

# PRACTICAL ASSIGNMENT -2

## QUESTION 1---

  Live SQL

Feedback Help yash.kasaudhan\_cs22@gla.ac.in 

SQL Worksheet

Clear Find Actions Save Run

```
1 CREATE TABLE Department (  
2   Deptno NUMBER(3) PRIMARY KEY,  
3   Dname VARCHAR(20) UNIQUE,  
4   Location VARCHAR(20) NOT NULL CHECK (Location IN ('Delhi','Pune','Agra'))  
5 );  
6 DESC Department;  
7
```

TABLE DEPARTMENT



Column	Null?	Type
DEPTNO	NOT NULL	NUMBER(3,0)
DNAME	-	VARCHAR2(20)
LOCATION	NOT NULL	VARCHAR2(20)


Download CSV

3 rows selected.

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SQL Worksheet

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```
16 v CREATE TABLE Employee (  
17     Empno VARCHAR(20) PRIMARY KEY CHECK(Empno LIKE 'E%'),  
18     Ename VARCHAR(20) UNIQUE,  
19     Designation VARCHAR(20) NOT NULL,  
20     SALARY NUMBER(10) DEFAULT 25000 CHECK(SALARY BETWEEN 15000 AND 50000),  
21     DOB DATE NOT NULL,  
22     Dno NUMBER(3),  
23     FOREIGN KEY (Dno) REFERENCES Department(Deptno)  
24 );  
25 DESC Employee;
```

TABLE EMPLOYEE

Column	Null?	Type
EMPNO	NOT NULL	VARCHAR2(20)
ENAME	-	VARCHAR2(20)
DESIGNATION	NOT NULL	VARCHAR2(20)
SALARY	-	NUMBER(10,0)
DOB	NOT NULL	DATE
DNO	-	NUMBER(3,0)

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```
31
32 CREATE TABLE Candidate(
33     Candidate_ID NUMBER(6) PRIMARY KEY,
34     Candidate_Name VARCHAR2(20) NOT NULL,
35     Candidate_Email VARCHAR2(30) UNIQUE CHECK (Candidate_Email LIKE '%@.%'),
36     Candidate_Dept VARCHAR(2) DEFAULT 'HR',
37     Manager_ID NUMBER(6),
38     FOREIGN KEY (Manager_ID) REFERENCES Candidate(Candidate_ID)
39 );
40 DESC Candidate;
```

TABLE CANDIDATE

Column	Null?	Type
CANDIDATE_ID	NOT NULL	NUMBER(6,0)
CANDIDATE_NAME	NOT NULL	VARCHAR2(20)
CANDIDATE_EMAIL	-	VARCHAR2(30)
CANDIDATE_DEPT	-	VARCHAR2(2)
MANAGER_ID	-	NUMBER(6,0)

# PRACTICAL ASSIGNMENT -2

## QUESTION 2---

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SQL Worksheet



Clear Find Actions Save Run


```
42 DROP TABLE College;
43 DROP TABLE Student;
44 DROP TABLE Apply;
45
46 CREATE TABLE College(
47     cName VARCHAR2(10),
48     state VARCHAR2(10),
49     enrollment INT
50 );
51
52 CREATE TABLE Student(
53     sID INT,
54     sName VARCHAR2(10),
55     GPA NUMBER(2,1),
56     sizeHS INT
57 );
58
59 CREATE TABLE Apply(
60     sID INT,
61     cName VARCHAR2(10),
62     major VARCHAR2(20)
63 );
```

Table created.

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SQL Worksheet


Clear Find Actions Save Run

66 ALTER TABLE College  
67 ADD PRIMARY KEY (cName);  
68

Table altered.

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SQL Worksheet

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```
68
69 ALTER TABLE Student
70 ADD PRIMARY KEY (sID);
71
```

Table altered.

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SQL Worksheet



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```
72 ALTER TABLE Apply
73 ADD PRIMARY KEY (sID,cName,Major);
74
```

Table altered.

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SQL Worksheet

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75  ALTER TABLE Apply

76 ADD FOREIGN KEY (sID) REFERENCES Student



77 ADD FOREIGN KEY (cName) REFERENCES college;


Table altered.



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SQL Worksheet



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```
78
79 ALTER TABLE Apply
80 MODIFY (major VARCHAR2(25));
81
```

Table altered.

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SQL Worksheet

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81  
82 ALTER TABLE Apply  
83 ADD (decision VARCHAR2(3) NOT NULL);

Table altered.

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## QUESTION 2---

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SQL Worksheet



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```
84
85 ALTER TABLE Apply
86 MODIFY (decision CHAR(1));
87
```

Table altered.

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SQL Worksheet

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```
90
91 --to find the constraint name for the foreign key created
92 v select constraint_name
93 from user_cons_columns
94 where table_name = 'APPLY'
95 and column_name = 'CNAME';
96 --selecting the constraint name and applying in drop constraint statement
97 v ALTER TABLE Apply
98 DROP CONSTRAINT SYS_C00130463101;
99
```

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SQL Worksheet



Clear Find Actions Save Run

```
100 ALTER TABLE Student
101 DROP COLUMN sizeHS;
102
```

Table altered.

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SQL Worksheet



Clear Find Actions Save Run

105 ALTER TABLE College  
106 DROP PRIMARY KEY;  
107

Table altered.

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SQL Worksheet

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109 ALTER TABLE Apply  
110 ADD UNIQUE (cname,major);  
111

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SQL Worksheet

Clear Find Actions Save Run

```
112 ALTER TABLE Apply
113 ADD FOREIGN KEY (cName) REFERENCES College;
114
```

Table altered.



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SQL Worksheet

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```
115
116 --A foreign key with "set null on delete" means that if a record in the parent table is deleted,
117 --then the corresponding records in the child table will have the foreign key fields set to null.
118 --The records in the child table will not be deleted
119 ALTER TABLE Apply
120 MODIFY(
121     CONSTRAINT withSetNullDelete
122     FOREIGN KEY (sID)
123     REFERENCES Student
124     ON DELETE SET NULL);
125
```

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SQL Worksheet


Clear Find Actions Save Run

130 ALTER TABLE College  
131 RENAME COLUMN enrollment TO enroll;  
132

Table altered.

# PRACTICAL ASSIGNMENT -2

## QUESTION 3---

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SQL Worksheet

Clear Find Actions Save Run

```
134 CREATE TABLE Customer (  
135     CustomerID VARCHAR(6) PRIMARY KEY CHECK (CustomerID LIKE 'C%'),  
136     CustomerName VARCHAR2(30) NOT NULL,  
137     DateOfReg DATE,  
138     UserId VARCHAR2(15) UNIQUE,  
139     Password VARCHAR2(15) NOT NULL  
140 )  
141  
142 CREATE TABLE BankInfo (  
143     AccountNo NUMBER(10) ,  
144     CustomerId VARCHAR2(6),  
145     CONSTRAINT CPKBankInfo PRIMARY KEY (AccountNo,CustomerId),  
146     CONSTRAINT FKBankInfo FOREIGN KEY (CustomerId) REFERENCES Customer ON DELETE CASCADE  
147 );  
148  
149 CREATE TABLE Billing (  
150     BillId NUMBER(4) PRIMARY KEY,  
151     AccountNo NUMBER(10),  
152     CustomerId VARCHAR2(6),  
153     BillDate DATE DEFAULT SYSDATE,  
154     PaymentType VARCHAR2(12) CHECK (PaymentType IN ('CreditCard','DebitCard')),  
155     CONSTRAINT CFKBilling FOREIGN KEY (AccountNo,CustomerId) REFERENCES BankInfo  
156 );
```

Table created.

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## QUESTION 3---

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SQL Worksheet

Clear Find Actions Save Run

```
159
160 CREATE TABLE Item(
161     ItemId VARCHAR2(6) PRIMARY KEY,
162     ItemName VARCHAR2(30) NOT NULL,
163     QtyOnHand NUMBER(3),
164     UnitPrice NUMBER(6,2) CHECK (UnitPrice > 0),
165     Class CHAR(1),
166     UnitOfMeasurement VARCHAR2(12),
167     ReOrderLevel NUMBER(3) CHECK (ReOrderLevel >0),
168     ReorderQty NUMBER(3) CHECK(ReorderQty >0),
169     Discount NUMBER(2,3),
170     CONSTRAINT QtyOnHandGreaterThanReOrderLevel CHECK (QtyOnHand > ReOrderLevel),
171     CONSTRAINT ClassConditionUnitPrice
172     CHECK (
173     Class IN ('A','B','C') AND
174     CASE
175         WHEN UnitPrice <100 THEN 'A'
176         WHEN UnitPrice <1000 THEN 'B'
177         WHEN UnitPrice >=1000 THEN 'C'
178     END = CLASS)
179 );
```

Table created.

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## QUESTION 3---

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Create Database Object

APPLY

Table

Status: Valid

Created 64 minutes ago

BANKINFO

Table

Status: Valid

Created 40 minutes ago

BILLING

Table

Status: Valid

Created 21 minutes ago

CANDIDATE

Table

Status: Valid

Created 3 hours ago

COLLEGE

Table

Status: Valid

Created 92 minutes ago

CUSTOMER

Table

Status: Valid

Created 40 minutes ago

DEPARTMENT

Table

Status: Valid

Created 4 hours ago

EMPLOYEE

Table

Status: Valid

Created 3 hours ago

ITEM

Table

Status: Valid

Created 95 seconds ago

STUDENT

Table

Status: Valid

Created 3 hours ago

# PRACTICAL ASSIGNMENT -2

## QUESTION 3---

Employee Table			
sno	Column Name	Datatype	Constraints
1	Fname	VARCHAR2(20)	
2	Minit		
3	Lname	VARCHAR2(20)	
4	SSn	VARCHAR2(20)	PRIMARY KEY
5	Bdate	DATE	
6	Address	VARCHAR2(30)	
7	Sex	VARCHAR2(7)	
8	Salary	INT	
9	SuperSSn	VARCHAR2(20)	FOREIGN KEY REFERENCES EMPLOYEE(SSN)
10	DepNo	VARCHAR2(20)	FOREIGN KEY REFERENCES DEPARTMENT (DepNo)

Department			
sno	Column Name	Datatype	Constraints
1	Dname	VARCHAR2(20)	
2	DepNo	VARCHAR2(20)	PRIMARY KEY
3	MgrSSN	VARCHAR2(20)	
4	MgrSDate	DATE	

Project			
sno	Column Name	Datatype	Constraints
1	Pname	VARCHAR2(20)	
2	Pnumber	INT	PRIMARY KEY
3	Plocation	VARCHAR2(20)	
4	DepNo	VARCHAR2(20)	FOREIGN KEY REFERENCES DEPARTMENT (DepNo)

## PRACTICAL ASSIGNMENT -2

### QUESTION 3---

Dependent			
sno	Column Name	Datatype	Constraints
1	ESSN	VARCHAR2(20)	PRIMARY KEY
2	Dependent_name	VARCHAR2(20)	PRIMARY KEY
3	Sex	VARCHAR2(20)	
4	Bdate	VARCHAR2(20)	
5	Relationship	VARCHAR2(20)	

Works_on				
sno	Column Name	Datatype	Constraints	
1	ESSN	VARCHAR2(20)	FOREIGN KEY REFERENCES EMPLOYEE (SSN)	PRIMARY KEY
2	Pno	INT	FOREIGN KEY REFERENCES PROJECT(Pnumber)	
3	Hours	NUMBER(2)		

Dept_Location				
sno	Column Name	Datatype	Constraints	
1	DepNo	VARCHAR2(20)	FOREIGN KEY REFERENCES DEPARTMENT(DepNO)	PRIMARY KEY
2	Dlocation	VARCHAR2(20)		