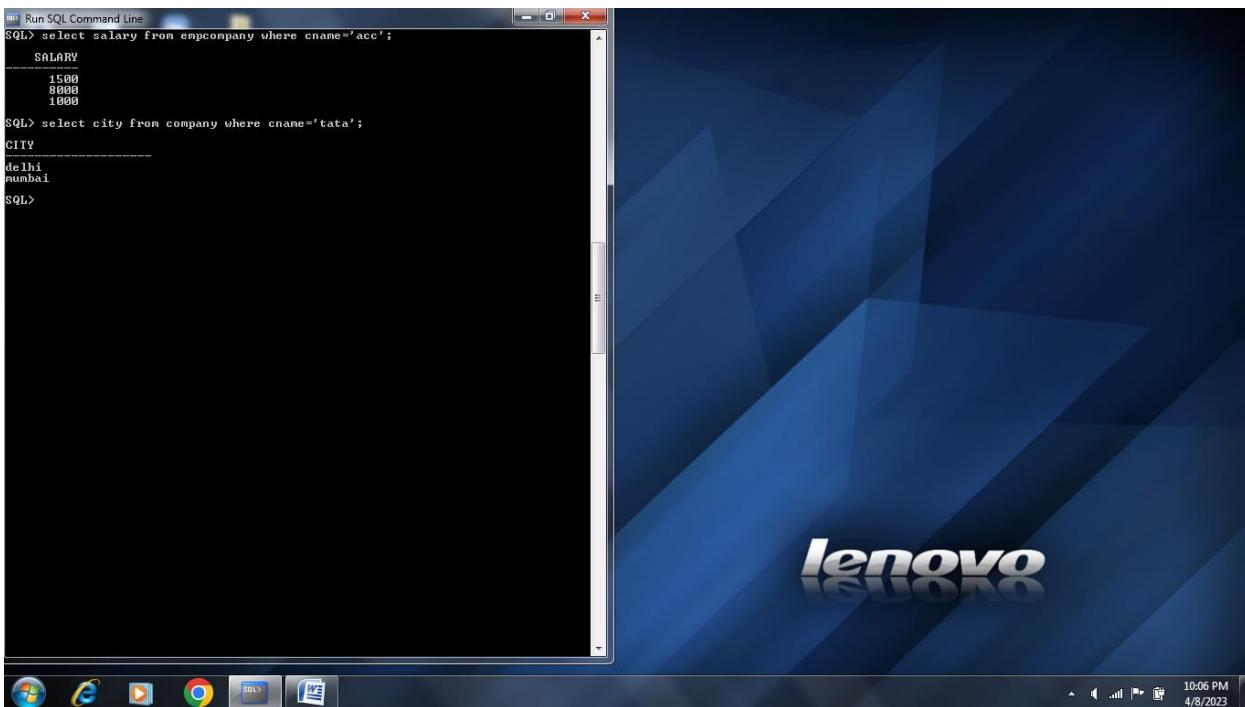
6 rows selected.

SQL> select salary from empcompany where cname='acc';
SALARY
-----
1500
8000
1000

SQL>
```

4. Give cities in which tata is located.

select city from company where cname='tata';



A screenshot of a Lenovo laptop screen. The desktop background is blue with the word "lenovo" in white. A Windows taskbar is at the bottom, showing icons for Start, Internet Explorer, File Explorer, and others. An open window titled "Run SQL Command Line" is in the foreground, displaying the following SQL queries and results:

```
SQL> select salary from empcompany where cname='acc';
SALARY
-----
1500
8000
1000

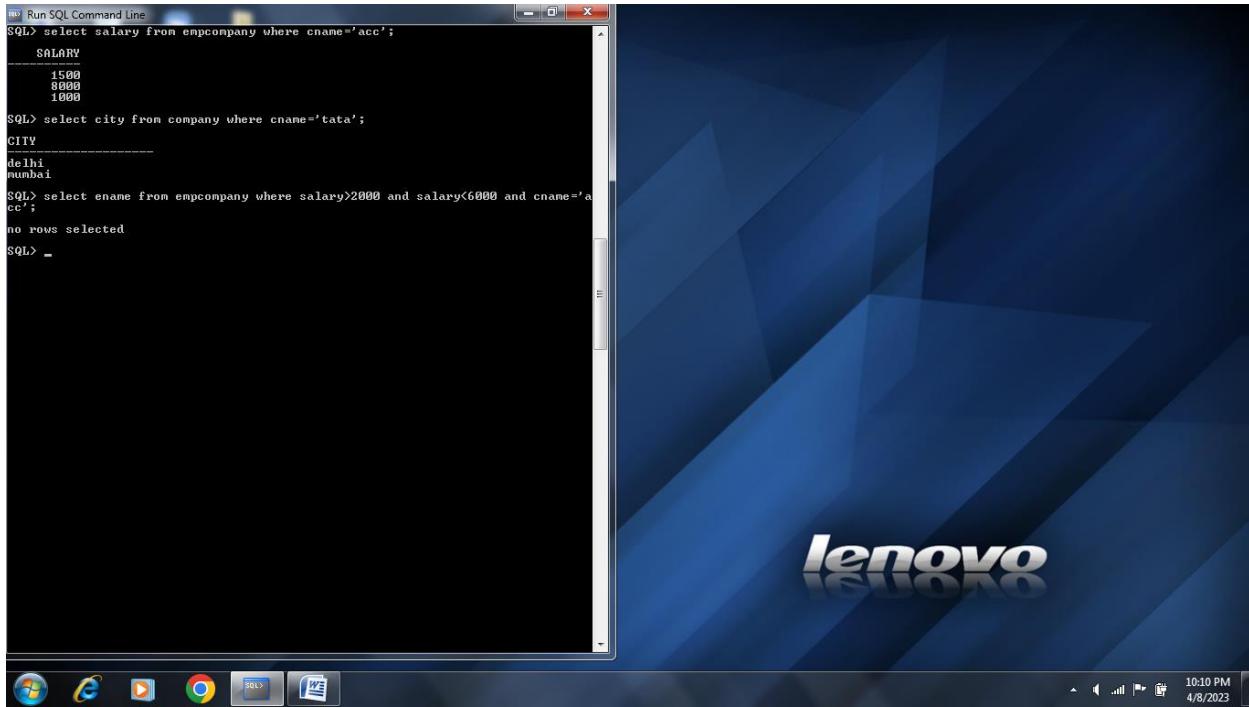
SQL> select city from company where cname='tata';
CITY
-----
delhi
mumbai

SQL>
```

5. Give names of employees having salary>2000 and less than 6000 and having company acc.

DATA BASE MANAGEMENT SYSTEMS LAB

select ename from empcompany where salary>2000 and salary<6000 and cname='acc';



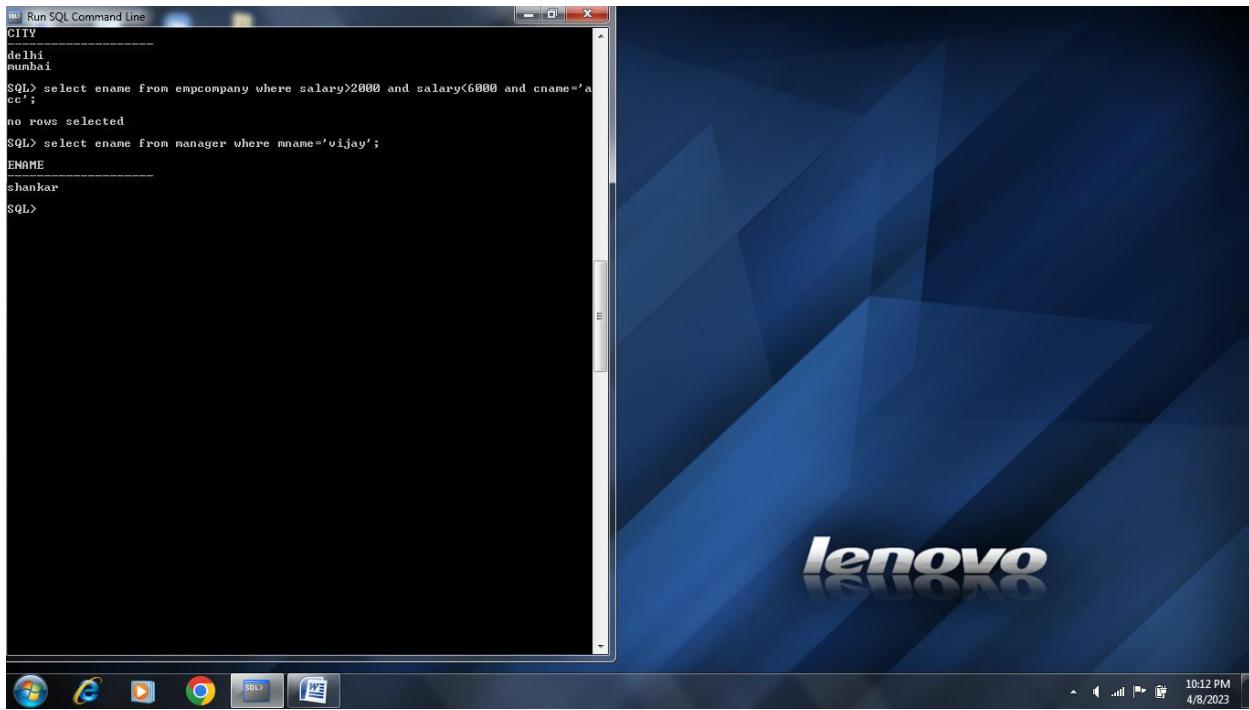
```
Run SQL Command Line
SQL> select salary from empcompany where cname='acc';
      SALARY
      -----
      1500
      8000
      1000

SQL> select city from company where cname='tata';
      CITY
      -----
      delhi
      mumbai

SQL> select ename from empcompany where salary>2000 and salary<6000 and cname='acc';
no rows selected
SQL>
```

6. Give names of employees having manager vijay.

select ename from manager where mname='vijay';



```
Run SQL Command Line
CITY
delhi
mumbai

SQL> select ename from empcompany where salary>2000 and salary<6000 and cname='acc';
no rows selected
SQL> select ename from manager where mname='vijay';
      ENAME
      -----
      shankar
SQL>
```

DATA BASE MANAGEMENT SYSTEMS LAB

7. Display the names of employees having in nagpur and working with company acc

select empname from employee1 where city='nagpur' intersect select ename from empcompany where cname='acc';

The screenshot shows a Windows desktop environment. On the left, a 'Run SQL Command Line' window is open, displaying the following SQL query results:

```
SQL> select * from employee1;
  EMPID EMPNAME          CITY
-----  -----
  1 anil              nes
  2 shankar           mumbai
  3 java              chennai
  4 sunil              mumbai
  5 vijay             delhi
  6 prakash            calcutta
  7 ajay              chennai

? rows selected.

SQL> select empname from employee1 where city='nagpur' intersect select ename from empcompany where cname='acc';
EMPNAME
anil
SQL>
```

The desktop background is a blue geometric pattern with the 'lenovo' logo. The taskbar at the bottom shows several icons, including the Start button, Internet Explorer, Google Chrome, and the SQL Command Line icon.

8. Display names of employee who are leaving in nagpur or bombay

select empname from employee1 where city='nagpur' or city='bombay';

DATA BASE MANAGEMENT SYSTEMS LAB



Run SQL Command Line

```
EMPNAME
anil
SQL> select ename from employee1 where city='nagpur' intersect select ename from empcompany where cname='acc' intersect select ename from empshift where shift='a';
select ename from employee1 where city='nagpur' intersect select ename from empcompany where cname='acc' intersect select ename from empshift where shift='a'
*
ERROR at line 1:
ORA-00984: "ENAME": invalid identifier

SQL> select * from empcompany;
EMPNAME          CNAME        SALARY JDATE
anil              acc           1500  01-MAY-23
shankar           tata          2000  10-JUL-23
job               cmc          1800  01-JUN-23
sunil             acc           1200  02-JUN-23
vijay             tata          5000  03-JAN-23
prakash           tata          3000  27-MAY-23
ajay              acc           8000  30-APR-23
amul              acc           1000  17-MAR-23
8 rows selected.

SQL> select empname from employee1 where city='nagpur' intersect select ename from empcompany where cname='acc' intersect select ename from empshift where shift='a';
no rows selected

SQL> select empname from employee where city='nagpur' or city='bombay';
select empname from employee where city='nagpur' or city='bombay'
*
ERROR at line 1:
ORA-00984: "CITY": invalid identifier

SQL> select empname from employee1 where city='nagpur' or city='bombay';
EMPNAME
anil
SQL>
```

Windows taskbar icons: Start, Internet Explorer, File Explorer, Google Chrome, SQLPlus, Notepad.

System tray: 10:31 PM, 4/8/2023

9. Display names of employees leaving in same city where sunil is residing.

select empname from employee1 where city='mumbai' intersect select empname from employee1 where city='mumbai';



Run SQL Command Line

```
SQL*Plus: Release 11.2.0.2.0 Production on Sat Apr 8 22:39:40 2023
Copyright (c) 1982, 2014, Oracle. All rights reserved.

SQL> connect sys as sysdba
Enter password:
Connected.
SQL> select empname from employee1 where city='mumbai' intersect select empname from employee1 where city='mumbai';
ERROR:
ORA-01756: quoted string not properly terminated

SQL> select empname from employee where city='mumbai' intersect select empname from employee where city='mumbai';
EMPNAME
shankar
sunil
SQL>
```

Windows taskbar icons: Start, Internet Explorer, File Explorer, Google Chrome, SQLPlus, Notepad.

System tray: 10:40 PM, 4/8/2023

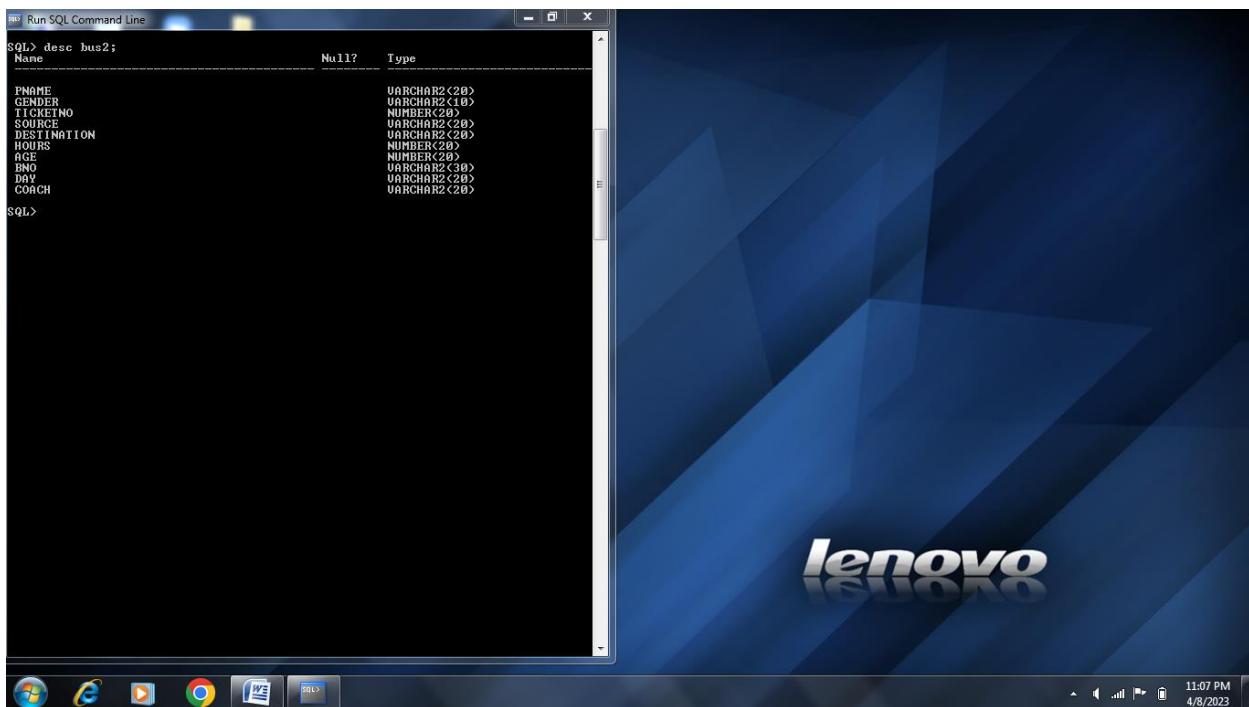
DATA BASE MANAGEMENT SYSTEMS LAB

SQL TABLE BUS

AIM OF THE EXPERIMENT: Prepare Data base for bus and apply Queries to the data base.

DESCRIPTION: Using SQL create data base bus with fields passenger name, there journey details,bus details etc.,,

```
create table bus2(pname varchar(20),gender varchar(10),ticketno number(20),source
varchar(20),destination      varchar(20),hours      number(20),age      number(20),bno
varchar(30),day varchar(20),coach varchar(20));
```



Now insert the values into bus2 table.

```
insert into bus2 values('Nivedha','f','10','mpl','shimla','12','29','apo312','sunday','ac');
insert into bus2 values('smile','f','15','tpt','kashmir','10','28','apo312','monday','ac');
insert into bus2values('happiness','m','20','hyd','kodaikanal','12','20','tn0314','tuesday','ac');
insert into bus2
values('success','f','19','delhi','antartica','8','24','apo415','wednesday','nonac');
insert into bus2values('Trust','m','18','bangalore','jammu','7','19','ks405','thursday','nonac');
insert into bus2 values('warrior','f','12','mumbai','paris','12','20','tn406','friday','ac');
```

DATA BASE MANAGEMENT SYSTEMS LAB

insert into bus2 values('winner','f','17','chennai','manali','15','19','ap409','saturday','ac');

The screenshot shows a Windows desktop with a blue geometric Lenovo wallpaper. In the top-left corner, there is a 'Run SQL Command Line' window. The window displays the results of a SQL query:

```

SQL> select * from bus2;
+-----+-----+-----+-----+
| PNAME | GENDER | TICKETNO | SOURCE |
+-----+-----+-----+-----+
| DESTINATION | HOURS | AGE | BNO |
+-----+-----+-----+-----+
| DAY | COACH |
+-----+-----+-----+-----+
| Nivedha | f | 12 | 10 ap1 |
| shimla | ac | 12 | 29 apo312 |
| sunday | | | |
| smile | f | 10 | 15 tpt |
| kashmir | ac | 10 | 28 apo312 |
| monday | | | |
| PNAME | GENDER | TICKETNO | SOURCE |
| DESTINATION | HOURS | AGE | BNO |
| DAY | COACH |
+-----+-----+-----+-----+
| happiness | m | 12 | 20 hyd |
| kodaikanal | ac | 12 | 20 tno314 |
| tuesday | | | |
| success | f | 8 | 19 delhi |
| antartica | ac | 8 | 24 apo415 |
| PNAME | GENDER | TICKETNO | SOURCE |
| DESTINATION | HOURS | AGE | BNO |
| DAY | COACH |
+-----+-----+-----+-----+
| wednesday | nonac | | |
| Trust | m | 7 | 18 bangalore |
| Jammu | nonac | 7 | 19 ks405 |
| Thursday | | | |
| warrior | f | 12 mumbai |
| PNAME | GENDER | TICKETNO | SOURCE |
| DESTINATION | HOURS | AGE | BNO |
| DAY | COACH |
+-----+-----+-----+-----+
| paris | ac | 12 | 20 tn406 |
| Friday | | | |
| winner | f | 15 | 17 chennai |
| manali | ac | 15 | 19 ap409 |
| saturday | ac | 15 | 19 ap409 |
+-----+-----+-----+-----+
7 rows selected.
SQL>

```

The taskbar at the bottom of the screen includes icons for Internet Explorer, Google Chrome, File Explorer, and the SQL Server Management Studio.

The screenshot shows a Windows desktop with a blue geometric Lenovo wallpaper. In the top-right corner, there is a Microsoft Word document titled 'Untitled - Microsoft Word'. The document contains the following text:

```

ELEMENT SYSTEMS LAB

```

In the top-left corner, there is a 'Run SQL Command Line' window. The window displays the results of a SQL query:

```

SQL> select * from bus2;
+-----+-----+-----+-----+
| PNAME | GENDER | TICKETNO | SOURCE |
+-----+-----+-----+-----+
| DESTINATION | HOURS | AGE | BNO |
+-----+-----+-----+-----+
| DAY | COACH |
+-----+-----+-----+-----+
| smile | f | 10 | 15 tpt |
| kashmir | ac | 10 | 28 apo312 |
| monday | ac | 10 | 28 apo312 |
| PNAME | GENDER | TICKETNO | SOURCE |
| DESTINATION | HOURS | AGE | BNO |
| DAY | COACH |
+-----+-----+-----+-----+
| happiness | m | 12 | 20 hyd |
| kodaikanal | ac | 12 | 20 tno314 |
| tuesday | ac | 12 | 20 tno314 |
| success | f | 8 | 19 delhi |
| antartica | ac | 8 | 24 apo415 |
| PNAME | GENDER | TICKETNO | SOURCE |
| DESTINATION | HOURS | AGE | BNO |
| DAY | COACH |
+-----+-----+-----+-----+
| wednesday | nonac | | |
| Trust | m | 7 | 18 bangalore |
| Jammu | nonac | 7 | 19 ks405 |
| Thursday | nonac | 7 | 19 ks405 |
| warrior | f | 12 mumbai |
| PNAME | GENDER | TICKETNO | SOURCE |
| DESTINATION | HOURS | AGE | BNO |
| DAY | COACH |
+-----+-----+-----+-----+
| paris | ac | 12 | 20 tn406 |
| Friday | ac | 12 | 20 tn406 |
| winner | f | 15 | 17 chennai |
| manali | ac | 15 | 19 ap409 |
| saturday | ac | 15 | 19 ap409 |
+-----+-----+-----+-----+
7 rows selected.
SQL>

```

The taskbar at the bottom of the screen includes icons for Internet Explorer, Google Chrome, File Explorer, and the SQL Server Management Studio.

Queries

1. Display all passenger name and there ticket number.

select ticketno, pname from bus2;

A screenshot of a Windows desktop. On the left, a 'Run SQL Command Line' window is open, displaying the following SQL query and results:

```
SQL> select ticketno,pname from bus2;
  TICKETNO  PNAME
  18  Oaththa
  19  Smile
  20  happiness
  19  success
  18  Trust
  12  warrior
  17  winner
? rows selected.
SQL>
```

The desktop background is a blue geometric pattern with the 'lenovo' logo. The taskbar at the bottom shows several icons, including the Start button, Internet Explorer, File Explorer, and the SQL Command Line icon. The system tray indicates the date as 4/8/2023 and the time as 11:38 PM.

2. Display the source and destination having journey, time more than 10 hours.

select source from bus2 union select destination from bus2 where hours>10;

A screenshot of a Windows desktop. On the left, a 'Run SQL Command Line' window is open, displaying the following SQL query and results:

```
SQL> select source from bus2 union select destination from bus2 where hours>10;
  SOURCE
  bangalore
  chennai
  delhi
  hyd
  kochikanal
  mumbai
  npl
  mumbai
  paris
  shillong
  tpt
11 rows selected.
SQL> -
```

The desktop background is a blue geometric pattern with the 'lenovo' logo. The taskbar at the bottom shows several icons, including the Start button, Internet Explorer, File Explorer, and the SQL Command Line icon. The system tray indicates the date as 4/8/2023 and the time as 11:42 PM.

DATA BASE MANAGEMENT SYSTEMS LAB

3. Display names of passengers whose age is greater than or equal to 18 and age less than 30.

select pname from bus2 where age>=18 and age<30;

A screenshot of a Windows desktop. On the left, there is a 'Run SQL Command Line' window with the following content:

```
SQL> select source from bus2 union select destination from bus2 where hours>10;
SOURCE
-----
bangalore
chennai
delhi
hyd
kodaikanal
mumbai
myl
mumbai
paris
shimla
tpt
11 rows selected.

SQL> select pname from bus2 where age in between 18 and 30;
select pname from bus2 where age in between 18 and 30
*
ERROR at line 1:
ORA-00936: missing expression

SQL> select pname from bus2 where age<=18 and age<30;
no rows selected

SQL> select pname from bus2 where age>=18 and age<30;
PNAME
-----
Nivedha
smile
happiness
success
Trust
warrior
winner
7 rows selected.

SQL> -
```

The desktop background is a blue geometric pattern with the 'lenovo' logo. The taskbar at the bottom shows icons for various applications including a browser, file explorer, and the SQL command line. The system tray indicates the date as 4/8/2023 and the time as 11:47 PM.

4. Display bus number that travel on sunday.

select bno from bus2 where day ='sunday';

A screenshot of a Windows desktop. On the left, there is a 'Run SQL Command Line' window with the following content:

```
SQL*Plus: Release 11.2.0.2.0 Production on Sat Apr 8 23:56:42 2023
Copyright (c) 1982, 2014, Oracle. All rights reserved.

SQL> connect sys as sysdba
Enter password:
Connected.
SQL> select bno from bus2 where day='sunday';
BNO
-----
apo12
SQL>
```

The desktop background is a blue geometric pattern with the 'lenovo' logo. The taskbar at the bottom shows icons for various applications including a browser, file explorer, and the SQL command line. The system tray indicates the date as 4/8/2023 and the time as 11:59 PM.

DATA BASE MANAGEMENT SYSTEMS LAB

5. Display names of the passengers who are travelling in ac coach.

select pname from bus2 where coach='ac';

A screenshot of a Windows desktop. On the left, there is a 'Run SQL Command Line' window with the following text:

```
SQL> select pname from bus2 where coach='ac';
PNAME
-----
Nivedha
smile
happiness
warrior
winner
SQL>
```

The desktop background features a blue geometric pattern with the word 'lenovo' in white. The taskbar at the bottom shows several icons, including the Start button, Internet Explorer, Google Chrome, File Explorer, and the SQL Command Line icon. The system tray indicates the date as 4/9/2023 and the time as 12:01 AM.

6. Display names of all passengers.

select pname from bus2;

A screenshot of a Windows desktop. On the left, there is a 'Run SQL Command Line' window with the following text:

```
SQL> select pname from bus2;
PNAME
-----
Nivedha
smile
happiness
gaurav
Trust
warrior
winner
7 rows selected.
SQL>
```

The desktop background features a blue geometric pattern with the word 'lenovo' in white. The taskbar at the bottom shows several icons, including the Start button, Internet Explorer, Google Chrome, File Explorer, and the SQL Command Line icon. The system tray indicates the date as 4/9/2023 and the time as 12:05 AM.

7. Display destination of the passenger whose source is mpl.

DATA BASE MANAGEMENT SYSTEMS LAB

select destination from bus2 where source='mpl';

A screenshot of a Windows desktop. On the left, there is a 'Run SQL Command Line' window with the following text:
SQL> select destination from bus2 where source='mpl';
DESTINATION
shimla
SQL>
The desktop background is a blue geometric pattern with the 'lenovo' logo. The taskbar at the bottom shows several icons, including the SQL window, and the system tray indicates the date and time as 12:08 AM on 4/9/2023.

8. Display day of journey of smile.

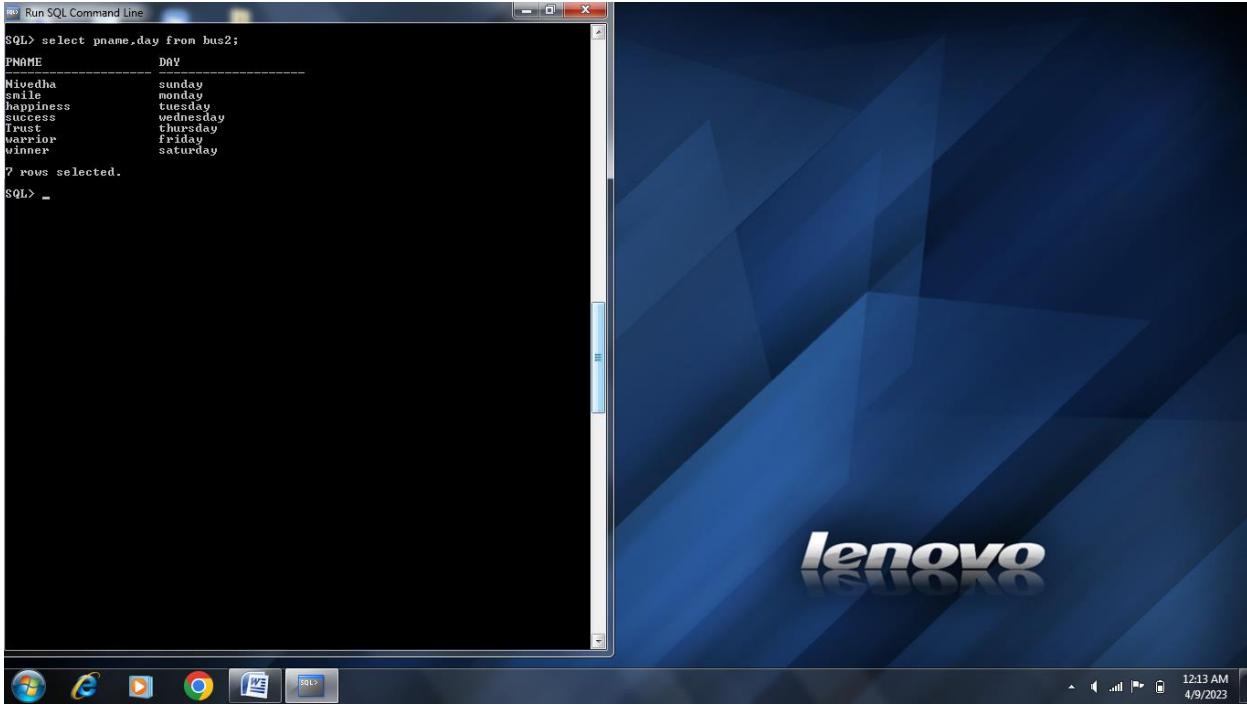
select day from bus2 where pname='smile';

A screenshot of a Windows desktop. On the left, there is a 'Run SQL Command Line' window with the following text:
SQL> select day from bus2 where pname='smile';
DAY
monday
SQL>
The desktop background is a blue geometric pattern with the 'lenovo' logo. The taskbar at the bottom shows several icons, including the SQL window, and the system tray indicates the date and time as 12:11 AM on 4/9/2023.

9. Display the passenger name and day of their travel.

select pname,day from bus2;

DATA BASE MANAGEMENT SYSTEMS LAB



A screenshot of a Windows desktop showing a SQL Command Line window. The window title is "Run SQL Command Line". The SQL query is:

```
SQL> select pname,day from bus2;
```

The output shows a table with two columns: PNAME and DAY.

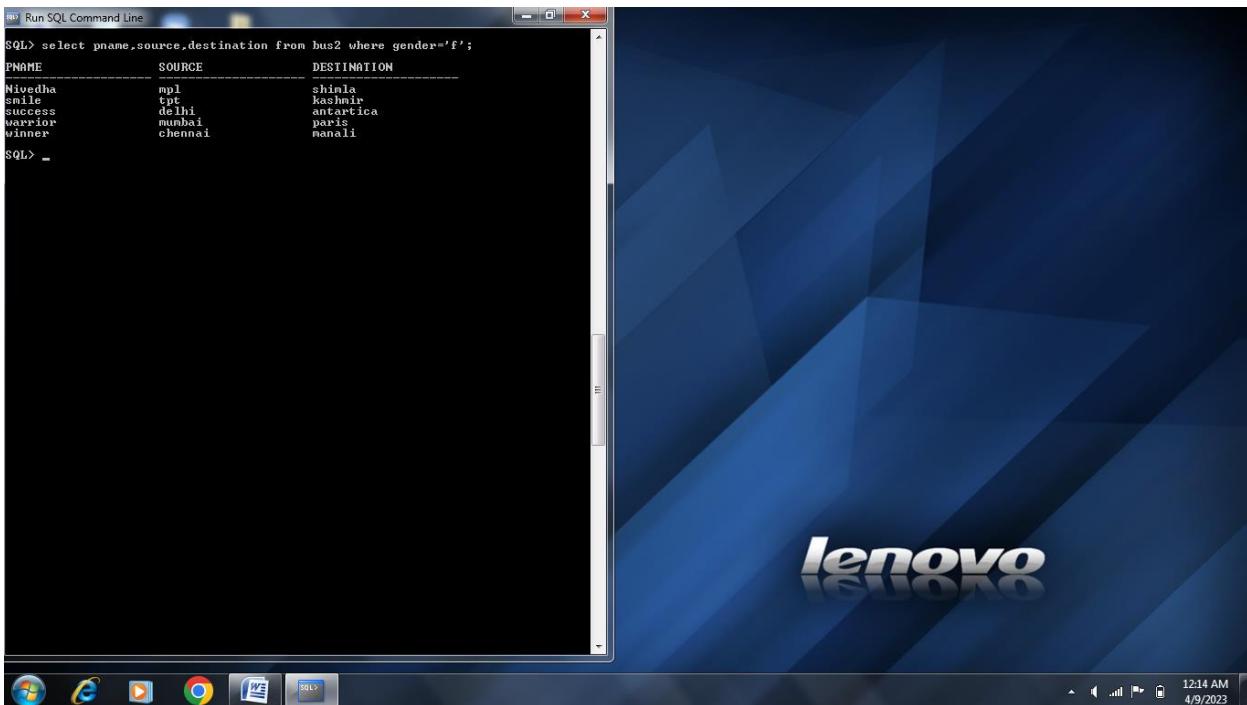
PNAME	DAY
Nivedha	sunday
smile	monday
happiness	tuesday
success	wednesday
Trust	thursday
warrior	friday
winner	saturday

7 rows selected.
SQL> -

The desktop taskbar at the bottom shows icons for Internet Explorer, File Explorer, and others. The system tray indicates the date as 4/9/2023 and the time as 12:13 AM.

10. Display passenger name,source,destination whose gender is female.

```
select pname,source,destination from bus2 where gender='f';
```



A screenshot of a Windows desktop showing a SQL Command Line window. The window title is "Run SQL Command Line". The SQL query is:

```
SQL> select pname,source,destination from bus2 where gender='f';
```

The output shows a table with three columns: PNAME, SOURCE, and DESTINATION.

PNAME	SOURCE	DESTINATION
Nivedha	mpl	shinla
smile	ts	lhasa
success	delhi	antarctica
warrior	mumbai	paris
winner	chennai	manali

SQL> -

The desktop taskbar at the bottom shows icons for Internet Explorer, File Explorer, and others. The system tray indicates the date as 4/9/2023 and the time as 12:14 AM.

11. Display names of passengers with there day,age and coach they travel.

```
select pname,day,age,coach from bus2;
```

DATA BASE MANAGEMENT SYSTEMS LAB



```
Run SQL Command Line
Nivedha      npl          shinla
sunday       tpt          kashmir
smile        tpt          kodaikanal
monday       hyd          kodaikanal
happiness    tuesday     kodaikanal
tuesday      hyd          kodaikanal

PNAME      SOURCE      DESTINATION
DAY

success    delhi       antartica
wednesday
Trust      bangalore   jammu
thursday
warrior   mumbai      paris
friday

PNAME      SOURCE      DESTINATION
DAY

winner    chennai     manali
saturday

? rows selected.

SQL> select pname,day,age,coach from bus2;
PNAME      DAY          AGE COACH
Nivedha    sunday      29 ac
smile      monday     28 ac
happiness   tuesday    28 ac
success     wednesday  24 nonac
Trust       thursday   19 nonac
warrior    friday     28 ac
winner     saturday   17 ac

? rows selected.

SQL>
```

12. Display all passenger names with there source and destination.

select pname,source,destination from bus2;



```
Run SQL Command Line
SQL*Plus: Release 11.2.0.2.0 Production on Sun Apr 9 00:19:23 2023
Copyright (c) 1982, 2014, Oracle. All rights reserved.
SQL> connect sys as sysdba
Enter password:
Connected.
SQL> select pname,source,destination from bus2;
PNAME      SOURCE      DESTINATION
Nivedha    npl          shinla
smile      tpt          kashmir
happiness   tpt          kodaikanal
success     hyd          antartica
tuesday     delhi       antartica
Trust      bangalore   jammu
warrior   mumbai      paris
friday

PNAME      SOURCE      DESTINATION
DAY

winner    chennai     manali
saturday

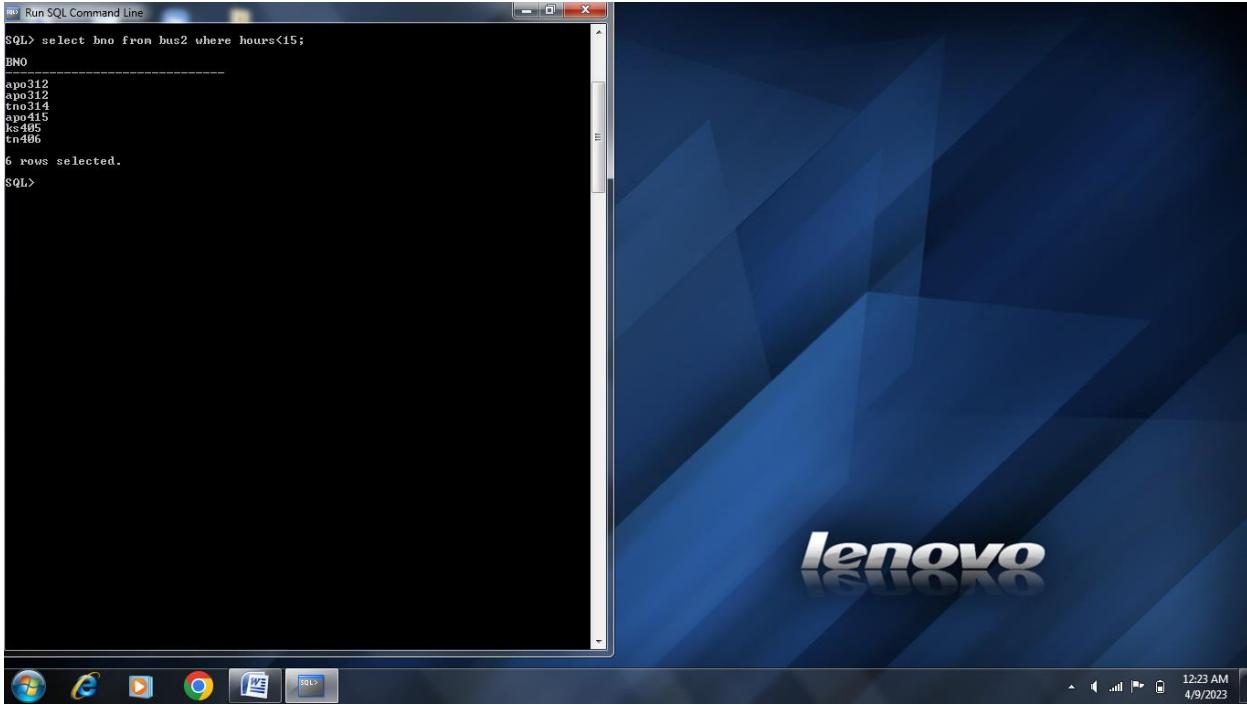
? rows selected.

SQL>
```

13. Display bus numbers whose travel time is less than 15 hours

select bno from bus2 where hours<15;

DATA BASE MANAGEMENT SYSTEMS LAB



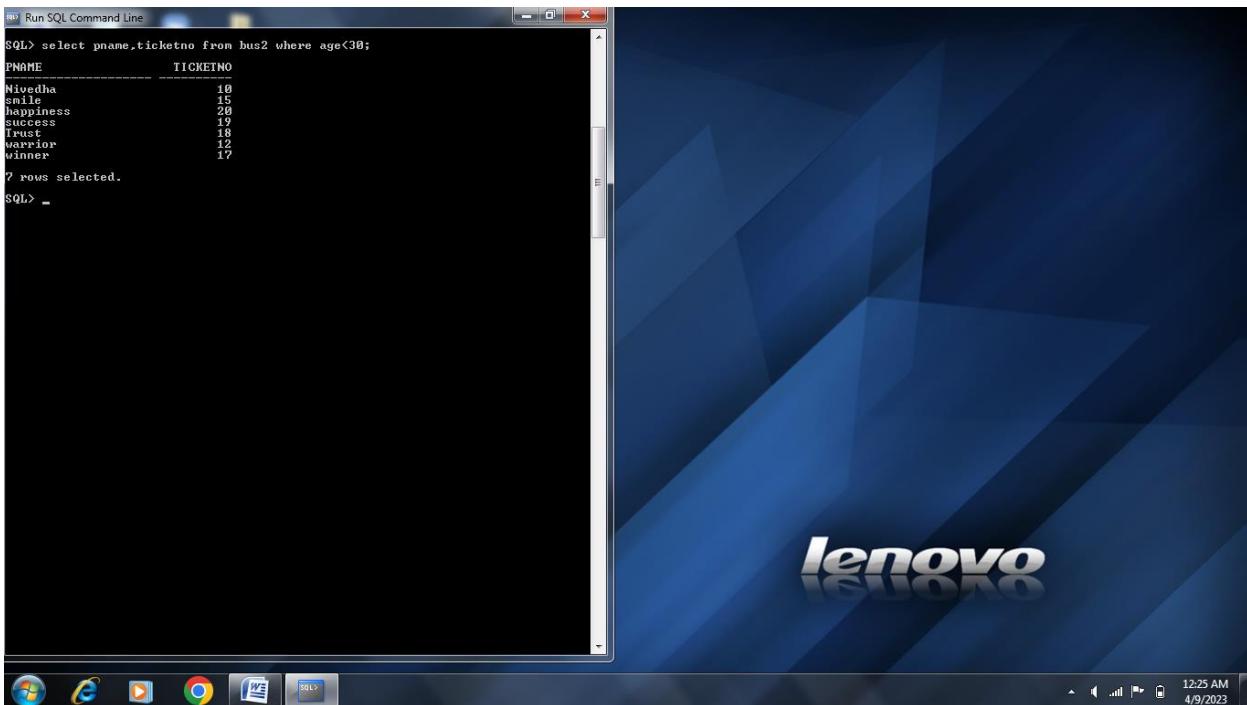
A screenshot of a Windows desktop environment. In the foreground, there is a 'Run SQL Command Line' window showing the following SQL query and results:

```
SQL> select bno from bus2 where hours<15;
BNO
ap0312
ap0312
ap0314
ap0415
ks495
tn496
6 rows selected.
SQL>
```

The desktop background features a blue geometric pattern with the word "lenovo" in white. The taskbar at the bottom shows several icons, including the SQL client, and the system tray indicates the date and time as 4/9/2023 at 12:23 AM.

14. Display passenger name with there ticket number having age less than 30.

select pname,ticketno from bus2 where age<30;



A screenshot of a Windows desktop environment. In the foreground, there is a 'Run SQL Command Line' window showing the following SQL query and results:

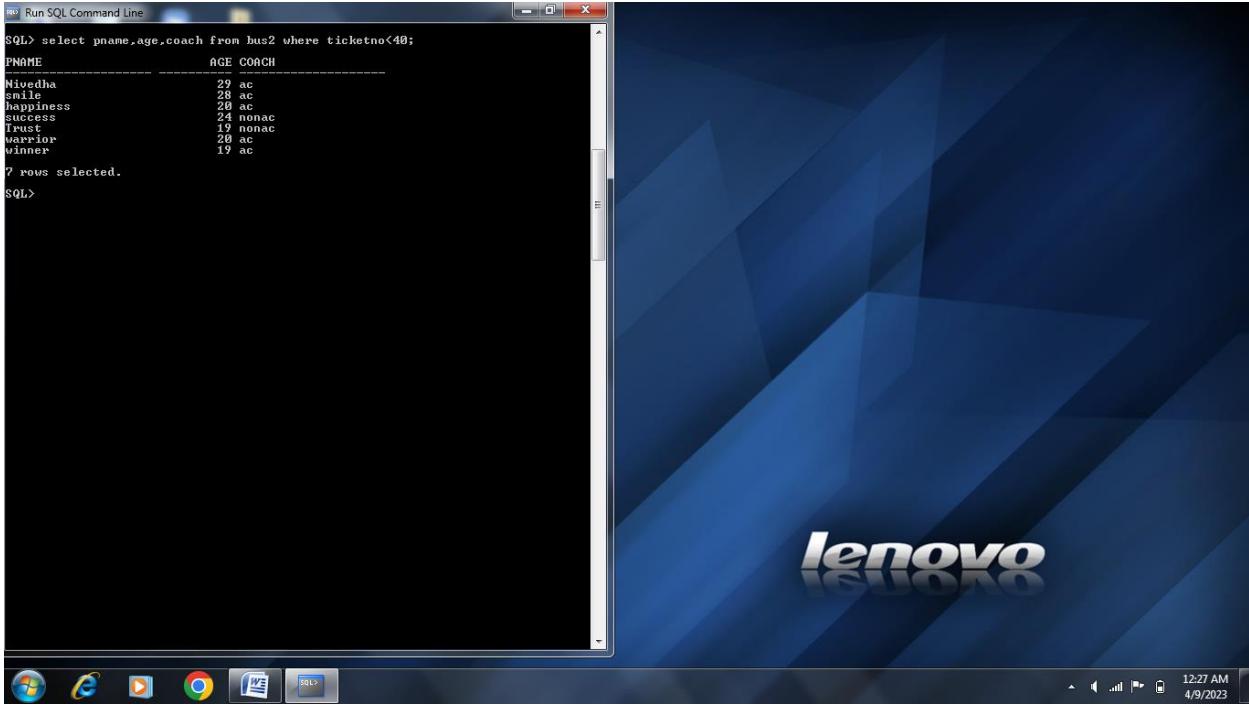
```
SQL> select pname,ticketno from bus2 where age<30;
PNAME          TICKETNO
Miyadha           10
enlight          15
happiness         20
success           19
Trust              18
warrior           12
winner             17
7 rows selected.
SQL>
```

The desktop background features a blue geometric pattern with the word "lenovo" in white. The taskbar at the bottom shows several icons, including the SQL client, and the system tray indicates the date and time as 4/9/2023 at 12:25 AM.

15. Display passenger name,age,coach where ticket number is less than 40.

select pname,age,coach from bus2 where ticketno<40;

DATA BASE MANAGEMENT SYSTEMS LAB



RESULT: Hence Implementation of SQL Queries for employee and passenger data base is successfully applied.

10. AIM OF THE EXPERIMENT: To Perform SQL operations on using views.

DESCRIPTION: In data base view cannot store the data. It is an imaginary table. To achieve concurrency we use views.

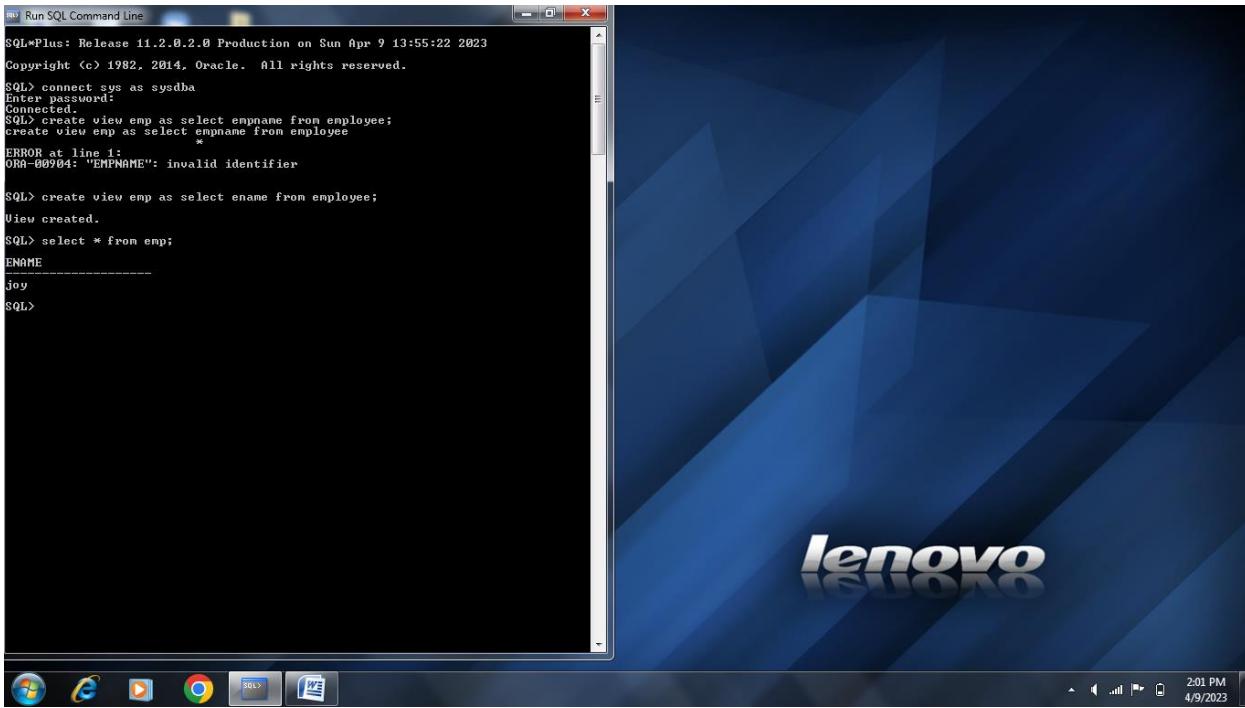
SOURCE CODE:

To **create a view**, the syntax is

```
create view emp as select ename from employee;
```

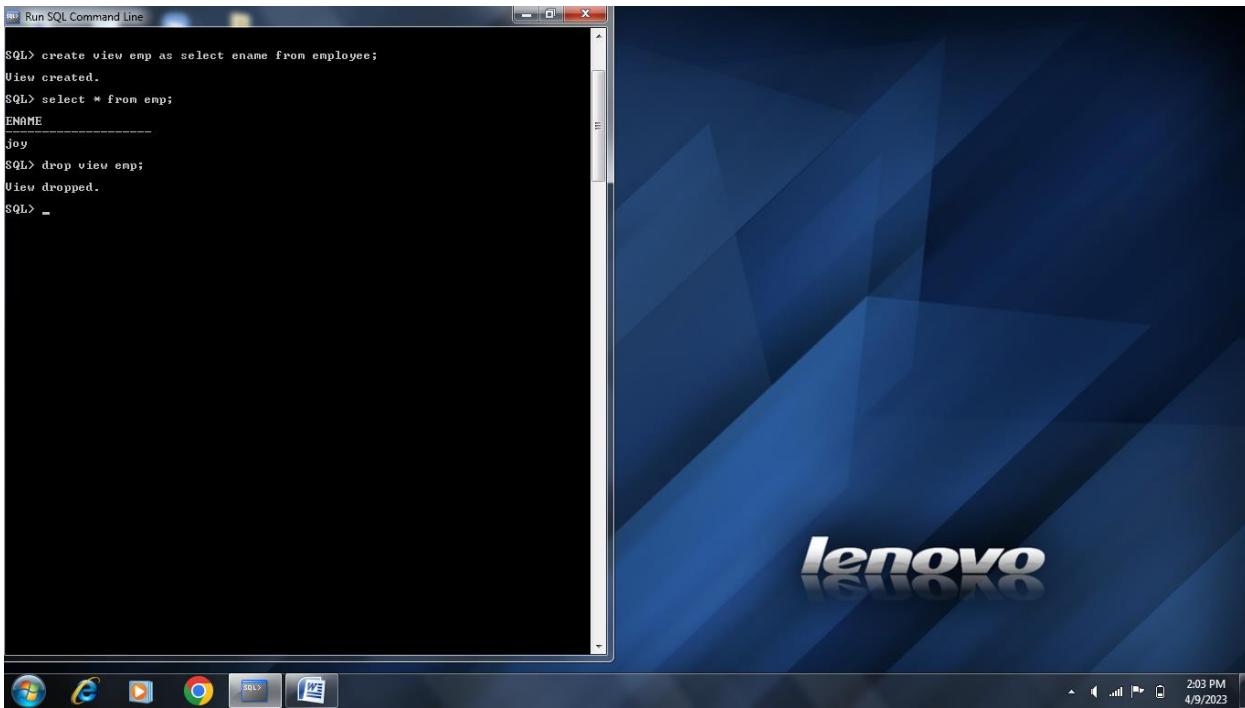
```
To see output , select * from emp;
```

DATA BASE MANAGEMENT SYSTEMS LAB



To drop a view , syntax is

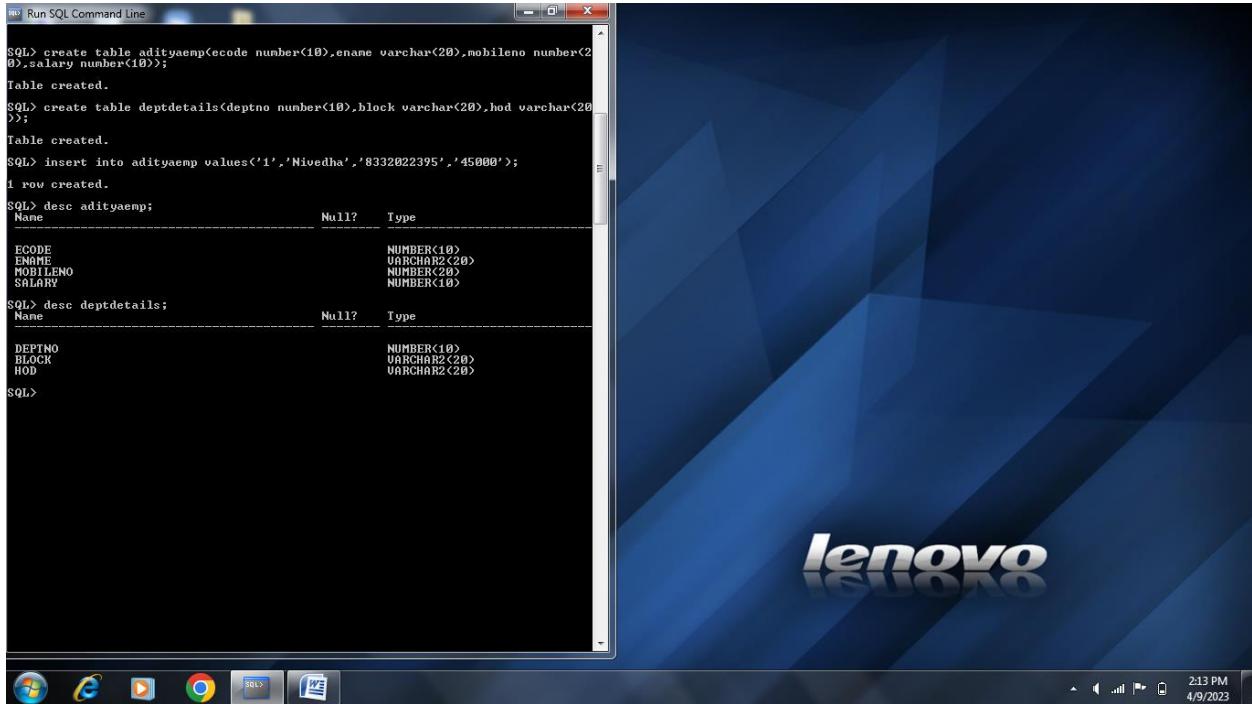
drop view emp;



DATA BASE MANAGEMENT SYSTEMS LAB

Create table of data base using SQL in view

```
create table adityaemp(icode number(10),ename varchar(20),mobileno  
number(20),salary number(10));  
  
create table deptdetails(deptno number(10),block varchar(20),hod varchar(20));
```



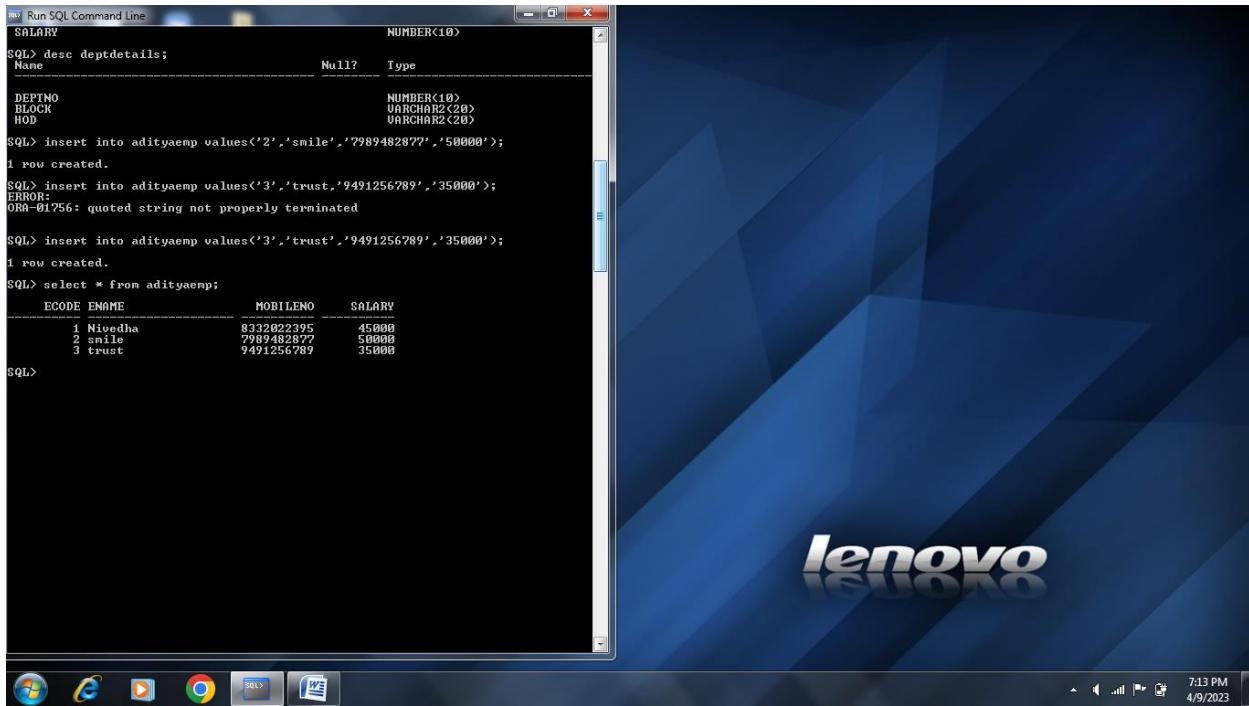
```
Run SQL Command Line  
  
SQL> create table adityaemp(icode number(10),ename varchar(20),mobileno number(20),salary number(10));  
Table created.  
SQL> create table deptdetails(deptno number(10),block varchar(20),hod varchar(20));  
Table created.  
SQL> insert into adityaemp values('1','Nivedha','8332022395','45000');  
1 row created.  
SQL> desc adityaemp;  
Name Null? Type  
ICODE NUMBER(10)  
ENAME VARCHAR2(20)  
MOBILENO NUMBER(20)  
SALARY NUMBER(10)  
  
SQL> desc deptdetails;  
Name Null? Type  
DEPTNO NUMBER(10)  
BLOCK VARCHAR2(20)  
HOD VARCHAR2(20)  
SQL>
```

Now insert the values into the above table.

```
insert into adityaemp values('1','Nivedha','8332022395','45000');  
insert into adityaemp values('2','Smile','7989482877','50000');  
insert into adityaemp values('3','trust','9491256789','350000');
```

Now insert 10 records and write output here

DATA BASE MANAGEMENT SYSTEMS LAB



```
insert into deptdetails('1','A','john');

insert into deptdetails('2','B','winston');

insert into deptdetails('3','C','Gulliver');

insert into deptdetails('4','D','Shinchan');

insert into deptdetails('5','E','Tom');

insert into deptdetails('6','F','Lilliput');
```

DATA BASE MANAGEMENT SYSTEMS LAB

A screenshot of a Windows desktop. In the foreground, a window titled "Run SQL Command Line" is open, displaying the following SQL query and its results:

```
1 row created.  
SQL> select * from deptdetails;  
DEPTNO BLOCK          HOD  
-----  
1 A           John  
2 B           WALTER  
3 C           Gulliver  
4 D           Shinchan  
5 E           Tom  
6 F           Lilliput  
? rows selected.  
SQL> -
```

The desktop background is a blue geometric pattern with the "lenovo" logo. The taskbar at the bottom shows several icons, including the Start button, Internet Explorer, File Explorer, and the SQL Command Line icon. The system tray indicates the date and time as 4/9/2023 and 7:25 PM.

insert 10 records and write the output

RESULT: Hence the program to implement Views has been implemented successfully.

11. AIM OF THE EXPERIMENT: Creation of Procedures in SQL.

DESCRIPTION: Procedure is a set of instructions where it is a recursive function which is a sub program. It can be called in many programs and functions. It performs multitasking.

SOURCE CODE:

```
SQL>create or replace procedure t1 as cursor c is select * from employee where empno>100;  
begin  
for i in c  
loop  
dbms_output.put_line<i.empname||i.basic);  
end loop;  
end;
```

DATA BASE MANAGEMENT SYSTEMS LAB

/OUTPUT:

The screenshot shows a Windows desktop environment. In the foreground, there is a window titled "Run SQL Command Line". The SQL code entered is:

```
SQL> create or replace procedure t1 as cursor c is select * from employee where
empno=10;
begin
  for i in c
  loop
    dbms_output.put_line(i.empname||i.basic);
  end loop;
end;
/
Warning: Procedure created with compilation errors.
SQL>
```

The background of the desktop features a blue abstract geometric pattern with the word "lenovo" in white. The taskbar at the bottom contains icons for various applications like Internet Explorer, Google Chrome, and Microsoft Word. The system tray shows the date and time as 4/9/2023 and 11:11 PM.

RESULT: Hence the program to create procedure is successfully applied.

12.AIM OF THE EXPERIMENT: To write PL/SQL Program using SQL commands.

DESCRIPTION: Pl/SQL stands for procedural language extension to SQL language. Using SQL a small set of programs to be written and input is given .

To write a pl/sql program to print the given number

SOURCE CODE:

```
SQL> declare
  2   r int;
  3   n int;
  4   x integer:=0;
  5   begin
  6     n:=&n;
  7     loop
  8       r:=mod(n,10);
  9       x:=x+r;
 10      n:=floor(n/10);
 11      exit when n=0;
 12    end loop;
 13    dbms_output.put_line('sum='||x);
 14  end;
 15 /
Enter value for n: 4
old   6: n:=&n;
new   6: n:=4;

PL/SQL procedure successfully completed.
```

OUTPUT: The pl/sql procedure is successfully completed.

RESULT: Hence PL/SQL program has been successfully applied

13. AIM OF THE EXPERIMENT: Perform Table creation with required constraints.

DESCRIPTION: The SQL table of employee is created and a few constraints are needed for the table updation using commands.

SOURCE CODE:

```
* ERROR at line 1:
ORA-00955: name is already used by an existing object

SQL> create table employee2(empno number<10>,empname varchar<20>,basic number<10,2>,hra number<10,2>,da number<10,2>,deductions number<10,2>,gross number<10,2>,net number<10,2>,dob date);
Table created.

SQL> desc employee2;
Name          Null?    Type
EMPNO          NUMBER(10)
EMPNAME        VARCHAR2(20)
BASIC          NUMBER(10,2)
HRA            NUMBER(10,2)
DA             NUMBER(10,2)
DEDUCTIONS     NUMBER(10,2)
GROSS          NUMBER(10,2)
NET            NUMBER(10,2)
DOB            DATE

SQL> alter table employee2 add empdesign varchar2<20>;
Table altered.

SQL> -
```

DATA BASE MANAGEMENT SYSTEMS LAB

perform table alteration for employee using alter command.

The screenshot shows a Windows desktop with a blue abstract background and a Lenovo logo. There are two windows open:

- Run SQL Command Line:** This window displays the following SQL commands and their results:

```
SQL> alter table employee2 add empdesign varchar2(20);
Table altered.

SQL> desc employee2;
Name          Null?    Type
EMPNO        NUMBER(10)
ENAME         VARCHAR2(20)
BASIC        NUMBER(10,2)
HRRA        NUMBER(10,2)
DRA        NUMBER(10,2)
DEDUCTIONS   NUMBER(10,2)
GROSS        NUMBER(10,2)
NET           NUMBER(10,2)
DOB           DATE
EMPDESIGN    VARCHAR2(20)

SQL> -
```
- Run SQL Command Line:** This window displays the following SQL commands and their results:

```
SQL> alter table employee2 add empdesign varchar2(20);
Table altered.

SQL> desc employee2;
Name          Null?    Type
EMPNO        NUMBER(10)
ENAME         VARCHAR2(20)
BASIC        NUMBER(10,2)
HRRA        NUMBER(10,2)
DRA        NUMBER(10,2)
DEDUCTIONS   NUMBER(10,2)
GROSS        NUMBER(10,2)
NET           NUMBER(10,2)
DOB           DATE
EMPDESIGN    VARCHAR2(20)

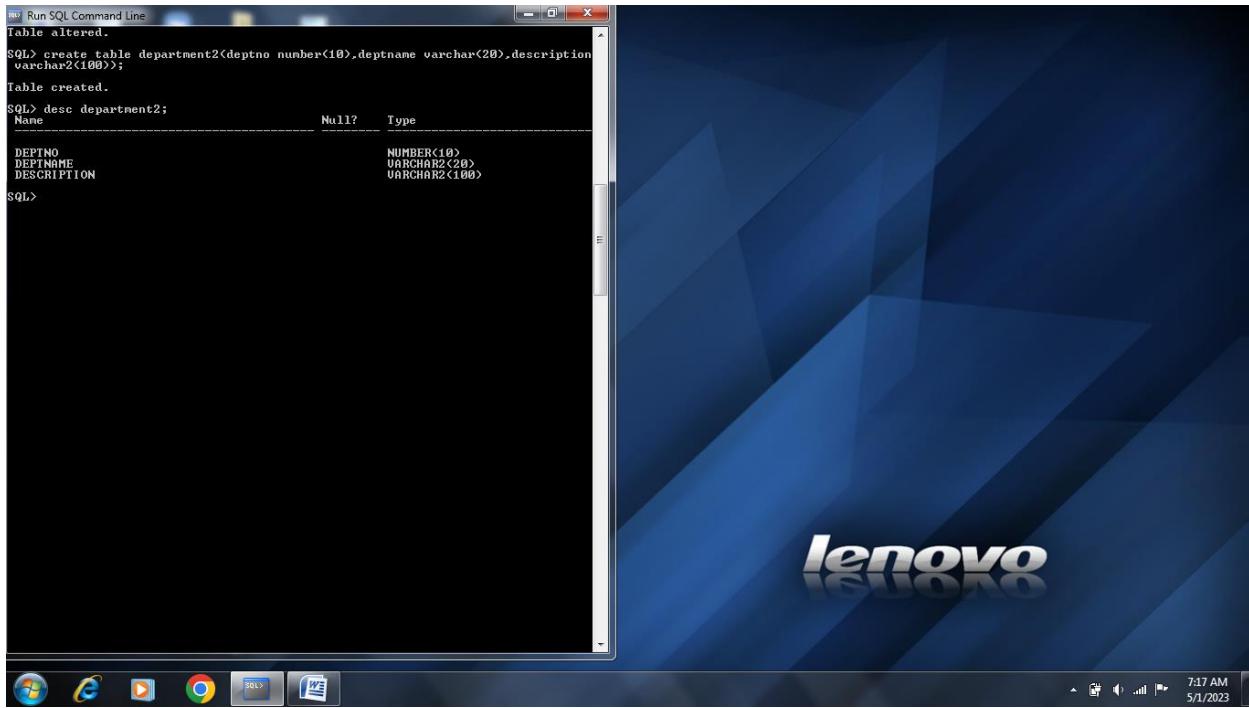
SQL> alter table employee2 add deptno number(3);
Table altered.

SQL> -
```

Below the windows, the Windows taskbar is visible with icons for Run, Start, Task View, File Explorer, Edge, Google Chrome, and File Explorer. The system tray shows the date and time as 7:14 AM 5/1/2023.

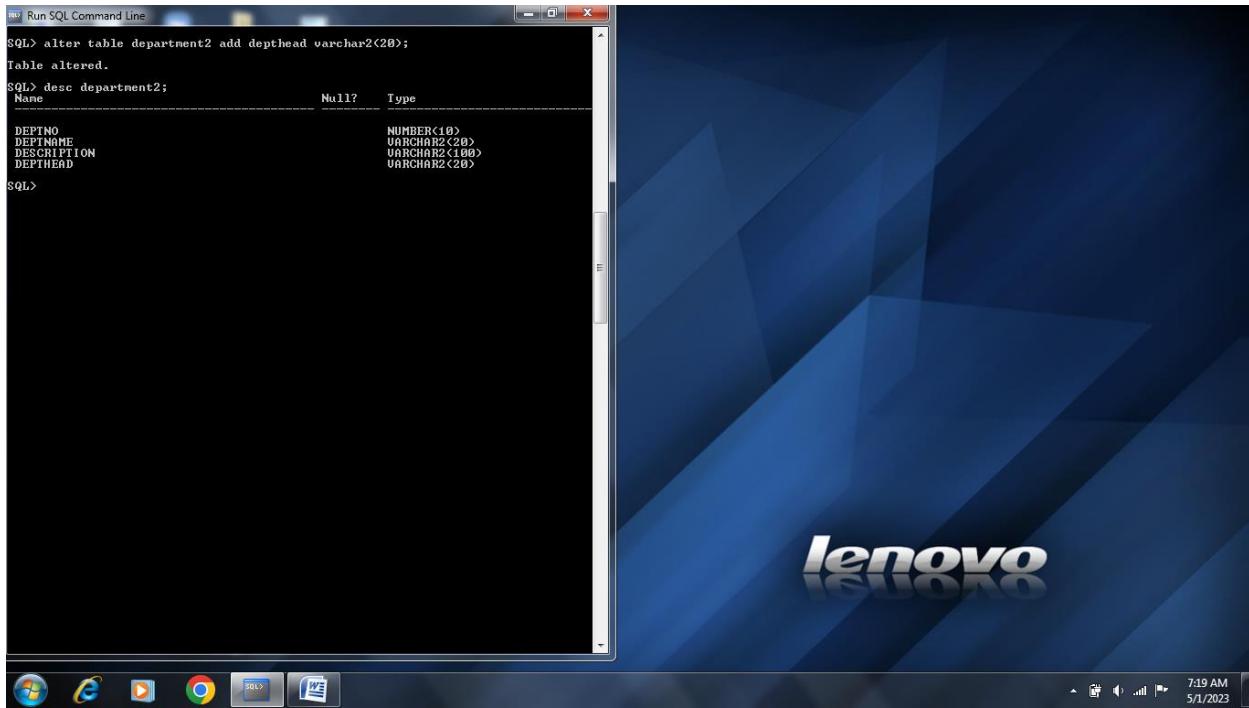
now create table department with deptno,name,description

DATA BASE MANAGEMENT SYSTEMS LAB



Run SQL Command Line
Table altered.
SQL> create table department2(deptno number<10>,deptname varchar<20>,description
<varchar2<100>>;
Table created.
SQL> desc department2;
Name Null? Type
DEPTNO NUMBER<10>
DEPTNAME VARCHAR2<20>
DESCRIPTION VARCHAR2<100>
SQL>

now perform alterations for department2 table using alter command



Run SQL Command Line
SQL> alter table department2 add depthead varchar2<20>;
Table altered.
SQL> desc department2;
Name Null? Type
DEPTNO NUMBER<10>
DEPTNAME VARCHAR2<20>
DESCRIPTION VARCHAR2<100>
DEPTHEAD VARCHAR2<20>
SQL>

DATA BASE MANAGEMENT SYSTEMS LAB

BASIC COLUMN SHOULD NOT BE NULL: alter certain columns to be as not null values.

The screenshot shows a Windows desktop with a blue Lenovo logo background. In the foreground, there is a 'Run SQL Command Line' window. The window contains the following SQL commands and their results:

```
SQL> alter table department2 add depthead varchar2<20>;
Table altered.

SQL> desc department2;
Name          Null?    Type
DEPTNO        NUMBER(10)
DEPTNAME      VARCHAR2<20>
DESCRIPTION    VARCHAR2<100>
DEPTHEAD      VARCHAR2<20>

SQL> alter table employee2 modify basic not null;
Table altered.

SQL> alter table employee2 modify empno not null;
Table altered.

SQL> alter table department2 modify deptname not null;
Table altered.

SQL> desc employee2;
Name          Null?    Type
EMPNO         NOT NULL NUMBER(10)
ENAME         VARCHAR2<20>
ENAME        NOT NULL NUMBER(10,2)
HR8           NUMBER(10,2)
DA            NUMBER(10,2)
DEDUCTIONS    NUMBER(10,2)
GROSS         NUMBER(10,2)
NETS          NUMBER(10,2)
DOB           DATE
EMPDESIGN    VARCHAR2<20>
DEPTNO        NUMBER(3)

SQL> desc department2;
Name          Null?    Type
DEPTNO        NUMBER(10)
DEPTNAME      NOT NULL VARCHAR2<20>
DESCRIPTION    VARCHAR2<100>
DEPTHEAD      VARCHAR2<20>

SQL>
```

The task bar at the bottom shows icons for Internet Explorer, Google Chrome, and the SQL command line application. The system tray indicates the date as 5/1/2023 and the time as 7:25 AM.

insert 10 values and write the output.

RESULT: Hence The program to perform table creation with required constraints is successfully applied.

14. AIM OF THE EXPERIMENT: To create Data Base Using Integrated Development Environment

DESCRIPTION: Data Base creates a environment to integrated different modules to add the information of the users. The Data Base Administrator (DBA) provide the credentials to the User.

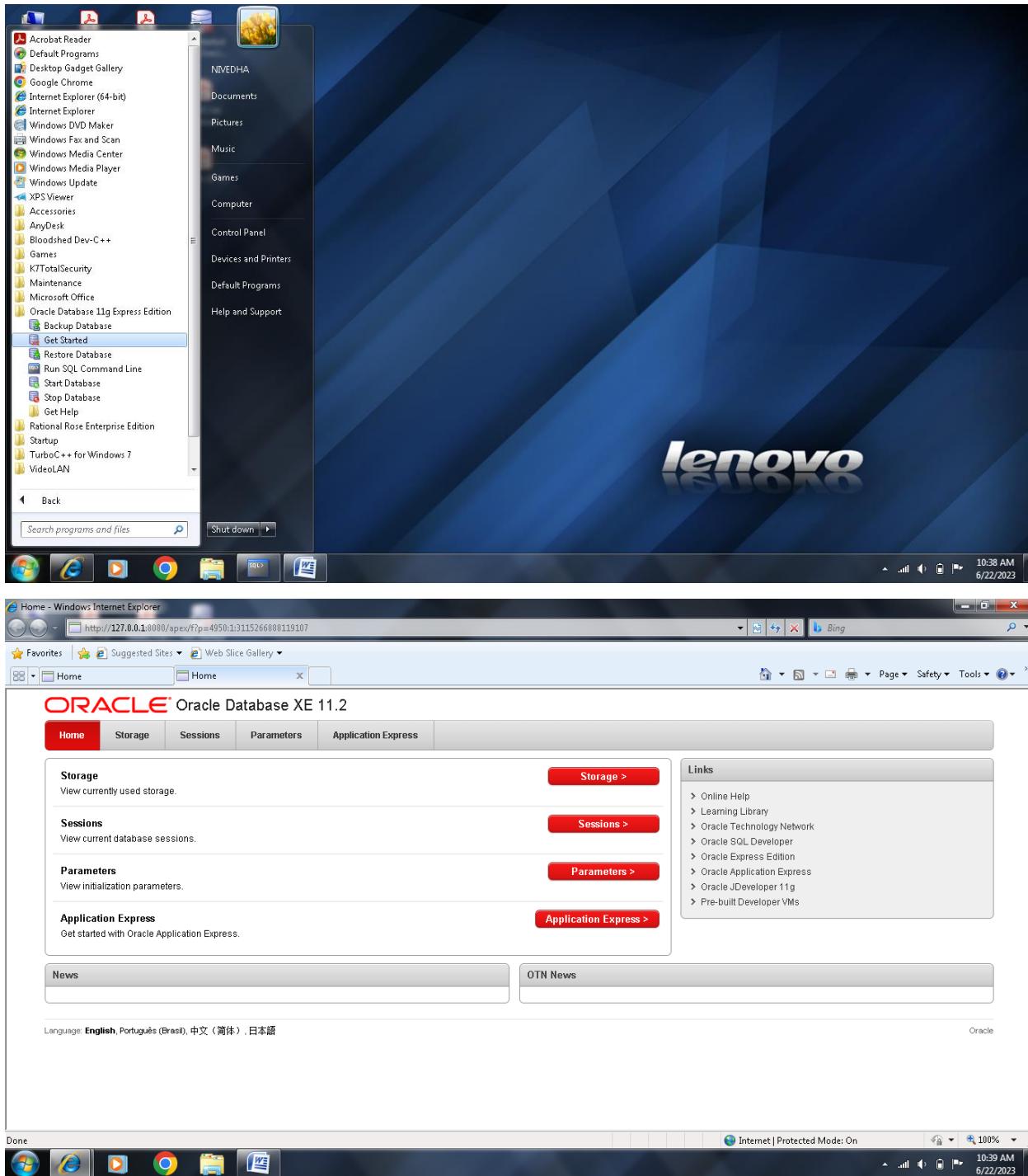
SOURCE CODE:

Step 1: Open Oracle 11g web environment by following the sequence of interfacing click on start->all programs->oracle 11g express edition->get started

DATA BASE MANAGEMENT SYSTEMS LAB



DATA BASE MANAGEMENT SYSTEMS LAB

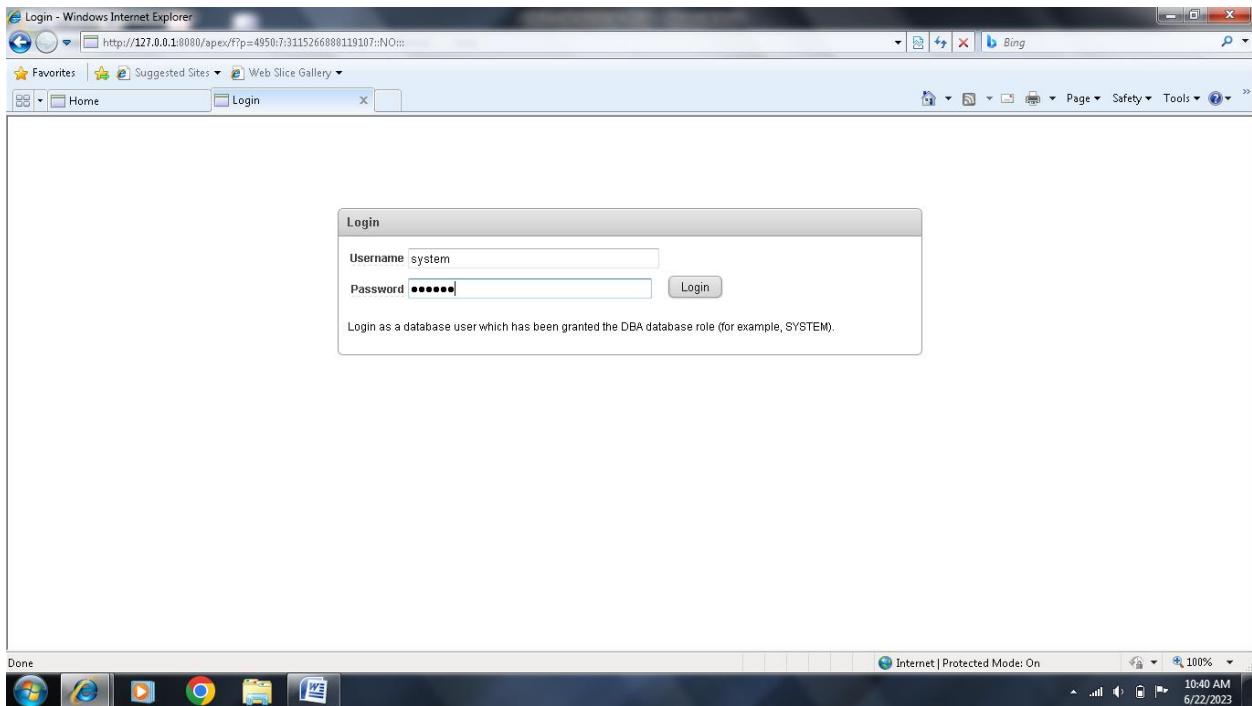


Step 2: Click on Application Express option and enter into the DBA by entering administrator credentials.

user name : system

password: oracle

DATA BASE MANAGEMENT SYSTEMS LAB



Then click on login

Step 3: create work space organization login to develop and create data bases for your organization.

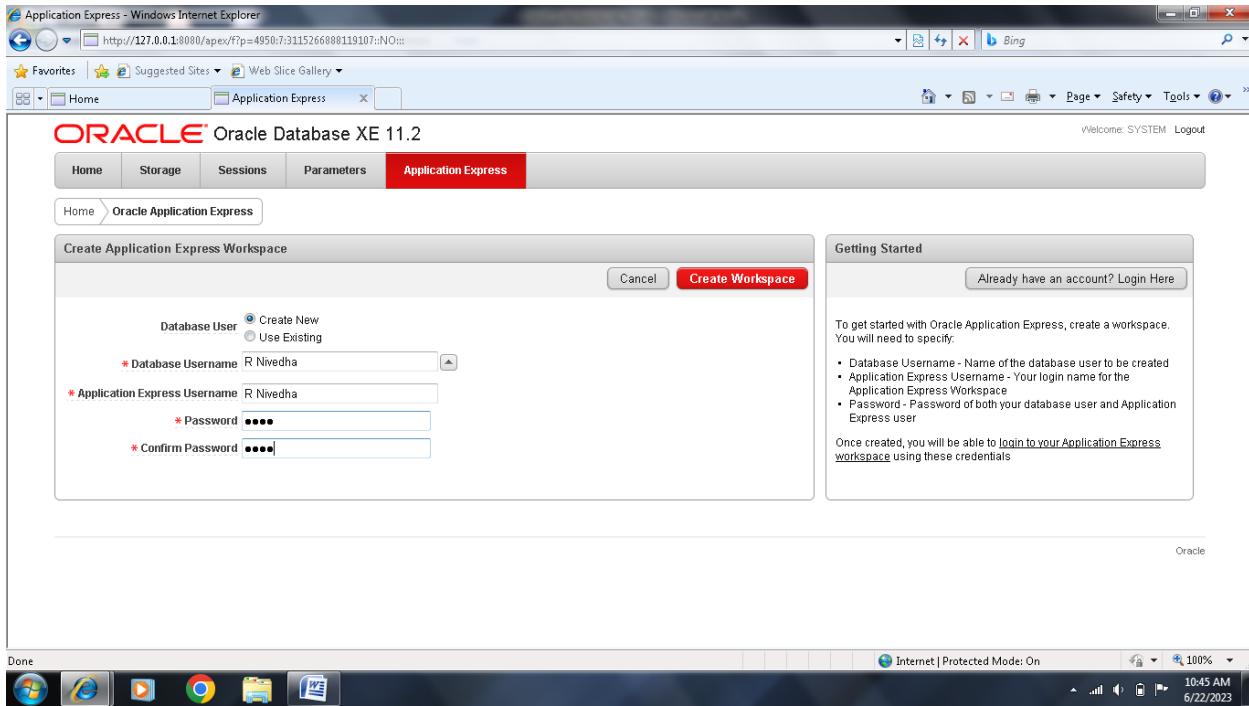
enter username : R Nivedha

Application Express Username: R Nivedha

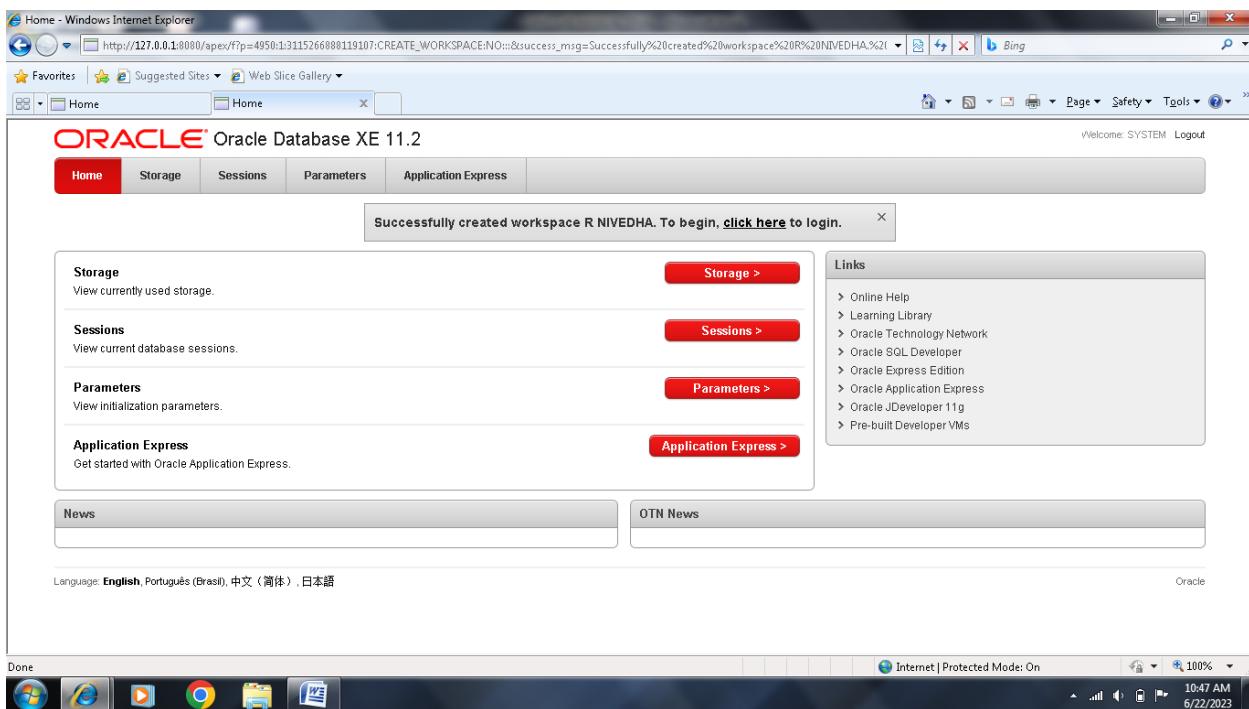
Password: @123

confirm password : @123

DATA BASE MANAGEMENT SYSTEMS LAB

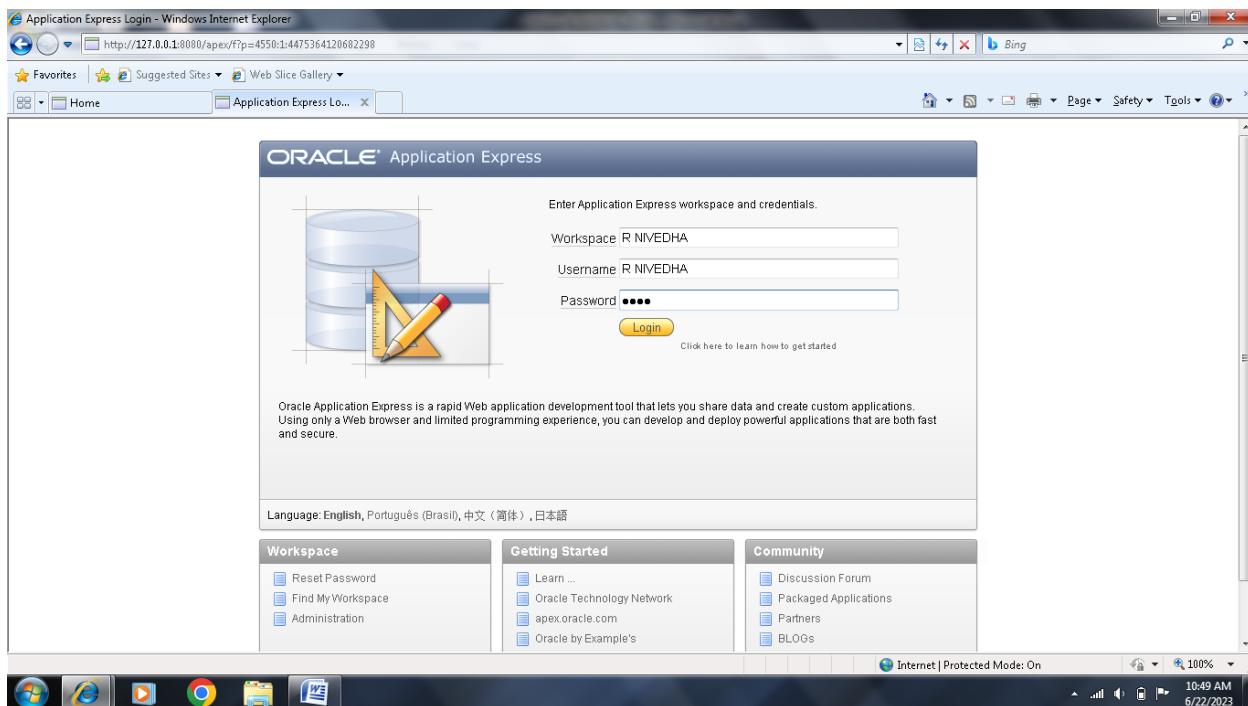


click on create workspace icon



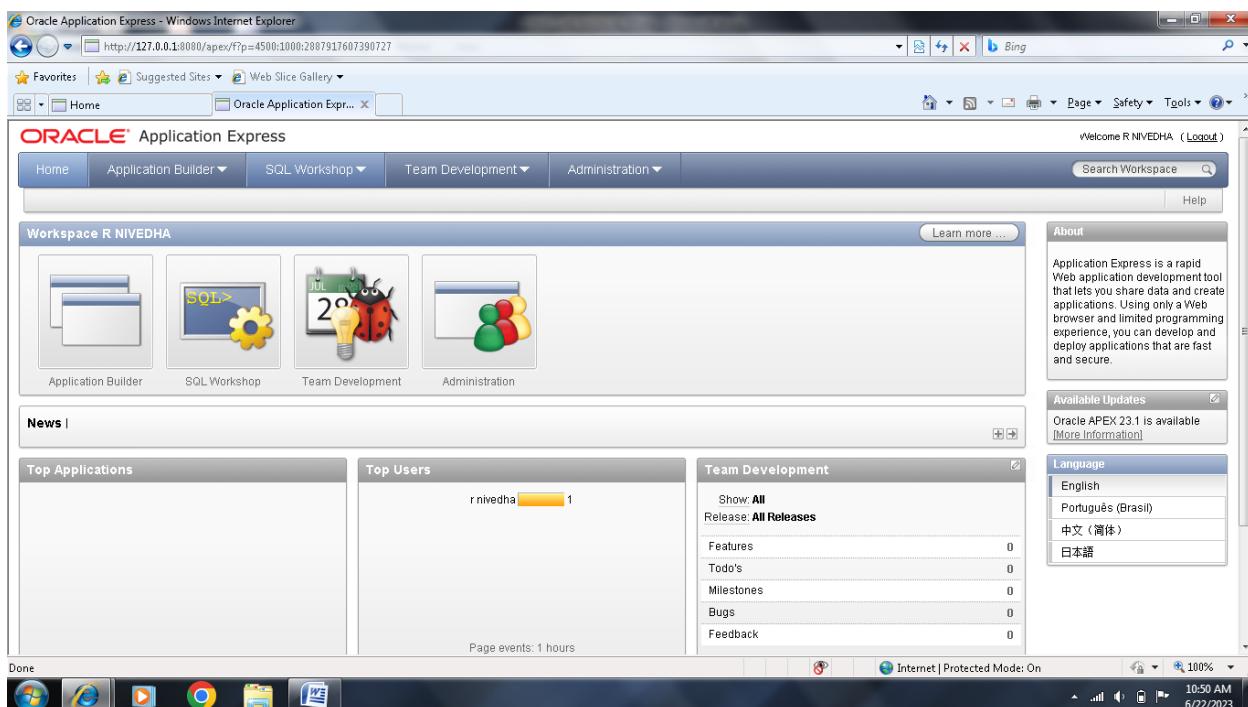
Step 4: Now click on login and enter your username and password

DATA BASE MANAGEMENT SYSTEMS LAB

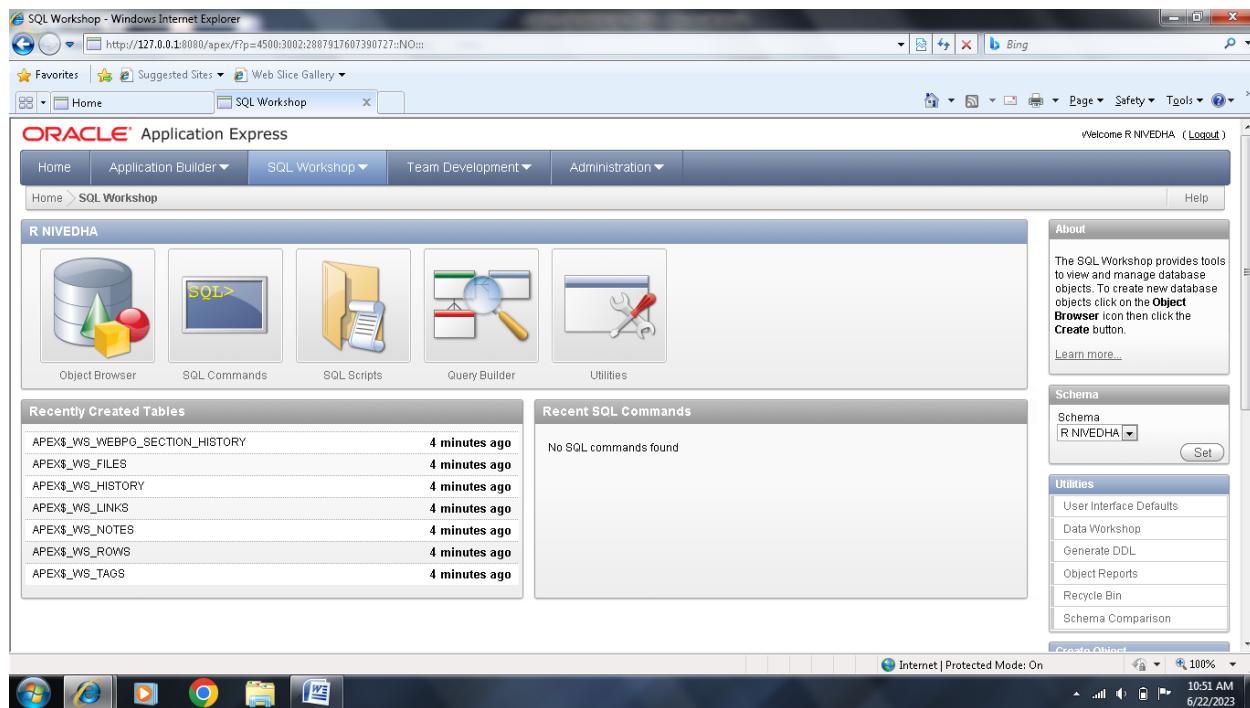


click on login

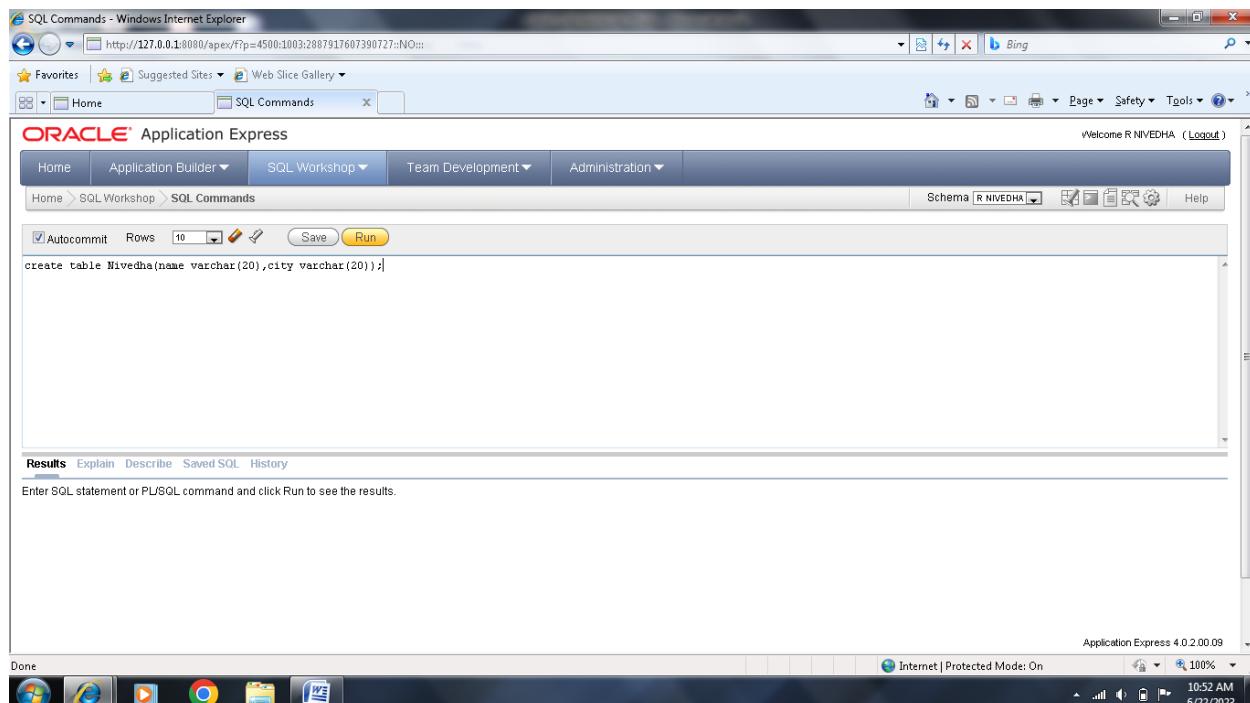
Step 5: After Successful login click on SQL workshop



DATA BASE MANAGEMENT SYSTEMS LAB



Step 6: Click on SQL commands option and start creating tables of SQL here.



Step 7: The table is created

DATA BASE MANAGEMENT SYSTEMS LAB

The screenshot shows the Oracle Application Express SQL Commands interface in a Windows Internet Explorer browser. The URL is <http://127.0.0.1:8080/apex/f?p=4500:1003:2887917607390727::NO::>. The schema is set to R_NIVEDHA. In the SQL Commands editor, the following SQL statement is entered:

```
create table Nivedha(name varchar(20),city varchar(20));
```

The results pane shows the output:

```
Table created.  
0.23 seconds
```

The status bar at the bottom right indicates "Application Express 4.0.2.00.09".

Step 8: Insert values & Execute Queries

The screenshot shows the Oracle Application Express SQL Commands interface in a Windows Internet Explorer browser. The URL is <http://127.0.0.1:8080/apex/f?p=4500:1003:2887917607390727::NO::>. The schema is set to R_NIVEDHA. In the SQL Commands editor, the following SQL statement is entered:

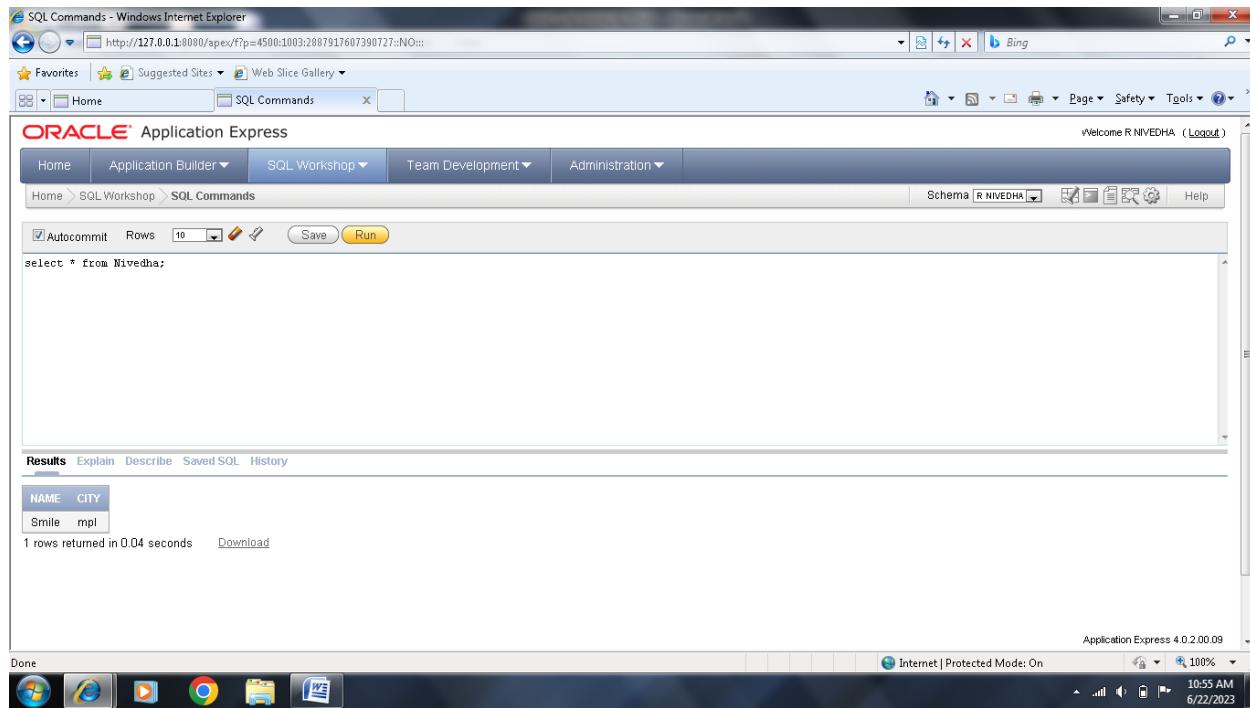
```
insert into Nivedha Values('Smile','mpl');
```

The results pane shows the output:

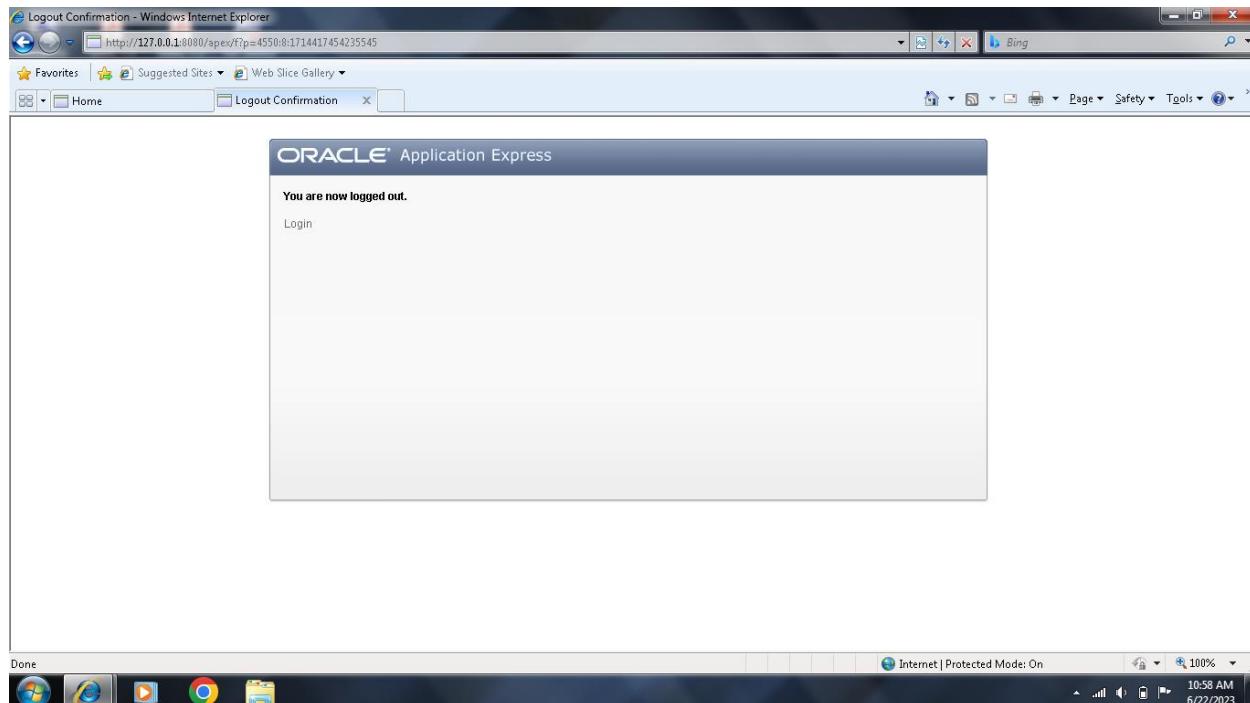
```
Table created.  
0.23 seconds
```

The status bar at the bottom right indicates "Application Express 4.0.2.00.09".

DATA BASE MANAGEMENT SYSTEMS LAB



Step 9 : click on logout option



RESULT: Hence the Data Base Using Integrated Development Environment is successfully Applied.

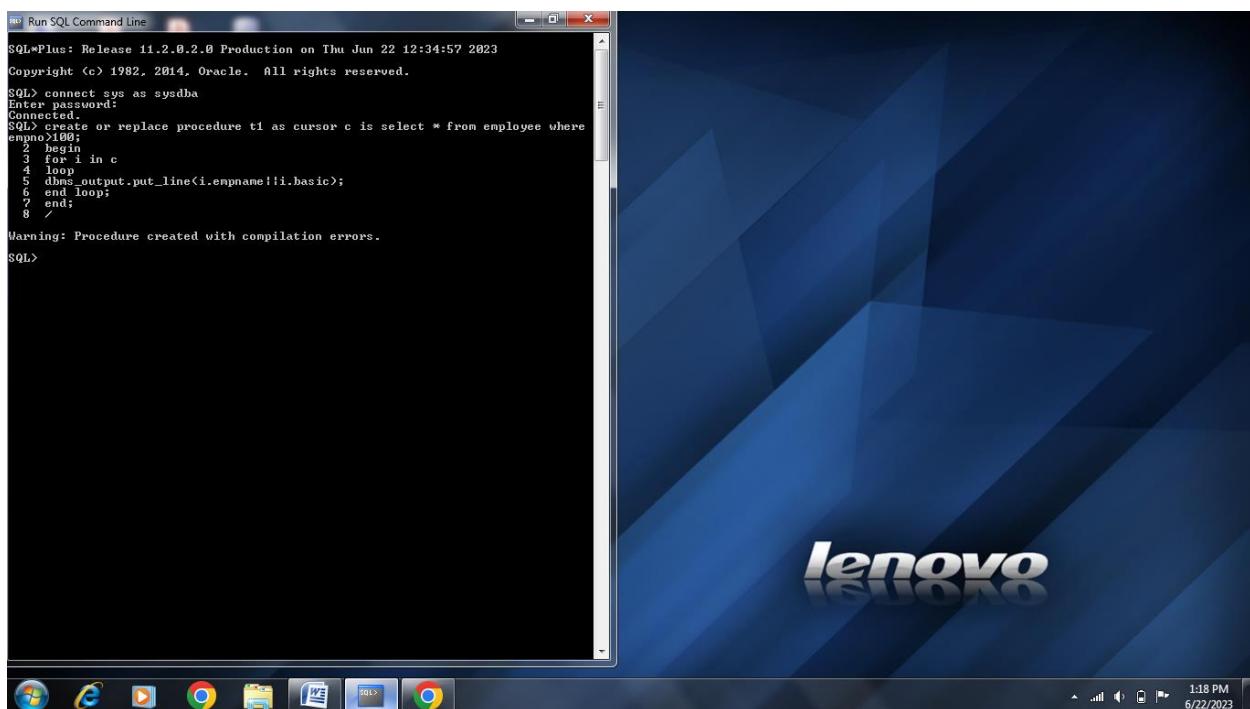
15. AIM OF THE EXPERIMENT: Implementation of Cursors Using SQL.

DESCRIPTION: Cursor make it possible to define a result set and perform complex logic on a row by row basis. By using the same mechanics, an SQL procedure can also define a result set and return it directly to the caller of the SQL procedure or to a client application.

SOURCE CODE:

```
create or replace procedure t1 as cursor c is select * from employee where empno>=100;
begin
for i in c
loop
dbms_output.put_line(i.empname||i.basic);
end loop;
end;
/
```

OUTPUT:



```
Run SQL Command Line
SQL*Plus: Release 11.2.0.2.0 Production on Thu Jun 22 12:34:57 2023
Copyright (c) 1982, 2014, Oracle. All rights reserved.
SQL> connect sys as sysdba
Enter password:
Connected.
SQL> create or replace procedure t1 as cursor c is select * from employee where
empno>100;
2  begin
3    for i in c
4    loop
5      dbms_output.put_line(i.empname||i.basic);
6    end loop;
7  end;
8
Warning: Procedure created with compilation errors.
SQL>
```

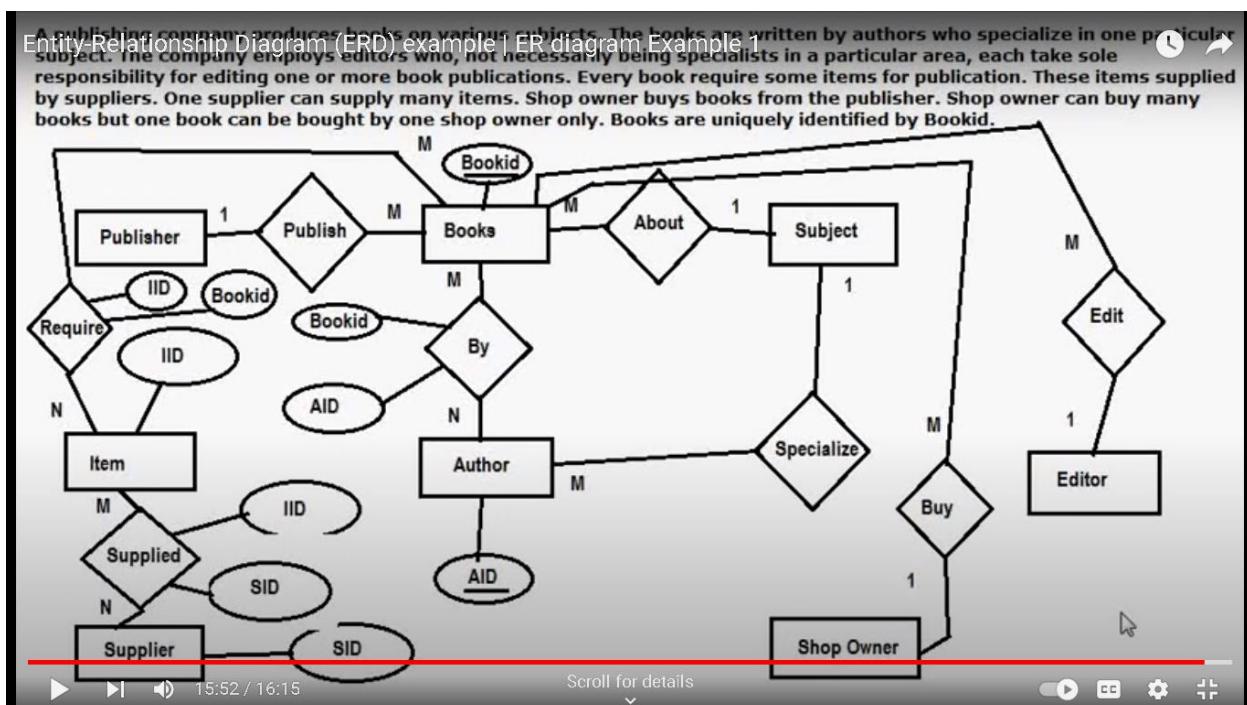
RESULT : Hence Cursor is executed successfully using SQL.

16. AIM OF THE EXPERIMENT: To Write Case Study about Book Publishing Company

DESCRIPTION:

A publishing company produces books on various subjects. The books are written by authors who specialize in one particular subject. The company employs editors who, not necessarily being specialists in a particular area, each take sole responsibility for editing one or more publications. A publication covers essentially one of the specialist subjects and is normally written by a single author. When writing a particular book, each author works with one editor, but may submit another work for publication to be supervised by other editors.

SOURCE CODE:



- From above ER diagram, the publisher publishes book. Every book has id, name, year of publication etc.,
- Author is the one who writes the book and delivers the book to the user using well known authorized publication.
- Shop owner buys the book and sells to the customer .

- Customer prefer the book with different editions of the publications

RESULT: Hence Case Study About Book Publishing company is executed successfully.

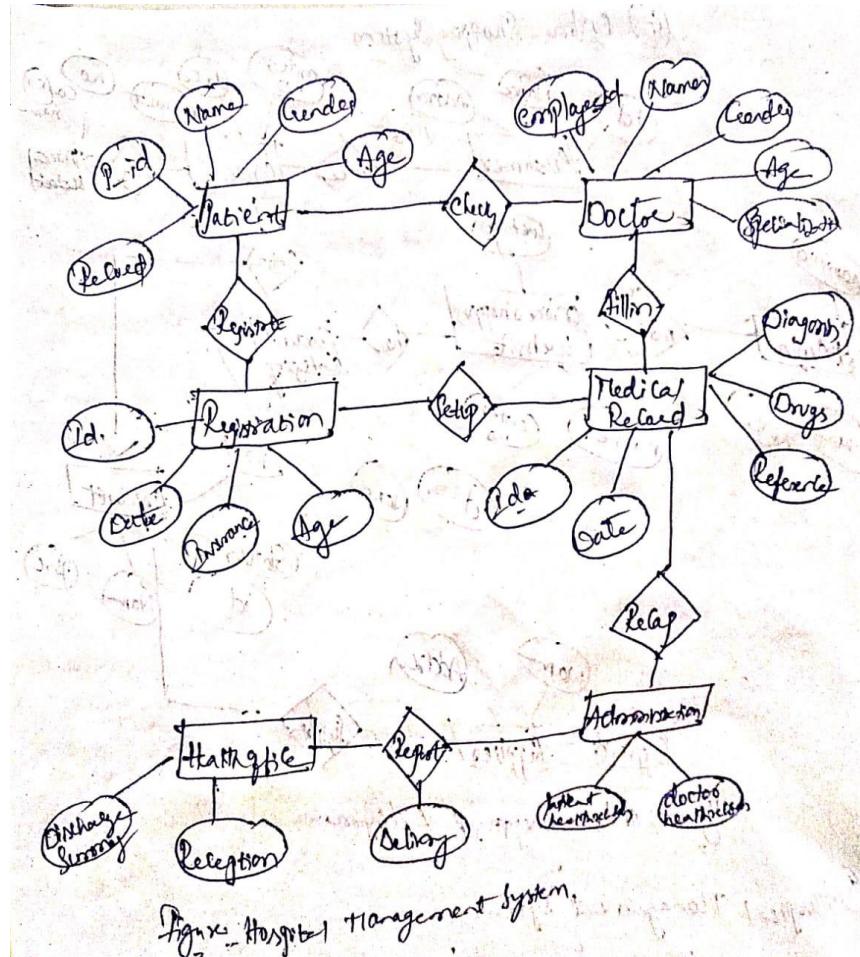
17. AIM OF THE EXPERIMENT: To Write Case Study about General Hospital

DESCRIPTION:

A General Hospital consists of a number of specialized wards such as Maternity, Pediatric, Oncology, etc.). Each ward hosts a number of patients, who were admitted on the recommendation of their confirmed by a consultant employed by the Hospital. On admission, the personal details of every patient are recorded. A separate register is to be held to store the information of the tests undertaken and the results of a prescribed treatment. A number of tests may be conducted for each patient. Each patient is assigned to one leading consultant but may be examined by another doctor, if required. Doctors are specialists in some branch of medicine and may be leading consultants for a number of patients, not necessarily from the same ward

SOURCE CODE:

DATA BASE MANAGEMENT SYSTEMS LAB



- From above ER diagram, Hospital management information system is a computerised system that help in managing clinical, financial, laboratory, Inpatient, outpatient, pharmaceutical, etc. operations in a hospital. With the help of Hospital Management Information system, health care providers can focus more on providing quality healthcare to the patients.
- A hospital information system helps healthcare providers in streamlining their operations including managing patient health records(EMR/EHR), appointments, billing, diagnostics and much more
- The Major role of is to record information on health events and check the quality of services at different levels of health care. The importance of patient assessment is a part of the concept of giving importance to patient's views in improving the

quality of health services.

- Hospital Information System benefits include enhancing patient satisfaction through improved communication; greater provider sensitivity towards patients; enhanced community awareness about the quality of services; and overall better use of services in the health system
- Healthcare management software is a digitized system that helps in management of health information of patients in a healthcare facility.

RESULT: Hence Case Study About General Hospital is executed successfully.

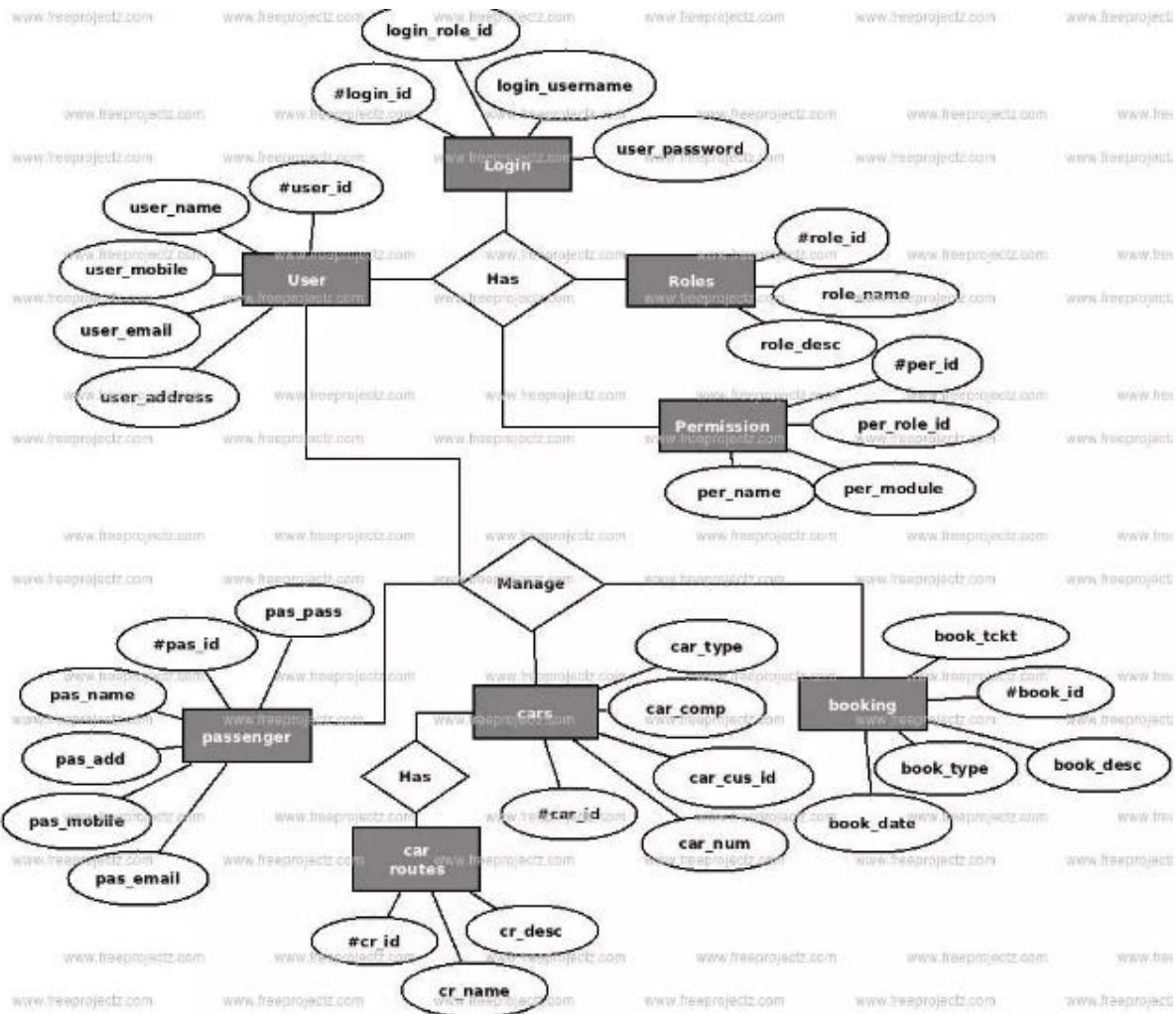
18. AIM OF THE EXPERIMENT: To Write Case Study about Car Rental Company

DESCRIPTION:

The information required includes a description of cars, subcontractors (i.e. garages), company expenditures, company revenues and customers. Cars are to be described by such data as: make, model, year of production, engine size, fuel type, number of passengers, registration number, purchase price, purchase date, rent price and insurance details. It is the company policy not to keep any car for a period exceeding one year.

SOURCE CODE:

DATA BASE MANAGEMENT SYSTEMS LAB



- ✚ A ER Diagram for Car Rental System provides an optimized graphical representation of the relationships between objects, entities and attributes associated with the system.
- ✚ This diagram is used to efficiently store and manage data related to car rental and its related applications. It helps to easily visualize the different entities such as customers, cars, and locations and their interactions.
- ✚ An ER Diagram for Car Rental System also helps in providing an overall view of the infrastructure of an IT system related to car rental and how the various components are interconnected. It is a useful tool for business analysis, testing, and debugging system related to car rental.

- Cost-Effective Rentals. One of the first signs of a good car rental company is that its rates are affordable and cost-effective.
- Smooth Customer Services. ...
- Discounts and Offers.
- Proper Fleet Maintenance.
- Convenient Vehicle Pickup. The customer analysis section of your car rental business plan must detail the customers you serve and/or expect to serve.

RESULT: Hence Case Study About Car Rental Company is executed successfully.

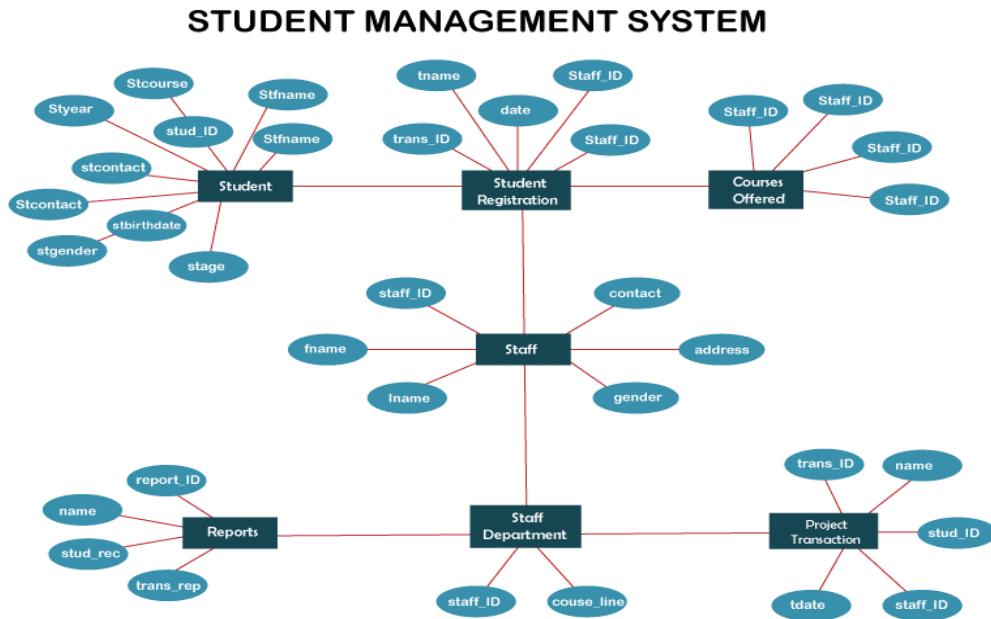
19. AIM OF THE EXPERIMENT: To Write Case Study about Student Progress Monitoring System

DESCRIPTION:

The college provides a number of modules, each being characterized by its code, title, credit value, module leader, teaching staff and the department they come from. A module is coordinated by a module leader who shares teaching duties with one or more lecturers. A lecturer may teach (and be a module leader for) more than one module. Students are free to choose any module they wish but the following rules must be observed: Some modules require pre- requisites modules and some degree programs have compulsory modules. The database is also to contain some information about students including their numbers, names, addresses, degrees they read for and their past performance i.e. modules taken and examination results

DATA BASE MANAGEMENT SYSTEMS LAB

SOURCE CODE:



- Student progress monitoring helps teachers evaluate how effective their instruction is, either for individual students or for the entire class.
- You are probably already familiar with the goals and objectives that must be included in the Individualized Education Plan (IEP) for each student who receives special education services.
- A teacher who uses progress monitoring works with the goals in the IEP, and the state standards for the student's grade level, to develop goals that can be measured and tracked, and that can be used to divide what the student is expected to learn by the end of the year into shorter, measurable steps.
- For example, the student may have a reading goal that is stated in terms of the number of words per minute expected by the end of the year. Or, the student may have a math goal that is stated as the number of problems scored correctly on tests covering the math content for the year.
- Once the teacher sets the goals and begins instruction, then he or she measures the student's progress toward meeting the goals each week. All the tests have the same level of difficulty, so the weekly tests can reflect the student's rate of progress

DATA BASE MANAGEMENT SYSTEMS LAB

accurately. With each test, the teacher compares how much the student is expected to have learned to the student's actual rate of learning.

- If the student is meeting or exceeding the expectation, the teacher continues to teach the student in the same way. If the student's performance on the measurement does not meet the expectation, then the teacher changes the teaching.
- The teacher might change the method being used, the amount of instructional time, the grouping arrangement (for example, individual instruction versus small-group instruction), or some other aspect of teaching.
- In this process, the teacher is looking for the type and amount of instruction that will enable the student to make enough progress toward meeting the goal. The measurements take from 1 to 5 minutes, so the student should not have the feeling of constantly being tested.
- In addition, since the teacher measures progress frequently usually once a week he or she can revise the instructional plan as soon as the student needs it, rather than waiting until a test or the state assessment shows that the student's instructional needs are not being met.
- After each weekly measurement, the teacher notes your student's performance level and compares it to previous measurements and to expected rates of learning. The teacher tracks the measurements on a graph as a way of showing the success of both the teacher and the student.

RESULT: Hence Case Study About Student Progress Monitoring System is executed successfully