Roll No: 133

DBMS1 Practical

Practical 1: Study of Data Definition Language Statement

- A) Write the query for the following
- 1) Create the following tables and include the necessary constraints NOT NULL, DEFAULT, CHECK, PRIMARY KEY, UNIQUE.
- a) Student (sid, sname, gender, dob, remark, marks, class, email)

b) Course (cid, cname, credits)



- 2) Alter the structure of the Course table
- a) Modify datatype of cname.

```
SQL> alter table course
2 modify cname varchar(30);

Table altered.

SQL> desc course
Name
Null? Type

CID
NOT NULL NUMBER(38)
VARCHAR2(30)
CREDITS

SQL> ___
```

Roll No: 133

b) Add a column coursehours with minimum course hours greater than 45

```
SQL> alter table course
2 add coursehour int check(coursehour>-45);

Table altered.

SQL> desc course
Name
Null? Type

CID
NOT NULL NUMBER(38)
CNAME
VARCHAR2(30)
CREDITS
NUMBER(38)
COURSEHOUR
NUMBER(38)
NUMBER(38)
SQL>
```

c) Add a column cdesc

```
SQL> alter table course
2 add cdesc varchar(20);

Table altered.

SQL> desc course
Name

Null? Type

CID

CNAME

CNAME

CREDITS

COURSEHOUR

COURSEHOUR

CDESC

VARCHAR2(20)

SQL>
```

3) Alter the structure of Student Table

a) Add column age with minimum age as 17.

```
SQL> alter table student 2 add age int check(age>=17);
Table altered.
SQL> desc student
                                                      Null? Type
 Name
                                                      NOT NULL NUMBER(38)
 SID
 SNAME
GENDER
                                                                 VARCHAR2(20)
                                                                 VARCHAR2(10)
 DOB
REMARK
                                                                 DATE
VARCHAR2(10)
 MARK
CLASS
                                                                 NUMBER(38)
VARCHAR2(30)
                                                     NOT NULL VARCHAR2(35)
NUMBER(38)
 EMAILID
 AGE
SQL> _
```

Roll No: 133

b) Delete the column dob

```
SQL> alter table student
2 drop column dob;

Table altered.

SQL> desc student
Name

Null? Type

SID

SNAME

SNAME

GENDER

GENDER

VARCHAR2(20)

GEMARK

VARCHAR2(10)

NEMARK

VARCHAR2(10)

NARK

VARCHAR2(20)

VARCHAR2(20)

VARCHAR2(30)

SEMAILID

NOT NULL VARCHAR2(35)

AGE

NUMBER(38)

VARCHAR2(35)

NUMBER(38)
```

c) Add a column phoneno

d) Rename phoneno to contactno

```
SQL> alter table student
2 rename column phoneno to contactno;
Table altered.
SQL> desc student
                                              Null? Type
Name
                                               NOT NULL NUMBER(38)
VARCHAR2(20)
 SID
                                                         VARCHAR2(10)
VARCHAR2(10)
 GENDER
                                                         NUMBER(38)
VARCHAR2(30)
 MARK
 CLASS
EMAILID
                                               NOT NULL VARCHAR2(35)
 AGE
CONTACTNO
                                                         NUMBER(38)
SQL>
```

Roll No: 133

4) Rename Student table as Student_details.

```
SQL> alter table student
2 rename to student_details;
Table altered.
SQL> desc student_details
                                               Null?
                                             NOT NULL NUMBER(38)
 SNAME
                                                          VARCHAR2(20)
 GENDER
                                                          VARCHAR2(10)
 REMARK
                                                          VARCHAR2(10)
                                                          NUMBER(38)
 CLASS
                                                          VARCHAR2(30)
                                                NOT NULL VARCHAR2(35)
 EMAILID
                                                          NUMBER(38)
NUMBER(38)
 AGE
CONTACTNO
SQL>
```

5) Describe the structure of both the tables.

```
SQL> desc student_details
                                                Null?
Name
SID
                                                NOT NULL NUMBER(38)
SNAME
GENDER
                                                          VARCHAR2(20)
VARCHAR2(10)
REMARK
                                                          VARCHAR2(10)
MARK
                                                          NUMBER(38)
                                                          VARCHAR2(30)
                                               NOT NULL VARCHAR2(35)
EMAILID
AGE
CONTACTNO
                                                          NUMBER(38)
SQL>
```

```
        SQL> desc course
        Null?
        Type

        CID
        NOT NULL NUMBER(38)

        CNAME
        VARCHAR2(30)

        CREDITS
        NUMBER(38)

        COURSEHOUR
        NUMBER(38)

        CDESC
        VARCHAR2(20)

        SQL> _
```

6) Drop the table student_details and Course.

```
SQL> drop table student_details;

Table dropped.

SQL> drop table course;

Table dropped.

SQL> ______
```

B) 1. Create a table EMPLOYEE with following attributes and specific data types and constraints required (Emp_no, E_name, E_address, E_ph_no, Dept_no, Dept_name, Job_id, Salary)

Roll No: 133

```
SQL> create table EMPLOYEE(Emp_no int primary key,E_name varchar(10),E_address varchar(20),E_ph_no int not null,Dept_name varchar(20),J
ob_id char unique,salary varchar(25));
Table created.
SQL> desc EMPLOYEE
                                          Null? Type
Name
 EMP_NO
                                         NOT NULL NUMBER(38)
                                                  VARCHAR2(10)
VARCHAR2(20)
E_NAME
E_ADDRESS
                                         NOT NULL NUMBER(38)
VARCHAR2(20)
DEPT_NAME
JOB_ID
                                                   CHAR(1)
                                                   VARCHAR2(25)
SALARY
SQL> _
```

2. Add a new column HIREDATE to the existing relation.

3. Change the datatype of JOB_ID from char to varchar2.

4. Change the name of column/field Emp_no to E_no.

Roll No: 133

```
SQL> alter table EMPLOYEE
 2 rename column Emp_no to E_no;
Table altered.
SQL> desc EMPLOYEE
                                             Null?
                                             NOT NULL NUMBER(38)
E_NAME
E_ADDRESS
                                                        VARCHAR2(10)
                                                       VARCHAR2(20)
E_PH_NO
DEPT_NAME
                                             NOT NULL NUMBER(38)
                                                       VARCHAR2(20)
 JOB_ID
                                                       VARCHAR2(20)
                                                       VARCHAR2(25)
 SALARY
HIREDATE
```

5. Modify the column width of the job field of emp table.

```
      SQL> alter table EMPLOYEE

      2 modify Job_id varchar(15);

      Table altered.

      SQL> desc EMPLOYEE

      Name
      Null? Type

      E_NO
      NOT NULL NUMBER(38)

      E_NAME
      VARCHAR2(10)

      E_ADDRESS
      VARCHAR2(20)

      E_PH_NO
      NOT NULL NUMBER(38)

      DEPT_NAME
      VARCHAR2(20)

      JOB_ID
      VARCHAR2(20)

      SALARY
      VARCHAR2(25)

      HIREDATE
      DATE
```

C) Create the following tables with specified attributes and constraints Department Table: Department_Id varchar2(20) primarykey, Department_Name varchar2(25) with required data.

```
SQL> create table Department(Department_Id varchar(20) primary key,Department_Name varchar(25));

Table created.

SQL> desc Department
Name

Null? Type

DEPARTMENT_ID
DEPARTMENT_ID
DEPARTMENT_NAME

VARCHAR2(20)
VARCHAR2(25)
```

Instructor Table: Instructor_id varchar2(20) primary key, Department_Id varchar2(20) Foreign key, Last_Name varchar2(25), First_Name varchar2(200) must have value, Telephone varchar2(20) must be unique, gender char(1) must be either 'F' or 'M', city varchar(10) default value must be 'MUMBAI'.

Roll No: 133

SQL> create table Instructor(Instructor_id varchar(20) primary key,Department_ID var char(20) references Department(Department_ID), Last_Name varchar(25), First_name varch ar(200) not null, Telephone varchar(20) unique, gender char(1) check(gender='F' or gen der='M'),city varchar(10) default 'MUMBAI'); Table created. SQL> create table Instructor_devangi as select * from Instructor; Table created. SQL> desc instructor Name Null? Type INSTRUCTOR ID NOT NULL VARCHAR2(20) DEPARTMENT_ID VARCHAR2(20) LAST NAME VARCHAR2(25) NOT NULL VARCHAR2(200) FIRST_NAME **TELEPHONE** VARCHAR2(20) **GENDER** CHAR(1) VARCHAR2(10) CITY SQL>

D) Create the following described below:

Column	Data Type	Length	Precision	Scale	Primary	Nullabl
					Key	e
EMPNO	Int	-	-	-	Yes	-
ENAME	Varchar2	10	-	-	-	No
JOB	Varchar2	9	-	-	-	~
MGR	Int	-	-	-	-	~
HIREDAT	Date	-	-	-	-	/
E						
SAL	Number	-	7	2	-	~
COMM	Int	-	-	-	-	~
DEPTNO	Int	-	-	-	-	/

```
SQL> create table EMP(EMPNO INT PRIMARY KEY,ENAME VARCHAR(10) NOT NULL,JOB VARCHAR(9),MGR INT,HIREDATE DATE,SAL NUMBER(7,2),COMM INT,DE
PTNO INT references Dept(DEPTNO));
Table created.
SQL> create table EMP_devangi as select * from EMP;
Table created.
SQL> desc EMP_devangi
                                              Null?
                                                       Type
                                                        NUMBER(38)
                                              NOT NULL VARCHAR2(10)
VARCHAR2(9)
 ENAME
 JOB
MGR
HIREDATE
                                                        NUMBER(38)
SAL
COMM
                                                        NUMBER(7,2)
NUMBER(38)
DEPTNO
                                                        NUMBER(38)
SQL> _
```

Roll No: 133

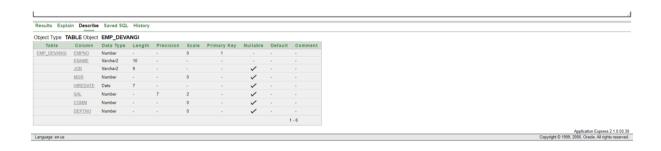
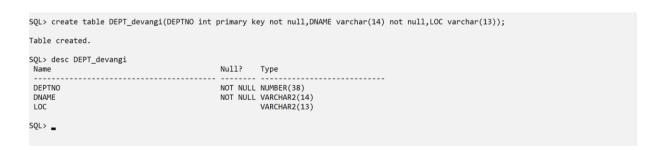
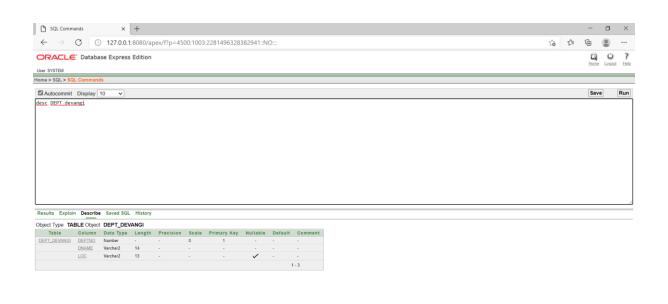


Table Name: DEPT

Language: en-us

Column	Data Type	Length	Precision	Scale	Primary Key	Nullable
DEPTNO	Int	-	-	-	Yes	-
DNAME	Varchar2	14	-	-	-	No
LOC	Varchar2	13	-	-	-	<





Application Express 2.1.0.00.39 Copyright © 1999, 2006, Oracle. All rights reserved.