```
postgres=# \i C:/assignment3.sql
CREATE DATABASE
psql (15.8, server 17rc1)
WARNING: psql major version 15, server major version 17.
         Some psql features might not work.
You are now connected to database "subashreevs" as user "postgres".
CREATE TABLE
CREATE TABLE
CREATE TABLE
CREATE TABLE
CREATE TABLE
CREATE TABLE
CREATE TABLE
CREATE TABLE
INSERT 0 19
INSERT 0 8
INSERT 0 19
INSERT 0 15
INSERT 0 5
INSERT 0 46
INSERT 0 13
INSERT 0 66
Problem 1
CREATE VIEW
     city       | sid
--------------+------
 Bloomington  | 1008
 Bloomington  | 1014
 Bloomington  | 1018
 Chicago      | 1006
 Chicago      | 1010
 Chicago      | 1016
 Cupertino    | 1002
 Denver       | 1015
 Indianapolis | 1013
 LosGatos     | 1007
 MountainView | 1005
 NewYork      | 1019
 Seattle      | 1003
 Seattle      | 1004
(14 rows)


Problem 2
CREATE VIEW
CREATE VIEW
 sid  | pname
------+--------
 1001 | Jean
 1002 | Vidya
 1003 | Anna
 1004 | Qin
 1008 | Emma
 1015 | Chris
 1016 | YinYue
 1018 | Arif
(8 rows)
```

Problem 3
CREATE VIEW

```
         s1          |         s2
-------------------+-------------------
 AI                 | AI
 Databases          | Databases
 Databases          | Networks
 Networks           | Databases
 Networks           | Networks
 OperatingSystems   | OperatingSystems
 Programming        | Programming
(7 rows)
```

Problem 4

```
 sid
------
 1001
 1004
 1010
 1013
 1015
(5 rows)
```

Problem 5

```
   cname
-----------
 Amazon
 Apple
 Microsoft
 Netflix
(4 rows)
```

Problem 6

```
    c     |   a
---------+-------
 Amazon  | 55000
 Apple   | 51250
 Google  | 70000
 Netflix | 60000
 Yahoo   |
(5 rows)
```

Problem 7
(a)
CREATE FUNCTION
(b)

```
 sid  | salary | numberofskills
------+--------+----------------
 1001 |  65000 |              2
 1002 |  45000 |              2
 1009 |  60000 |              3
 1012 |  50000 |              3
 1014 |  50000 |              4
 1018 |  50000 |              1
(6 rows)
```

```
 sid  | salary | numberofskills
------+--------+----------------
 1003 |  55000 |              0
 1004 |  55000 |              2
 1006 |  55000 |              3
 1008 |  50000 |              0
 1010 |  55000 |              2
 1015 |  60000 |              2
 1016 |  55000 |              2
(7 rows)


 sid | salary | numberofskills
-----+--------+----------------
(0 rows)


(c)
CREATE FUNCTION
(d)
 student_sid | student_salary | numberofskills
-------------+----------------+----------------
        1001 |          65000 |              2
        1002 |          45000 |              2
        1009 |          60000 |              3
        1012 |          50000 |              3
        1014 |          50000 |              4
        1018 |          50000 |              1
(6 rows)


 student_sid | student_salary | numberofskills
-------------+----------------+----------------
        1003 |          55000 |              0
        1004 |          55000 |              2
        1006 |          55000 |              3
        1008 |          50000 |              0
        1010 |          55000 |              2
        1015 |          60000 |              2
        1016 |          55000 |              2
(7 rows)


 student_sid | student_salary | numberofskills
-------------+----------------+----------------
(0 rows)


(e)
CREATE FUNCTION
    c    |  p
---------+------
 Amazon  | 1006
 Google  | 1011
 Netflix | 1017
 Yahoo   | 1013
(4 rows)
```

```
Problem 8
CREATE VIEW
CREATE VIEW
 sid  | pname
------+-------
 1011 | Nick
 1018 | Arif
(2 rows)


Problem 9
CREATE VIEW
CREATE VIEW
   cname
-----------
 Microsoft
 ACM
 Google
 Yahoo
 IBM
(5 rows)


THIS WILL ALSO CONTAIN THE COMPANIES WHICH DO NOT HAVE ANY MANAGERS EMPLOYED.
Problem 10
CREATE VIEW
CREATE VIEW
 sid  |  pname
------+----------
 1002 | Vidya
 1004 | Qin
 1007 | Danielle
 1010 | Linda
 1016 | YinYue
 1018 | Arif
 1019 | John
(7 rows)


Problem 11
CREATE VIEW
CREATE FUNCTION
  cname
---------
 ACM
 Google
 IBM
 Netflix
(4 rows)


THIS WILL ALSO CONTAIN THE COMPANIES WHICH DO NOT HAVE ANY EMPLOYEEs.
Problem 12
CREATE VIEW
  p1  |  p2
------+------
 1002 | 1010
```

```
1002 | 1019
1002 | 1007
1002 | 1001
1002 | 1015
1002 | 1016
1002 | 1004
1009 | 1012
1009 | 1006
1009 | 1017
1004 | 1010
1004 | 1019
1004 | 1007
1004 | 1001
1004 | 1015
1004 | 1016
1004 | 1002
1016 | 1010
1016 | 1019
1016 | 1007
1016 | 1001
1016 | 1015
1016 | 1004
1016 | 1002
1015 | 1010
1015 | 1019
1015 | 1007
1015 | 1001
1015 | 1016
1015 | 1004
1015 | 1002
1001 | 1010
1001 | 1019
1001 | 1007
1001 | 1015
1001 | 1016
1001 | 1004
1001 | 1002
1017 | 1012
1017 | 1006
1017 | 1009
1007 | 1010
1007 | 1019
1007 | 1001
1007 | 1015
1007 | 1016
1007 | 1004
1007 | 1002
1013 | 1014
1013 | 1005
1019 | 1010
1019 | 1007
1019 | 1001
1019 | 1015
1019 | 1016
1019 | 1004
1019 | 1002
1006 | 1012
1006 | 1017
1006 | 1009
```

```
 1005 | 1014
 1005 | 1013
 1012 | 1006
 1012 | 1017
 1012 | 1009
 1014 | 1005
 1014 | 1013
 1010 | 1019
 1010 | 1007
 1010 | 1001
 1010 | 1015
 1010 | 1016
 1010 | 1004
 1010 | 1002
(74 rows)


Problem 13
CREATE FUNCTION
CREATE TRIGGER
psql:C:/assignment3.sql:718: ERROR:  Primary key constraint violated: cname Amazon
already exists
CONTEXT:  PL/pgSQL function check_company_key_constraint() line 5 at RAISE
Problem 14
CREATE FUNCTION
CREATE TRIGGER
CREATE FUNCTION
CREATE TRIGGER
psql:C:/assignment3.sql:761: ERROR:  Referential integrity constraint violated:
cname Amadeus does not exist in Company
CONTEXT:  PL/pgSQL function check_company_exists() line 5 at RAISE
Problem 15
CREATE TABLE
CREATE TABLE
CREATE TABLE
CREATE FUNCTION
CREATE TRIGGER
CREATE FUNCTION
CREATE TRIGGER
INSERT 0 1
INSERT 0 1
 a
----
 15
(1 row)


INSERT 0 1
INSERT 0 1
 a
----
 15
(1 row)


INSERT 0 1
INSERT 0 1
 a
----
```

```
  15
(1 row)


INSERT 0 1
INSERT 0 1
   a
-----
   15
 101
(2 rows)


DROP TABLE
DROP TABLE
DROP TABLE
psql (15.8, server 17rc1)
WARNING: psql major version 15, server major version 17.
         Some psql features might not work.
You are now connected to database "postgres" as user "postgres".
DROP DATABASE
```