2.

```
 - - create the table
CREATE TABLE qOne
    (
    Object char(255) NOT NULL,
    Dependent char(255) NOT NULL,
     CONSTRAINT obj_pk PRIMARY KEY (Object),
     CONSTRAINT dep_fk FOREIGN KEY (Dependent)
    REFERENCES qOne(Object) DISABLE
);

- - insert content into the table

   INSERT ALL
    INTO qOne(Object, Dependent) Values ('e2','e1')
    INTO qOne(Object, Dependent) Values ('e3','e2')
    INTO qOne(Object, Dependent) Values ('e1','e3')
    SELECT * FROM dual;

 - - modify the table, enable the constraint
ALTER TABLE qOne
ENABLE CONSTRAINT dep_fk;
```

3.

```
                - - CREATE THE THREE TABLES

SQL> CREATE TABLE Suppliers (
  2  S# varchar(255) NOT NULL,
  3  SNAME varchar(255),
  4  STATUS int,
  5  CITY varchar(255),
  6  PRIMARY KEY (S#)
  7  );


SQL> CREATE TABLE Parts(
  2  P# varchar(255) NOT NULL,
  3  PNAME varchar(255),
  4  Color varchar(255),
  5  Weight int,
  6  City varchar(255),
```

```
  7  PRIMARY KEY (P#)
  8  );

SQL> CREATE TABLE sp (
  2  S# varchar(255),
  3  p# varchar(255),
  4  QTY int,
  5  FOREIGN KEY ( S#) references Suppliers (S#),
  6  FOREIGN KEY ( p#) references Parts (P#),
  7  PRIMARY KEY (S#)
  8  );
```

– – SET ADDITIONAL CONSTRAINTS

```
– – check that the status of the supplier is greater than zero
ALTER TABLE Suppliers
ADD CONSTRAINT check_Status (status > 0);


– – ensure that the name of the supplier is not null
ALTER TABLE Suppliers
MODIFY SNAME varchar NOT NULL;

– – check that the only colours to be used for the parts  tables are
red, blue or green

ALTER TABLE Parts
ADD CONSTRAINT check_color CHECK (Color IN ('Red', 'Blue', 'Green'));


 – – check that the #p value has two character
ALTER TABLE Parts
ADD CONSTRAINT check_hashP CHECK (LENGTH(P#) = 2);

– – check that the qty for the supplier part is at least 100 to 400
units
ALTER TABLE sp
ADD CONSTRAINT check_qty CHECK (QTY BETWEEN 100 and 400);
```

– – POPULATE TABLES

```
INSERT ALL
```

```
INTO Suppliers (s#, sname, status, city) VALUES ('s1',
'Smith', 20, 'London')
INTO Suppliers (s#, sname, status, city) VALUES ('s2',
'Jones', 30, 'Paris')
INTO Suppliers (s#, sname, status, city) VALUES ('s3',
'Blake', 30, 'Paris')
INTO Suppliers (s#, sname, status, city) VALUES ('s4',
'Clark', 20, 'London')
INTO Suppliers (s#, sname, status, city) VALUES ('s5',
'Adams', 30, 'Athens')

INTO Parts (p#, pname, color, weight, city) VALUES ('p1',
'Nut', 'Red', 12.0, 'London')
INTO Parts (p#, pname, color, weight, city) VALUES ('p2',
'Bolt', 'Green', 17.0, 'Paris')
INTO Parts (p#, pname, color, weight, city) VALUES ('p3',
'Screw', 'Blue', 17.0, 'Oslo')
INTO Parts (p#, pname, color, weight, city) VALUES ('p4',
'Screw', 'Red', 14.0, 'London')
INTO Parts (p#, pname, color, weight, city) VALUES ('p5',
'Cam', 'Blue', 12.0, 'Paris')
INTO Parts (p#, pname, color, weight, city) VALUES ('p6',
'Cog', 'Red', 19.0, 'London')

INTO sp (s#, p#, qty) VALUES ('s1', 'p1', 300)
INTO sp (s#, p#, qty) VALUES ('s1', 'p2', 200)
INTO sp (s#, p#, qty) VALUES ('s1', 'p3', 400)
INTO sp (s#, p#, qty) VALUES ('s1', 'p4', 200)
INTO sp (s#, p#, qty) VALUES ('s1', 'p5', 100)
INTO sp (s#, p#, qty) VALUES ('s1', 'p6', 100)
INTO sp (s#, p#, qty) VALUES ('s2', 'p1', 300)
INTO sp (s#, p#, qty) VALUES ('s2', 'p2', 400)
INTO sp (s#, p#, qty) VALUES ('s3', 'p2', 200)
INTO sp (s#, p#, qty) VALUES ('s4', 'p2', 200)
INTO sp (s#, p#, qty) VALUES ('s4', 'p4', 300)
INTO sp (s#, p#, qty) VALUES ('s4', 'p5', 400)

 SELECT * FROM dual;


- - total constraints = Primary Key + Foreign Key + NOT
NULL + Check_Status + Modify SName + Check_color +
check_hashP + check_qty = 8 unique constrains
```