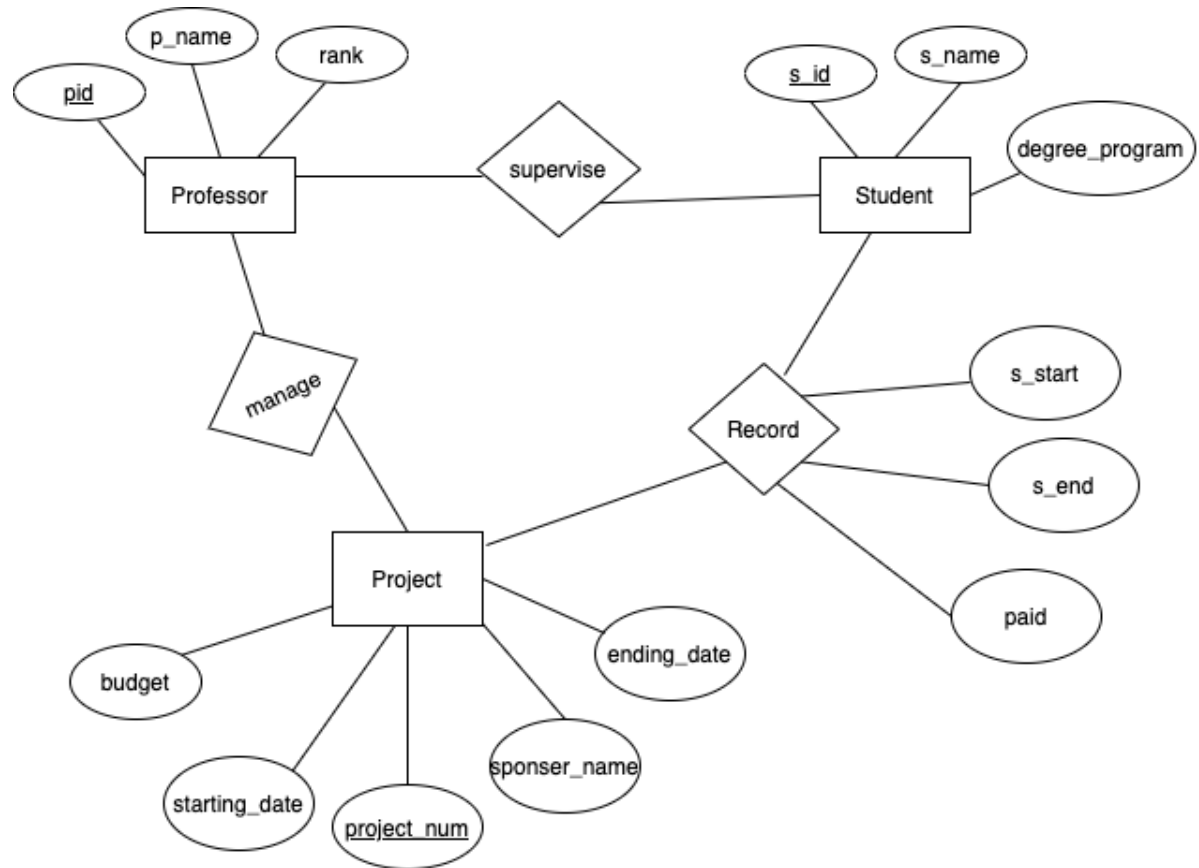


Problem 1

1-1



SQL code

```
CREATE TABLE Professor{
    pid INTEGER,
    p_name VARCHAR(20),
    rank INTEGER,
    PRIMARY KEY (pid)
};

CREATE TABLE Student{
    s_id INTEGER,
    pid INTEGER,
    s_name VARCHAR(20),
    degree_program VARCHAR(20),
    PRIMARY KEY (s_id),
    FOREIGN KEY (pid) REFERENCES Professor ON DELETE CASCADE
};

CREATE TABLE Record{
    s_id INTEGER,
    project_num INTEGER,
    s_start DATE,
    s_stop DATE,
    paid REAL
    PRIMARY KEY (s_id, project_num),
    FOREIGN KEY (s_id) REFERENCES Student ON DELETE CASCADE,
    FOREIGN KEY (project_num) REFERENCES Project ON DELETE CASCADE
};

CREATE TABLE Project{
    project_num INTEGER,
    pid INTEGER,
    sponsor_name VARCHAR(20),
    starting_date DATE,
    ending_date DATE,
    budget REAL,
    PRIMARY KEY (project_num),
    FOREIGN KEY pid REFERENCES Professor ON DELETE CASCADE
};
```

Problem 2

- primary key (fourm_name, post_id)

fourm_name	post_id	title	article	reply
Gossiping	131	Girlfriend	How can I get girlfriend ?	["Haha", "I don't know"]
Gossiping	252	Firends	I don't have a friend...	["Haha", "I can be", "QQ"]
Joke	46	Knock	Knock! Knock! ...	["Then?", "What's the point ?"]
Joke	151	Santa Claus	Hold! Hold! Hold!	["XDD"]

- primary key(fourm_name)

fourm_name	popularity
Gossiping	100
Joke	23