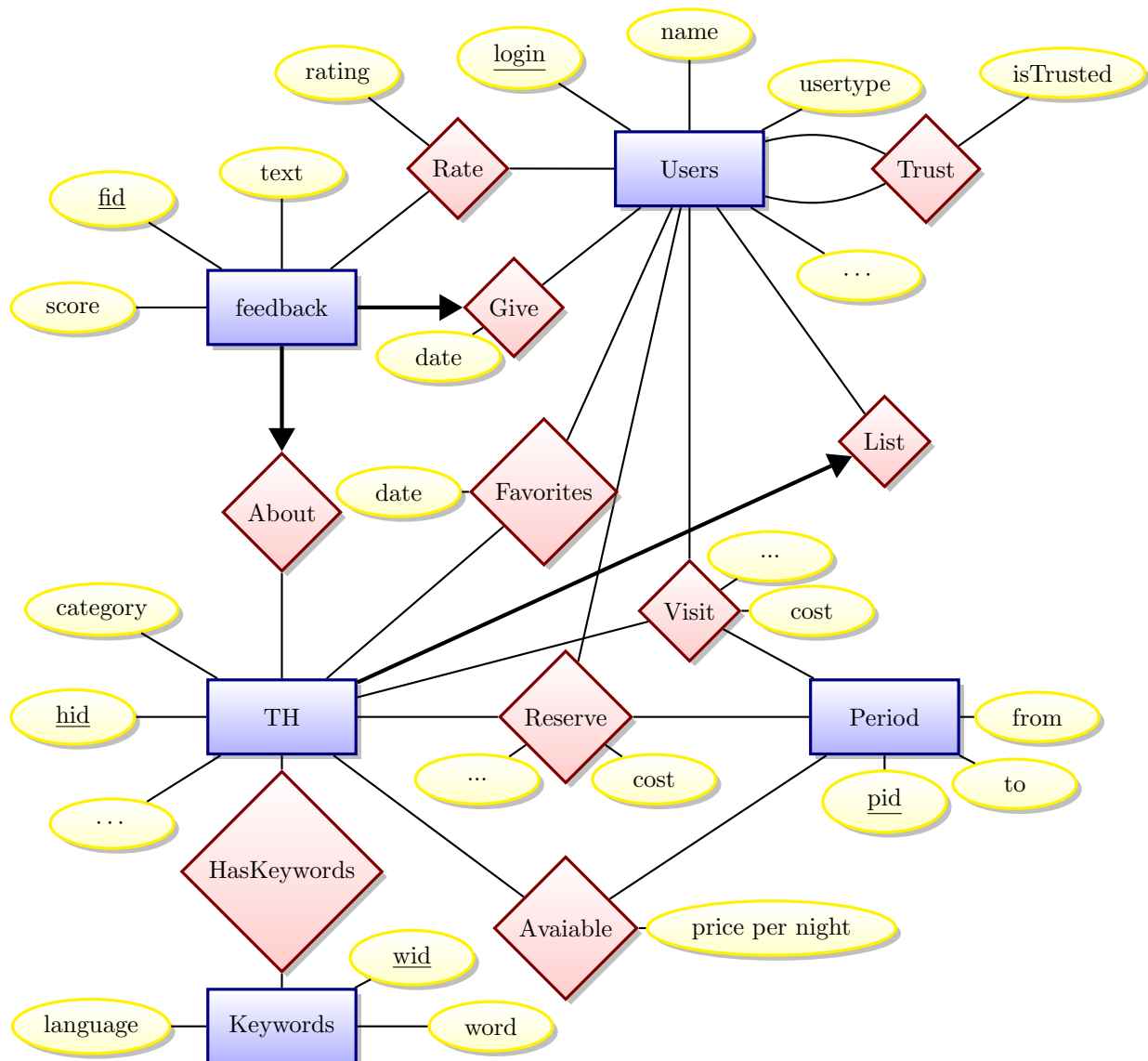


# Project Phase 1 Solution <sup>1</sup>

February 21, 2017

**Phase 1: Solution** (note that it is possible that another proper design might differ slightly from this particular design)

**1.a** The ER; See the figure below.



**1.b** The relational schema. See the schemas below:

TH(hid int primary key, category varchar[50], ..., login foreign key references Users NOT NULL);

Users(login char[30] primary key, name varchar[40], userType boolean, ...);

Period(pid int primary key, from date, to date);

Reserve(login, hid, pid primary key, cost int, login foreign key references Users, hid foreign key references TH, pid foreign key references Period);

Visit(login, hid, pid primary key, cost int, login foreign key references Users, hid foreign key references

TH, pid foreign key references Period);

Available(hid, pid primary key, price-per-night int, hid foreign key references TH, pid foreign key references Period);

Trust(login1, login2 primary key, isTrusted boolean, login1 foreign key references Users, login2 foreign key references Users);

Feedback(fid int primary key, ..., text char[100], fbdate date, hid foreign key references TH NOT NULL, login foreign key references Users NOT NULL)

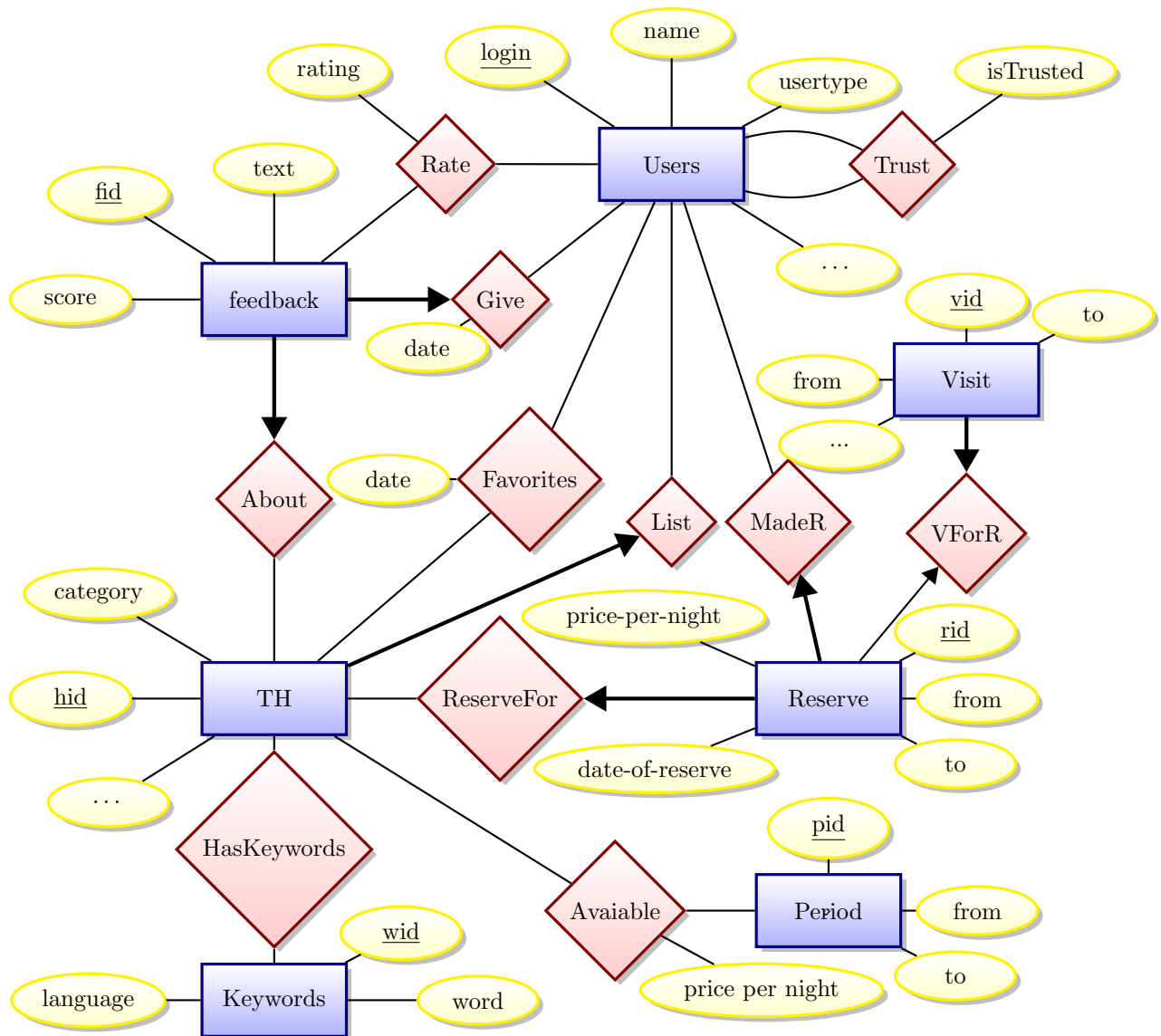
Rates(login, fid primary key, rating char[20], login foreign key references Users, fid foreign key references feedback);

Favorites(hid, login primary key, fvdate date, hid foreign key references TH, login foreign key references Users)

Keywords(wid int primary key, word char[50], language char[20])

HasKeywords(hid, wid primary key, hid foreign key references TH, wid foreign key references Keywords)

1.a Another possible ER design; See the figure below.



1.b The relational schema. See the schemas below:

TH(hid int primary key, category varchar[50], ..., login foreign key references Users NOT NULL);

Users(login char[30] primary key, name varchar[40], userType boolean, ...);

Period(pid int primary key, from date, to date);

Reserve(rid primary key, from date, to date, price-per-night int, date-of-res date, login foreign key references Users NOT NULL, hid foreign key references TH) NOT NULL;

Visit(vid primary key, from date, to date, rid foreign key references Reserve NOT NULL);

Available(hid, pid primary key, price-per-night int, hid foreign key references TH, pid foreign key references Period);

Trust(login1, login2 primary key, isTrusted boolean, login1 foreign key references Users, login2 foreign key references Users);

Feedback(fid int primary key, ..., text char[100], fbdate date, hid foreign key references TH NOT NULL, login foreign key references Users NOT NULL)

Rates(login, fid primary key, rating char[20], login foreign key references Users, fid foreign key references feedback);

Favorites(hid, login primary key, fvdate date, hid foreign key references TH, login foreign key references Users)

Keywords(wid int primary key, word char[50], language char[20])

HasKeywords(hid, wid primary key, hid foreign key references TH, wid foreign key references Keywords)