

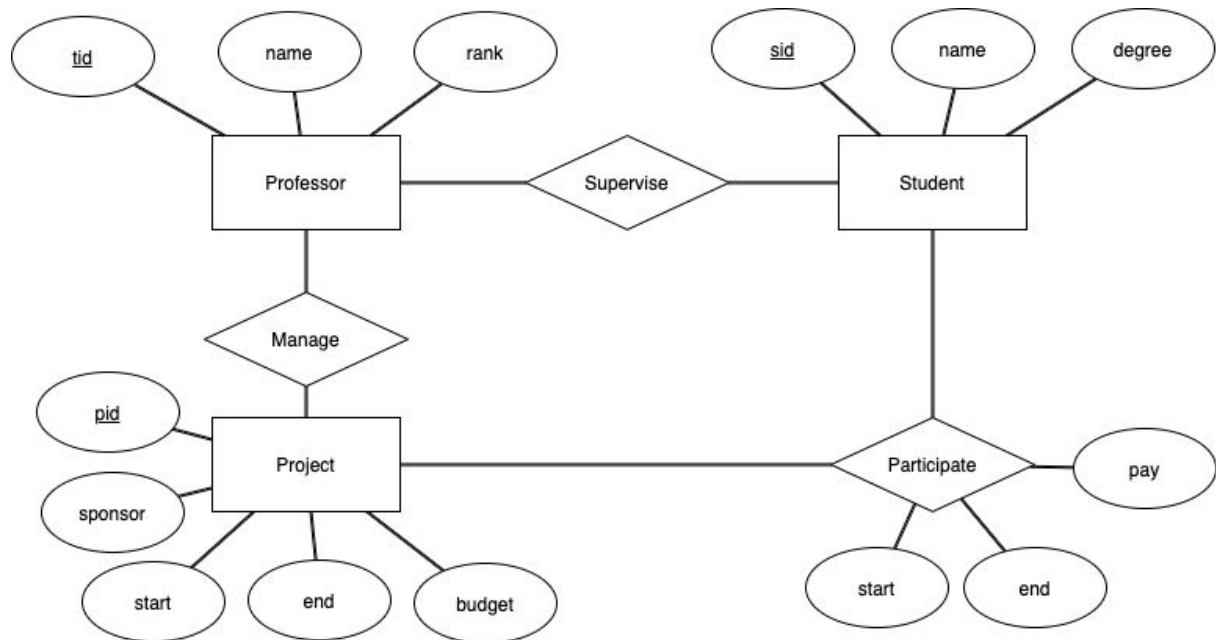
# Database\_Assignment1

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## 1. Problem 1:

### a. ER Model:



### b. Relational Model:

```
▼ CREATE TABLE Professor {  
    tid INTEGER,  
    name VARCHAR(20),  
    rank VARCHAR(40),  
    PRIMARY KEY (tid)  
};
```

```
▼ CREATE TABLE Student {  
    sid INTEGER,  
    name VARCHAR(20),  
    degree VARCHAR(40),  
    PRIMARY KEY(sid)  
};
```

```
▼ CREATE TABLE Project {  
    pid INTEGER,  
    sponsor VARCHAR(40),  
    s_date DATE,  
    e_date DATE,  
    budget REAL,  
    PRIMARY KEY(pid)  
};
```

```
▼ CREATE TABLE Participate {  
    sid INTEGER,  
    pid INTEGER,  
    s_date DATE,  
    e_date DATE,  
    pay REAL,  
    PRIMARY KEY(sid, pid),  
    FOREIGN KEY(sid) REFERENCES Student,  
    FOREIGN KEY(pid) REFERENCES Project  
};
```

```
CREATE TABLE Manage {  
    tid INTEGER,  
    pid INTEGER,  
    PRIMARY KEY(pid),  
    FOREIGN KEY(tid) REFERENCES Professor,  
    FOREIGN KEY(pid) REFERENCES Project  
};
```

```
CREATE TABLE Supervise {  
    sid INTEGER,  
    tid INTEGER,  
    PRIMARY KEY(sid),  
    FOREIGN KEY(sid) REFERENCES Student,  
    FOREIGN KEY(tid) REFERENCES Professor  
};
```

## 2. Problem 2:

a. forum table: (primary key: forum\_name)

i.

forum_name	popularity
Gossiping	164
News	62
Joke	23

b. global table(primary key: global\_id)

i.

global_id	forum_name	post_id
0	Gossiping	190
1	Gossiping	236
2	News	55
3	Joke	168

ii.

c. post table: (primary key: post\_id)

i.

global_id	title	article
0	Girlfriend	How can I get girlfriend ?
1	Friends	I don't have a friend...
2	Wow	Why?
3	Computer	One minus one

ii.

d. reply table: (primary key: rid)

i.

rid	content	global_id
0	"Haha"	0
1	"I don't know"	0
2	"Haha"	1
3	"I can be"	1

4	“QQ”	1
5	“Then?”	2
6	“What’s the point?”	2
7	“Hahaha”	3