DATA MODELING EXERCISE

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INSTRUCTIONS

1. Follow the Visio tutorial to complete the exercise. After this exercise, you should be able to use a modeling application like Visio to design database structures.

    - Tables, columns, primary keys, composite keys, relationships (foreign keys), column definitions, relationship properties.

2. EER exercise (use Visio if you like)

    - Think about these types of people in SPSU:
        - Student: full time, part time, graduate, undergraduate, current, prospective, etc.
        - Student employee: student assistant, GRA, GTA, etc.
        - Faculty: tenured, tenure track, visiting, PTI, non-teaching
        - Staff: full time, part time, admin
        - Alumni
        - Others: parents, family member, emergency contact, etc.
    - How do we model the scenario?
        - Faculty: tenured, tenure track,

3. What data structure level to use for the following data?

    - Company, ZIPCode
    - Composite attribute: Name, Address, Date, etc.
    - Multi-Value Attribute: skills, table of contents, etc.

4. EAV experience: how to model the following data?

    - In a simple test bank, there are many multiple choice questions. Each question has title, body, 4 choices, and the answer.
    - http://spsu.edu/itdegrees/permanent_schedules/undergrad_perm_sched.htm

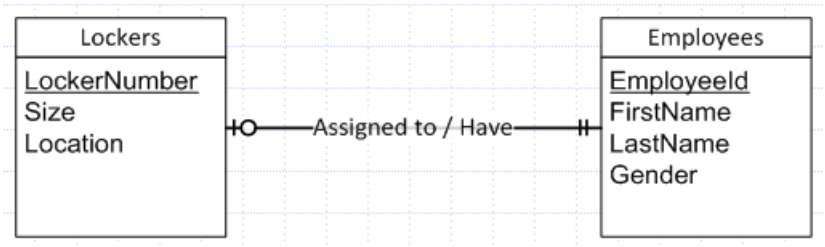
5. Primary key

    - http://spsu.edu/itdegrees/permanent_schedules/undergrad_perm_sched.htm: How would you design the PK? Would you use a surrogate key?
    - How would you design the PK?

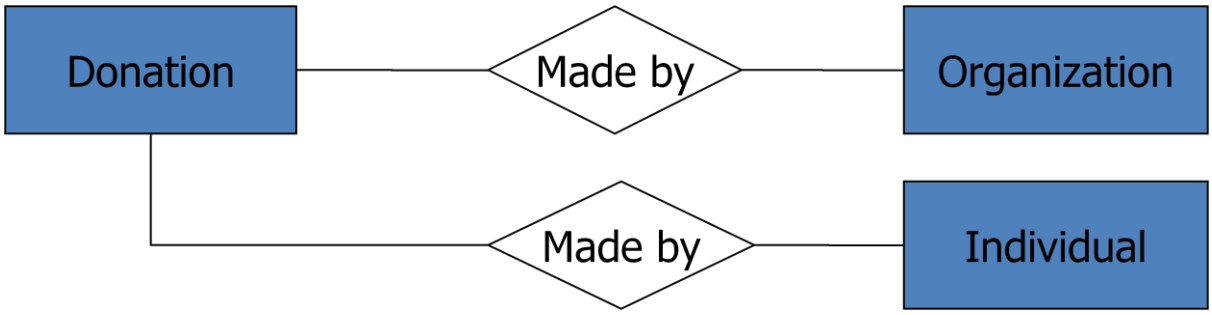
DATE	TIME_START	TIME_END	ROOM	EVENT_NAME	PARTY_OF
6/17/2012	11:00AM	2:00PM	Allure	Burton Wedding	60
6/17/2012	11:00AM	2:00PM	Bonanza	Adams Office	12
6/17/2012	3:00PM	5:30PM	Allure	Smith Family	15
6/17/2012	3:30PM	5:30PM	Bonanza	Adams Office	12
6/18/2012	1:00PM	3:00PM	Bonanza	Boy Scouts	33
6/18/2012	11:00AM	2:00PM	Allure	March of Dimes	25
6/18/2012	11:00AM	12:30PM	Bonanza	Smith Family	12

6. How to design tables and keys in the following cases:

a.

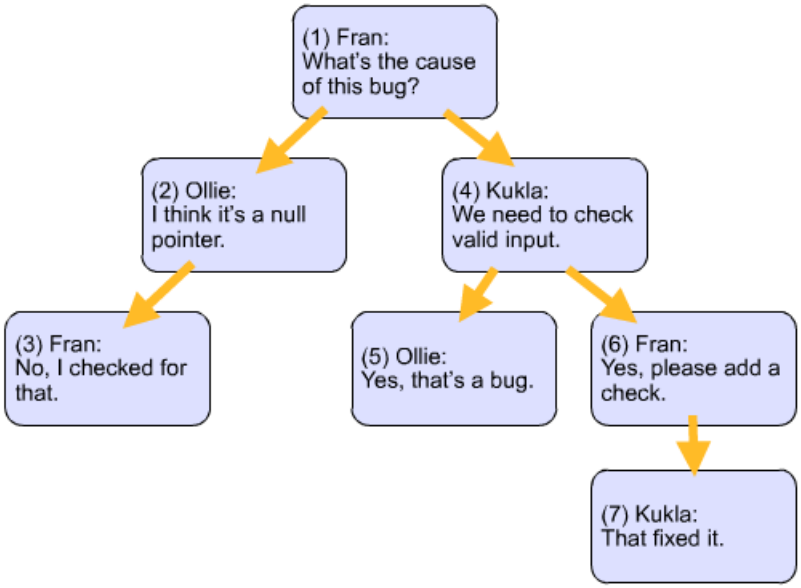


b.



c.

d.



REFERENCES

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