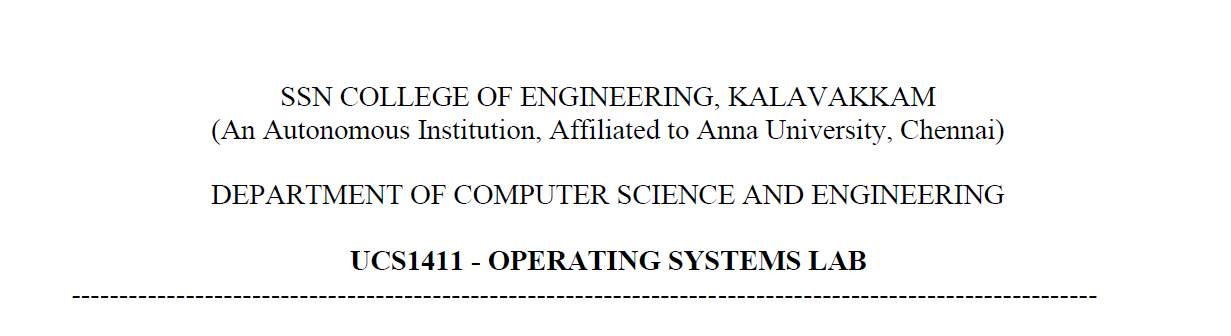
****

UCS1412 – DBMS Lab

Assignment – 1

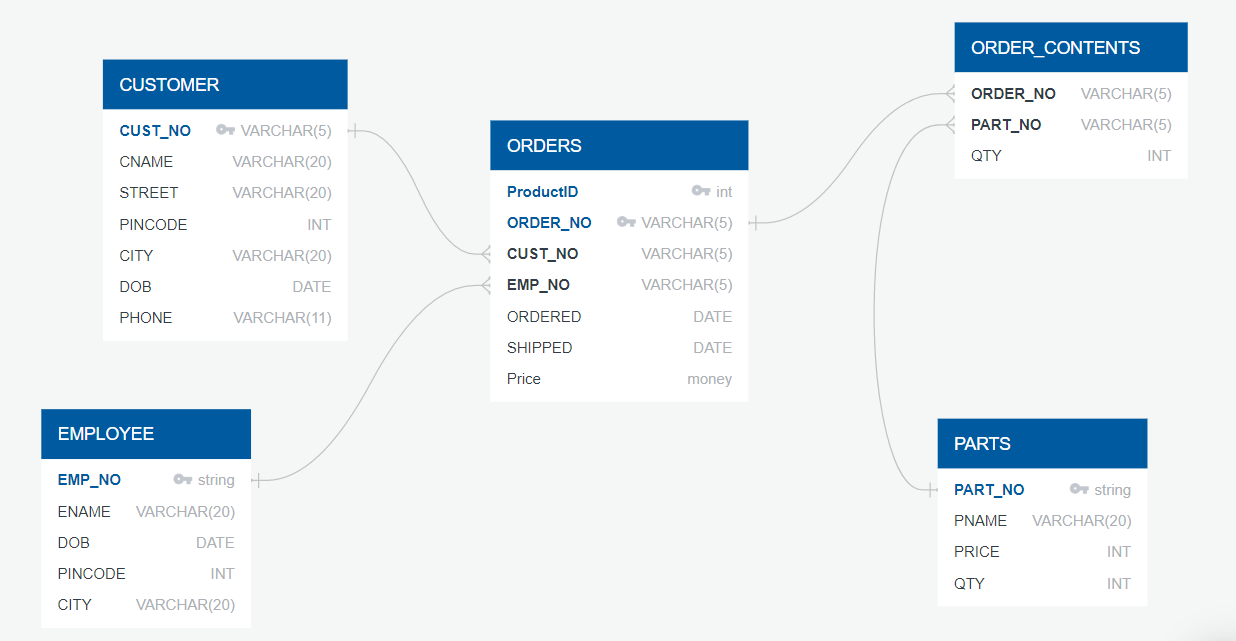
Name: Jayannthan P T

Dept: CSE ‘A’

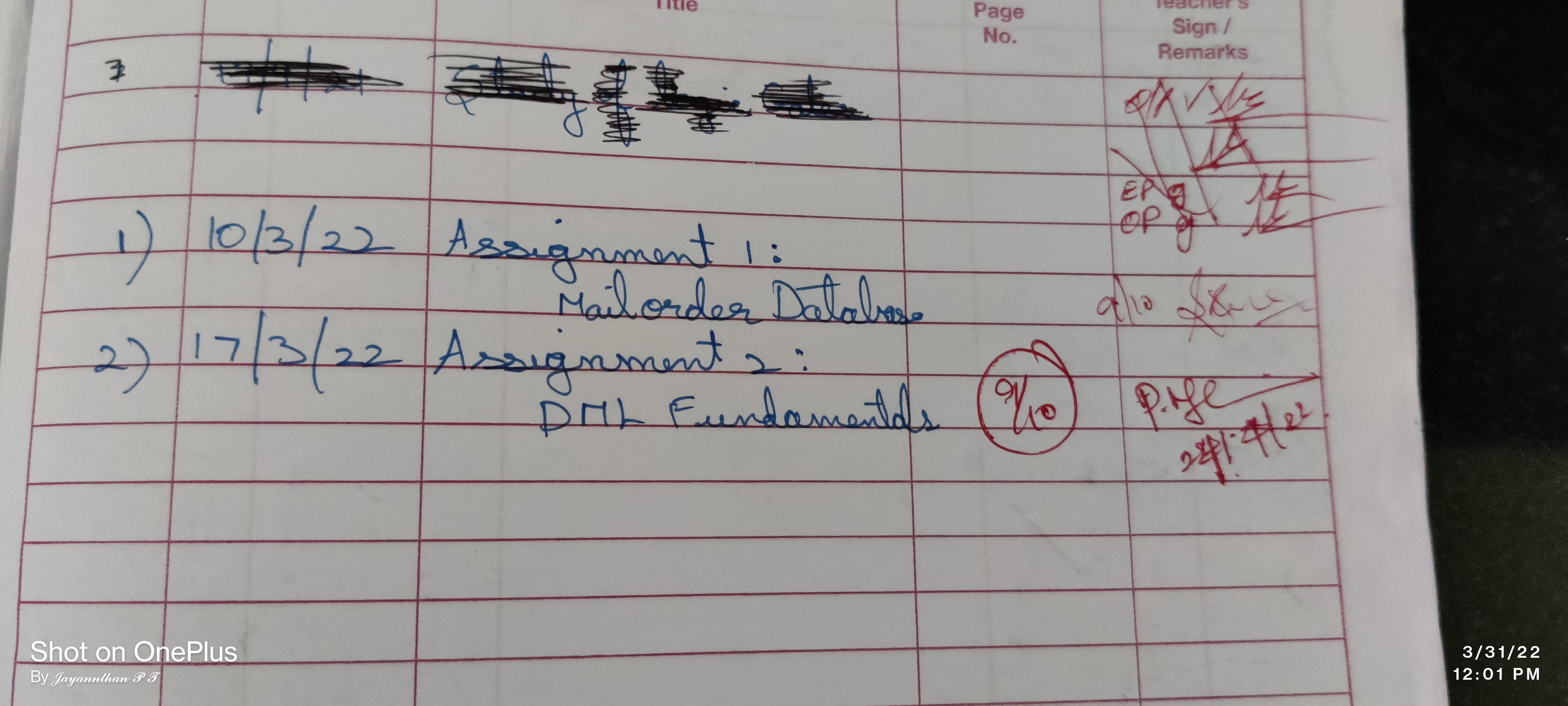
Roll No.: 205001049

**Title:** DDL for Mail Order Database

**Schema Diagram:**

****

**Observation Index Correction:**



**Spool File Output:**

SQL> REM \*\*\*DROPPING TABLES\*\*\*

SQL>

SQL> DROP TABLE ORDER\_CONTENTS;

Table dropped.

SQL> DROP TABLE ORDERS;

Table dropped.

SQL> DROP TABLE PARTS;

Table dropped.

SQL> DROP TABLE CUSTOMER;

Table dropped.

SQL> DROP TABLE EMPLOYEE;

Table dropped.

SQL>

SQL>

SQL> REM \*\*\*CREATING TABLE EMPLOYEE\*\*\*

SQL>

SQL> CREATE TABLE EMPLOYEE(

  2  EMP\_NO VARCHAR(5) **CONSTRAINT** E\_PRIMEKEY PRIMARY KEY,

  3  ENAME VARCHAR(20),

  4  DOB DATE,

  5  PINCODE INT,

  6  CITY VARCHAR(20),

  7  **CONSTRAINT** ESTART\_LETTER **CHECK**(EMP\_NO LIKE 'E%')

  8  );

Table created.

SQL> DESC EMPLOYEE;

 Name                                      Null?    Type

*----------------------------------------- -------- ----------------------------*

 EMP\_NO                                    NOT NULL **VARCHAR2**(5)

 ENAME                                              **VARCHAR2**(20)

 DOB                                                DATE

 PINCODE                                            **NUMBER**(38)

 CITY                                               **VARCHAR2**(20)

SQL>

SQL> REM \*\*\*INSERTING VALUES INTO EMPLOYEE\*\*\*

SQL>

SQL> INSERT INTO EMPLOYEE VALUES

  2  ('E01','Tony','05-DEC-1992',601101,'Chennai');

1 row created.

SQL> INSERT INTO EMPLOYEE VALUES

  2  ('E02','Steve','23-MAR-1989',601050,'Madurai');

1 row created.

SQL> INSERT INTO EMPLOYEE VALUES

  2  ('E03','Peter','17-JUN-1995',601302,'Trichy');

1 row created.

SQL>

SQL> INSERT INTO EMPLOYEE VALUES

  2  ('E04','Chris','07-JAN-1985',601023,'Kovai');

1 row created.

SQL>

SQL>

SQL> REM \*\*\***check** **constraint** ESTART\_LETTER\*\*\*

SQL> INSERT INTO Employee VALUES ('03','Roshan','29/MAR/2022',600006,'trichy');

INSERT INTO Employee VALUES ('03','Roshan','29/MAR/2022',600006,'trichy')

\*

ERROR at **line** 1:

ORA-02290: **check** **constraint** (SYSTEM.ESTART\_LETTER) violated

SQL>

SQL>

SQL> REM \*\*\*CREATING TABLE CUSTOMER\*\*\*

SQL>

SQL> CREATE TABLE CUSTOMER(

  2  CUST\_NO VARCHAR(5) **CONSTRAINT** C\_PRIMEKEY PRIMARY KEY,

  3  CNAME VARCHAR(20),

  4  STREET VARCHAR(20),

  5  PINCODE INT,

  6  CITY VARCHAR(20),

  7  DOB DATE,

  8  PHONE VARCHAR(11) **CONSTRAINT** PHONE\_UNIQUE UNIQUE,

  9  **CONSTRAINT** CSTART\_LETTER **CHECK**(CUST\_NO LIKE 'C%'));

Table created.

SQL> DESC CUSTOMER;

 Name                                      Null?    Type

*----------------------------------------- -------- ----------------------------*

 CUST\_NO                                   NOT NULL **VARCHAR2**(5)

 CNAME                                              **VARCHAR2**(20)

 STREET                                             **VARCHAR2**(20)

 PINCODE                                            **NUMBER**(38)

 CITY                                               **VARCHAR2**(20)

 DOB                                                DATE

 PHONE                                              **VARCHAR2**(11)

SQL>

SQL> REM \*\*\*INSERTING VALUES INTO CUSTOMER\*\*\*

SQL>

SQL> INSERT INTO CUSTOMER VALUES

  2  ('C01','Sam','Street1',501101,'Delhi','20-Jul-1999',9673125647);

1 row created.

SQL> INSERT INTO CUSTOMER VALUES

  2  ('C02','Shyam','Street2',501060,'Mumbai','19-Oct-1979',9670005647);

1 row created.

SQL> INSERT INTO CUSTOMER VALUES

  2  ('C03','Stark','Street3',501101,'Kolkata','20-Jul-1999',9848949218);

1 row created.

SQL> INSERT INTO CUSTOMER VALUES

  2  ('C04','Gwen','Street4',501101,'Hyderabad','20-Jul-1999',9676489841);

1 row created.

SQL>

SQL>

SQL> REM \*\*\***check** **constraint** C\_PRIMEKEY\*\*\*

SQL> INSERT INTO CUSTOMER VALUES ('C03','Te','Street',620265,'Madurai','30/JUL/2022',9998865646);

INSERT INTO CUSTOMER VALUES ('C03','Te','Street',620265,'Madurai','30/JUL/2022',9998865646)

\*

ERROR at **line** 1:

ORA-00001: unique **constraint** (SYSTEM.C\_PRIMEKEY) violated

SQL> REM \*\*\***check** **constraint** CSTART\_LETTER\*\*\*

SQL> INSERT INTO CUSTOMER VALUES ('04','Tem','Street',620275,'pondicherry','30/JUL/2022',999866546);

INSERT INTO CUSTOMER VALUES ('04','Tem','Street',620275,'pondicherry','30/JUL/2022',999866546)

\*

ERROR at **line** 1:

ORA-02290: **check** **constraint** (SYSTEM.CSTART\_LETTER) violated

SQL>

SQL>

SQL>

SQL> REM \*\*\*CREATING TABLE PARTS\*\*\*

SQL>

SQL> CREATE TABLE PARTS(

  2  PART\_NO VARCHAR(5) **CONSTRAINT** P\_PRIMEKEY PRIMARY KEY,

  3  PNAME VARCHAR(20),

  4  PRICE INT **CONSTRAINT** PRICENOTNULL NOT NULL,

  5  QTY INT ,

  6  **CONSTRAINT** QTY\_MORE **CHECK**(QTY > 0),

  7  **CONSTRAINT** PSTART\_LETTER **CHECK**(PART\_NO LIKE 'P%'));

Table created.

SQL> DESC PARTS;

 Name                                      Null?    Type

*----------------------------------------- -------- ----------------------------*

 PART\_NO                                   NOT NULL **VARCHAR2**(5)

 PNAME                                              **VARCHAR2**(20)

 PRICE                                     NOT NULL **NUMBER**(38)

 QTY                                                **NUMBER**(38)

SQL>

SQL>

SQL> REM \*\*\*INSERTING VALUES INTO PARTS\*\*\*

SQL>

SQL> INSERT INTO PARTS VALUES

  2  ('P01','Screw',70,1000);

1 row created.

SQL> INSERT INTO PARTS VALUES

  2  ('P02','Pipe',50,1500);

1 row created.

SQL> INSERT INTO PARTS VALUES

  2  ('P03','Wire',10,1200);

1 row created.

SQL> INSERT INTO PARTS VALUES

  2  ('P04','Wood',90,1100);

1 row created.

SQL>

SQL>

SQL> REM \*\*\***check** **constraint** PSTART\_LETTER\*\*\*

SQL> INSERT INTO PARTS VALUES ('01', 'ABD', 2500, 25);

INSERT INTO PARTS VALUES ('01', 'ABD', 2500, 25)

\*

ERROR at **line** 1:

ORA-02290: **check** **constraint** (SYSTEM.PSTART\_LETTER) violated

SQL> REM \*\*\***check** **constraint** P\_PRIMEKEY\*\*\*

SQL> INSERT INTO PARTS VALUES ('P04', 'ABD', 2500, 25);

INSERT INTO PARTS VALUES ('P04', 'ABD', 2500, 25)

\*

ERROR at **line** 1:

ORA-00001: unique **constraint** (SYSTEM.P\_PRIMEKEY) violated

SQL>

SQL>

SQL> REM \*\*\*CREATING TABLE ORDERS\*\*\*

SQL>

SQL> CREATE TABLE ORDERS(

  2  ORDER\_NO VARCHAR(5) **CONSTRAINT** O\_PRIMEKEY PRIMARY KEY,

  3  CUST\_NO VARCHAR(5),

  4  EMP\_NO VARCHAR(5),

  5  ORDERED DATE,

  6  SHIPPED DATE,

  7  **CONSTRAINT** DATE\_CHECK **CHECK**(SHIPPED > ORDERED),

  8  **CONSTRAINT** OSTART\_LETTER **CHECK**(ORDER\_NO LIKE 'O%'),

  9  **CONSTRAINT** FORKEYEMP **FOREIGN KEY**(EMP\_NO) **REFERENCES** EMPLOYEE(EMP\_NO),

 10  **CONSTRAINT** FORKEYCUS **FOREIGN KEY**(CUST\_NO) **REFERENCES** CUSTOMER(CUST\_NO));

Table created.

SQL> DESC ORDERS;

 Name                                      Null?    Type

*----------------------------------------- -------- ----------------------------*

 ORDER\_NO                                  NOT NULL **VARCHAR2**(5)

 CUST\_NO                                            **VARCHAR2**(5)

 EMP\_NO                                             **VARCHAR2**(5)

 ORDERED                                            DATE

 SHIPPED                                            DATE

SQL>

SQL>

SQL> REM \*\*\*INSERTING VALUES INTO ORDERS\*\*\*

SQL>

SQL> INSERT INTO ORDERS VALUES

  2  ('O01','C01','E02','26-Jan-2022','3-Feb-2022');

1 row created.

SQL> INSERT INTO ORDERS VALUES

  2  ('O02','C03','E01','29-Jan-2022','8-Feb-2022');

1 row created.

SQL> INSERT INTO ORDERS VALUES

  2  ('O03','C02','E04','8-Feb-2022','19-Feb-2022');

1 row created.

SQL> INSERT INTO ORDERS VALUES

  2  ('O04','C04','E03','13-Jan-2022','24-Jan-2022');

1 row created.

SQL>

SQL>

SQL> REM \*\*\***check** **constraint** O\_PRIMEKEY\*\*\*

SQL> INSERT INTO Orders VALUES('O03', 'C02', 'E03', '12/JAN/2022', '24/JAN/2022');

INSERT INTO Orders VALUES('O03', 'C02', 'E03', '12/JAN/2022', '24/JAN/2022')

\*

ERROR at **line** 1:

ORA-00001: unique **constraint** (SYSTEM.O\_PRIMEKEY) violated

SQL> REM \*\*\***check** **constraint** DATE\_CHECK\*\*\*

SQL> INSERT INTO Orders VALUES('O04','C04','E03','12/JAN/2022', '10/JAN/2022');

INSERT INTO Orders VALUES('O04','C04','E03','12/JAN/2022', '10/JAN/2022')

\*

ERROR at **line** 1:

ORA-02290: **check** **constraint** (SYSTEM.DATE\_CHECK) violated

SQL> REM \*\*\***check** **constraint** FOREIGN KEYS\*\*\*

SQL> INSERT INTO ORDERS VALUES ('O05','C00','E03','13-Jan-2022','24-Jan-2022');

INSERT INTO ORDERS VALUES ('O05','C00','E03','13-Jan-2022','24-Jan-2022')

\*

ERROR at **line** 1:

ORA-02291: integrity **constraint** (SYSTEM.FORKEYCUS) violated - parent key not

found

SQL> INSERT INTO ORDERS VALUES ('O05','C01','E00','13-Jan-2022','24-Jan-2022');

INSERT INTO ORDERS VALUES ('O05','C01','E00','13-Jan-2022','24-Jan-2022')

\*

ERROR at **line** 1:

ORA-02291: integrity **constraint** (SYSTEM.FORKEYEMP) violated - parent key not

found

SQL>

SQL> REM \*\*\*CREATING TABLE ORDER\_CONTENTS\*\*\*

SQL>

SQL> CREATE TABLE ORDER\_CONTENTS(

  2  ORDER\_NO VARCHAR(5),

  3  PART\_NO VARCHAR(5),

  4  QTY INT,

  5  **CONSTRAINT** FORKEYORD **FOREIGN KEY**(ORDER\_NO) **REFERENCES** ORDERS(ORDER\_NO),

  6  **CONSTRAINT** FORKEYPART **FOREIGN KEY**(PART\_NO) **REFERENCES** PARTS(PART\_NO),

  7  **CONSTRAINT** ORDERCONTENTSPRIME PRIMARY KEY(ORDER\_NO ,PART\_NO));

Table created.

SQL> DESC ORDER\_CONTENTS;

 Name                                      Null?    Type

*----------------------------------------- -------- ----------------------------*

 ORDER\_NO                                  NOT NULL **VARCHAR2**(5)

 PART\_NO                                   NOT NULL **VARCHAR2**(5)

 QTY                                                **NUMBER**(38)

SQL>

SQL> REM \*\*\*INSERTING VALUES INTO ORDER\_CONTENTS\*\*\*

SQL>

SQL> INSERT INTO ORDER\_CONTENTS VALUES

  2  ('O01','P02', 50);

1 row created.

SQL> INSERT INTO ORDER\_CONTENTS VALUES

  2  ('O03','P01', 45);

1 row created.

SQL> INSERT INTO ORDER\_CONTENTS VALUES

  2  ('O02','P04', 55);

1 row created.

SQL> INSERT INTO ORDER\_CONTENTS VALUES

  2  ('O01','P03', 78);

1 row created.

SQL> INSERT INTO ORDER\_CONTENTS VALUES

  2  ('O04','P02', 25);

1 row created.

SQL>

SQL> REM \*\*\***check** **constraint** FOREIGN KEYS\*\*\*

SQL> INSERT INTO ORDER\_CONTENTS VALUES('O03', 'P001',4);

INSERT INTO ORDER\_CONTENTS VALUES('O03', 'P001',4)

\*

ERROR at **line** 1:

ORA-02291: integrity **constraint** (SYSTEM.FORKEYPART) violated - parent key not

found

SQL> INSERT INTO ORDER\_CONTENTS VALUES('O00', 'P04',4);

INSERT INTO ORDER\_CONTENTS VALUES('O00', 'P04',4)

\*

ERROR at **line** 1:

ORA-02291: integrity **constraint** (SYSTEM.FORKEYORD) violated - parent key not

found

SQL>

SQL>

SQL> REM \*\*\*ADDING REORDER\_LEVEL IN PARTS\*\*\*

SQL>

SQL> ALTER TABLE PARTS

  2  ADD REORDER\_LEVEL INT;

Table altered.

SQL>

SQL>

SQL> REM \*\*\*ADDING HIRE\_DATE IN EMPLOYEE\*\*\*

SQL>

SQL> ALTER TABLE EMPLOYEE

  2  ADD HIRE\_DATE DATE;

Table altered.

SQL>

SQL>

SQL> REM \*\*\*MODIFYING SIZE OF ENAME IN CUSTOMER\*\*\*

SQL>

SQL> ALTER TABLE CUSTOMER

  2  MODIFY (CNAME  VARCHAR(25));

Table altered.

SQL>

SQL>

SQL> REM \*\*\*DELETING DOB IN CUSTOMER\*\*\*

SQL>

SQL> ALTER TABLE CUSTOMER

  2  DROP COLUMN DOB;

Table altered.

SQL>

SQL>

SQL> REM \*\*\*MODIFYING SHIPPED NOT NULL IN ORDERS\*\*\*

SQL>

SQL> ALTER TABLE ORDERS

  2  MODIFY (SHIPPED DATE **CONSTRAINT** RECIEVENOTNULL NOT NULL);

Table altered.

SQL>

SQL>

SQL>

SQL>

SQL> REM \*\*\*CASCADING\*\*\*

SQL>

SQL> ALTER TABLE ORDER\_CONTENTS

  2  DROP **CONSTRAINT** FORKEYORD;

Table altered.

SQL>

SQL>

SQL> ALTER TABLE ORDER\_CONTENTS

  2  ADD **CONSTRAINT** FORKEYORD **FOREIGN KEY**(ORDER\_NO) **REFERENCES** ORDERS(ORDER\_NO) **ON DELETE CASCADE**;

Table altered.

SQL>

SQL>

SQL>

SQL> REM \*\*\*VIEW TABLES\*\*\*

SQL>

SQL> select \* from employee;

EMP\_N ENAME                DOB          PINCODE CITY                 HIRE\_DATE

*----- -------------------- --------- ---------- -------------------- ---------*

E01   Tony                 05-DEC-92     601101 Chennai

E02   Steve                23-MAR-89     601050 Madurai

E03   Peter                17-JUN-95     601302 Trichy

E04   Chris                07-JAN-85     601023 Kovai

SQL>

SQL> select \* from customer;

CUST\_ CNAME                     STREET                  PINCODE

*----- ------------------------- -------------------- ----------*

CITY                 PHONE

*-------------------- -----------*

C01   Sam                       Street1                  501101

Delhi                9673125647

C02   Shyam                     Street2                  501060

Mumbai               9670005647

C03   Stark                     Street3                  501101

Kolkata              9848949218

CUST\_ CNAME                     STREET                  PINCODE

*----- ------------------------- -------------------- ----------*

CITY                 PHONE

*-------------------- -----------*

C04   Gwen                      Street4                  501101

Hyderabad            9676489841

SQL>

SQL> select \* from parts;

PART\_ PNAME                     PRICE        QTY REORDER\_LEVEL

*----- -------------------- ---------- ---------- -------------*

P01   Screw                        70       1000

P02   Pipe                         50       1500

P03   Wire                         10       1200

P04   Wood                         90       1100

SQL> select \* from orders;

ORDER CUST\_ EMP\_N ORDERED   SHIPPED

*----- ----- ----- --------- ---------*

O01   C01   E02   26-JAN-22 03-FEB-22

O02   C03   E01   29-JAN-22 08-FEB-22

O03   C02   E04   08-FEB-22 19-FEB-22

O04   C04   E03   13-JAN-22 24-JAN-22

SQL>

SQL> select \* from order\_contents;

ORDER PART\_        QTY

*----- ----- ----------*

O01   P02           50

O03   P01           45

O02   P04           55

O01   P03           78

O04   P02           25

SQL>

SQL>

SQL>

SQL> REM \*\*\*CHECKING **ON DELETE CASCADE**\*\*\*

SQL> DELETE FROM ORDERS WHERE ORDER\_NO='O01';

1 row deleted.

SQL>

SQL>

SQL> select \* from orders;

ORDER CUST\_ EMP\_N ORDERED   SHIPPED

*----- ----- ----- --------- ---------*

O02   C03   E01   29-JAN-22 08-FEB-22

O03   C02   E04   08-FEB-22 19-FEB-22

O04   C04   E03   13-JAN-22 24-JAN-22

SQL> select \* from order\_contents;

ORDER PART\_        QTY

*----- ----- ----------*

O03   P01           45

O02   P04           55

O04   P02           25

SQL> spool off