

Practical no: 1

* Study of Data Definition Language statement

- A. Write the query for the following
 i) 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)

→ create table student (SID INT NOT NULL Primary key, Sname varchar(30), gender varchar(9), dob date, Remark varchar(10), mark INT, Class varchar(10) default 'BSCIT', email varchar(10) not null unique, check (gender in ('male, female')));

- Table created
- desc student
- Table student

column	Null?	Type
SID	NOT NULL	NUMBER
SNAME	=	VARCHAR2(30)
GENDER	=	VARCHAR2(9)

DOB	-	DATE
REMARK	-	VARCHAR2(10)
MARK	NUMBER	
CLASS	VARCHAR2(10)	
EMAIL	VARCHAR2(10)	

b. Course (cid, cname, credits)
 → Create Table course(cid INT NOT NULL, cname
 varchar(30), credit ^{char}(1));

- Table created

desc course

TABLE COURSE

column	NULL?	Type
CID	NOT NULL	NUMBER
CNAME		VARCHAR(30)
CREDIT		char(1)

2) Alter the structure of course table

a. Modify the datatype of cname

→ Alter table course

modify cname varchar(80)

- Table altered

desc course

TABLE COURSE

column	Null?	Type
CID	NOTNULL	NUMBER
CNAME	-	VARCHAR2(80)
CREDIT	-	CHAR(1)

b. Add a column coursehours with minimum coursehour grater than 45

→ Alter table course

Add coursehours varchar(50);

- Table altered

desc course

TABLE COURSE

column	Null?	Type
CID	NOTNULL	NUMBER
CNAME	-	VARCHAR2(80)
CREDIT	-	CHAR(1)
COURSEHOUR	-	VARCHAR2(50)

c. Add a column cdese

→ Alter table course

Add cdese int;

- Table altered
desc course
TABLE COURSE

column	Null?	Type
CID	NOT NULL	NUMBER
CNAME		VARCHAR2(80)
CREDIT		CHAR(1)
COURSEHOUR		VARCHAR2(50)
CDESC	-	NUMBER

3) Alter the structure of the student Table

a. Add column age with minimum age as 17
→ Alter table student
Add age varchar(17);

Table altered

b. Delete the column dob
→ Alter table student
Drop column dob;

Table altered

c. Add a column phoneno.
→ Alter table student
Add phone int;

Table altered

d. Rename phone no to contact no

→ Alter table student

Rename column Phone to contacts;

Table altered

4) Rename student table as student details

→ Alter table student

Rename to student-details;

Table altered

s) Describe the structure of the tables

- desc student-details

TABLE STUDENT-DETAILS

Column	NULL?	Type
SID	NOT NULL	NUMBER
SNAME	-	VARCHAR2(30)
GENDER	-	VARCHAR2(9)
REMARK	-	VARCHAR2(10)
MARK	-	NUMBER
CLASS	-	VARCHAR2(10)
EMAIL	NOT NULL	VARCHAR2(10)
AGE	-	VARCHAR2(11)
CONTACT	-	NUMBER

- desc course

TABLE COURSE

column	NULL?	Type
CID	NOTNULL	NUMBER
CNAME	-	VARCHAR2(80)
CREDIT	-	CHAR(1)
COURSEHOUR	-	VARCHAR2(50)
CDFSC	-	NUMBER

→ Drop table student-details and course

- Drop table student - details

Table dropped

- Drop table course

Table dropped

i) Create a table EMPLOYEE with following and specific data types and constraints required
(Emp-no, E-name, E-address, E-ph-no,
Dept-no, Dept-name, Job-id, Salary)

→ Create table Employee(Emp-no, INT Primary Key, NOT NULL, E-name varchar(30), E-address varchar(10), E-ph-no INT Not Null, Dep-no char(5), Dep-name varchar(10) default 'BSCIT', Job-id char (9), Salary varchar(10));

- desc Employee

column	Null?	Type
EMP-NO	NOT NULL	NUMBER
E-NAME	-	VARCHAR2(30)
E-ADDRESS	-	VARCHAR2(10)
E-PH-NO	NOT NULL	NUMBER
DEP-NO	-	CHAR(5)
DEP-NAME	-	VARCHAR2(10)
JOB-ID	-	CHAR(9)
SALARY	-	VARCHAR2(10)

2) Add a new column HIREDATE to the existing relation

→ Alter table Employee
Add Hiredate Dat;

Table altered

3) Change the datatype of Job-id from char to varchar2

→ Alter table Employee
modify (Job-id varchar(20));

Table altered

4) Change the name of column /field Emp-no to E-no

→ Alter table Employee
Rename column Emp-no to E-no;

Table altered

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

→ Alter table Employee
modify (Job-Id varchar(50));

Table altered
desc Employee

Column	NULL?	Type
E-NO	NOT NULL	NUMBER
E-NAME		VARCHAR2(30)
E-ADDRESS		VARCHAR2(10)
E-PH-NO	NOT NULL	NUMBER
DEP-NO	-	CHAR(5)
DEP-NAME	-	VARCHAR2(10)
JOB-ID	-	VARCHAR2(50)
SALARY	-	VARCHAR2(10)
HIREDATE	-	NUMBER

C. Create the following tables with attributes and constraints

* Department Table : Department-id varchar2(20) primarykey, Department-Name varchar2(25) with required data.

→ Create table Department(Department-id varchar(20) Primary key NOT NULL,

Department-name varchar(25) NOT NULL;

- Column	Null?	Type
DEPARTMENT-ID	NOT NULL	varchar(20)
DEPARTMENT- NAME	NOTNULL	varchar(25)

* Instructor Table: Instructor-id varchar(20) primary key. Department-id varchar(20) foreign key. last-Name varchar(25), first-Name varchar(200) must have value, Telephone varchar(20) must be unique, gender char(1) must be either 'F' or 'M', city varchar(10) default value must be 'MUMBAI',

- Column	Null?	Type
INSTRUCTORID	NOT NULL	VARCHAR 2(20)
DEPARTMENTID	-	VARCHAR 2(20)
LAST NAME	-	VARCHAR 2 (25)
FIRST NAME	-	VARCHAR 2 (200)
TELEPHONE	-	VARCHAR 2(20)
GENDER	-	CHAR(1)
CITY	-	VARCHAR 2(10)

D. Create the following described below

TABLE

Table name EMP

Column	Data Type	length	Precision	Scale	Primary Key	Null able
EMPNO	Int	-	-	-	Yes	-
ENAME	VARCHAR2(20)	10	-	-	-	NO
JOB	VARCHAR2	9	-	-	-	✓
MGR	Int	-	-	-	-	✓
HIREDATE	DATE	-	-	-	-	✓
SAL	NUMBER	7	1	2	-	✓
COMM	Int	-	-	-	-	✓
DEPTNO	Int	-	-	-	-	✓

→ create table EMP (EMPNO int not null Primary key, ENAME Varchar(20) Not null, JOB VARCHAR(9), MGR INT, HIREDATE DATE, SAL NUMBER (7,2), COMM INT, DEPTNO INT);

Table created

desc EMP

TABLE EMP

Column	NULL?	Type
EMPNO	NOT NULL	NUMBER
ENAME	NOT NULL	VARCHAR2(20)
JOB	-	VARCHAR2(9)

MGR	-	NUMBER
HIRE DATE	-	DATE
SAL	-	NUMBER(7,2)
COMM	-	NUMBER
DEPTNO	-	NUMBER

* Table Name DEPT

Column	Data Type	length	Precision	scale	Primary Key	Nullable
DEPTNO	int	4	10	2	Yes	-
DNAME	varchar	14	10	2	No	
LOC	varchar	13	10	2		✓

→ create table DEPT (DEPTNO int Not Null Primary key, DNAME varchar(14) Not Null, LOC varchar(13));

Table created
desc DEPT

TABLE DEPT

Column	Null?	Type
DEPTNO	NOT NULL	NUMBER
DEPTNAME	NOT NULL	VARCHAR2(14)
LOC	-	VARCHAR2(13)