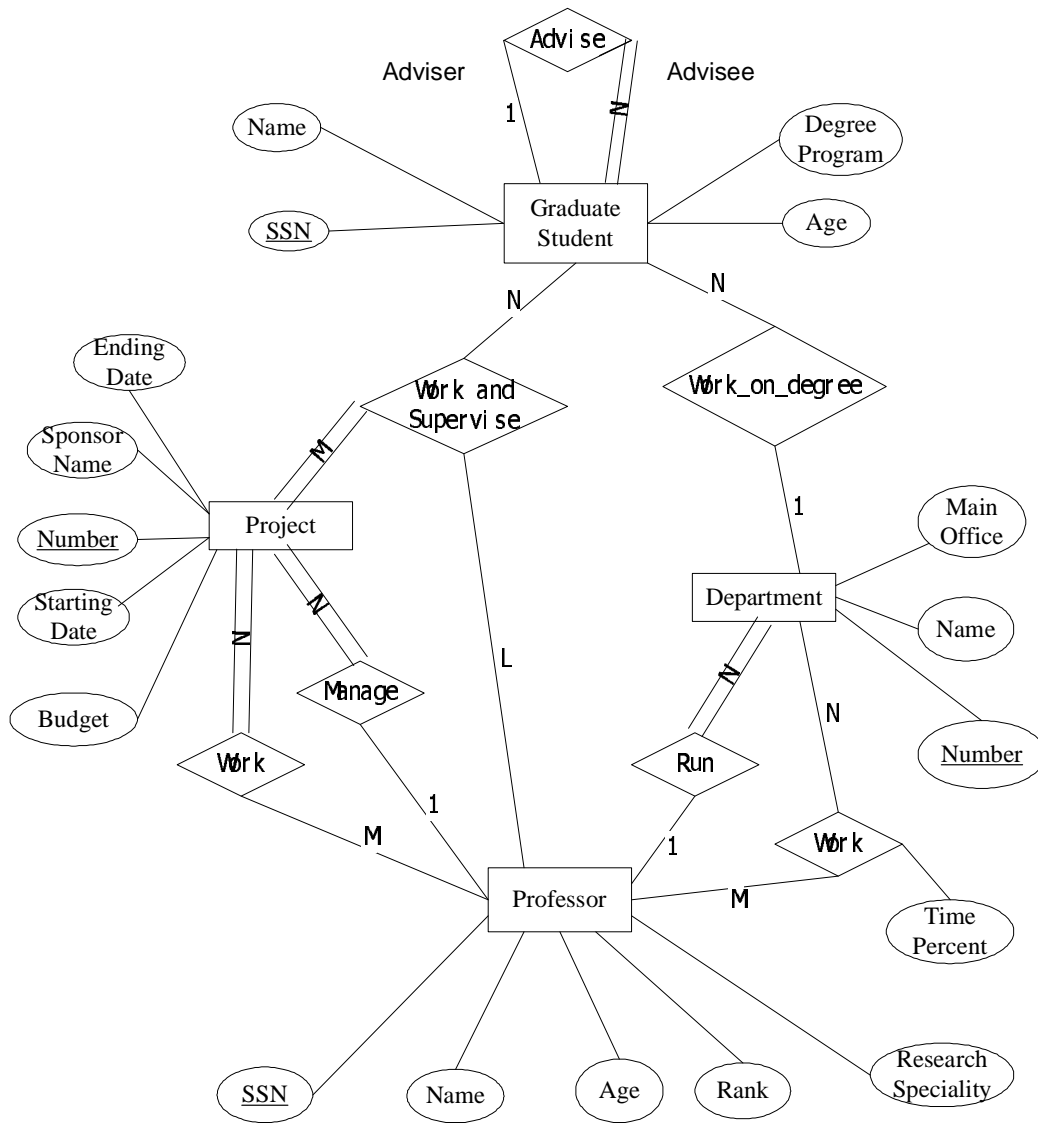


CSC742 Homework2 Solution

1.



2.1

We can use Sql to represent the changes:

Update Project set PNUMBER=99 where PNUMBER=1

Update WORKS_ON set PNO=99 where PNO=1

2.2

The following tuples are removed from the corresponding relations:

Tuples 1, 2, 5, 6 in Employee; Tuple 1 in Department; Tuple 3, 4, 5 in DEPT_LOCATION; Tuples 1 through 9 in Works_on; Tuples 1, 2, 3 in Project; Tuples 1, 2, 3, 5, 6, 7 in Depend.

7.19

(a)

There are NO integrity constraints violated.

(h)

Reference integrity constraints violated.

The following are the different ways of enforcing these constraints:

1)reject

2)cascade by deleting referring tuples:

delete from WORKS_ON where PNO=1

3)change values to a existing PNO (such as 2):

update WORKS_ON set PNO=2 where PNO=1

(j)

Reference integrity constraints violated.

The following are the different ways of enforcing these constraints:

1)reject

2)change referenced tuple

Here we can add a new EMPLOYEE tuple whose SSN is 943775543

3) change referencing tuple

Here we can UPDATE the SUPERSSN (the EMPLOYEE tuple whose SSN is 999887777) to a EXISTING EMPLOYEE's SSN (Such as 123456789)

(k)

There are NO integrity constraint violated.