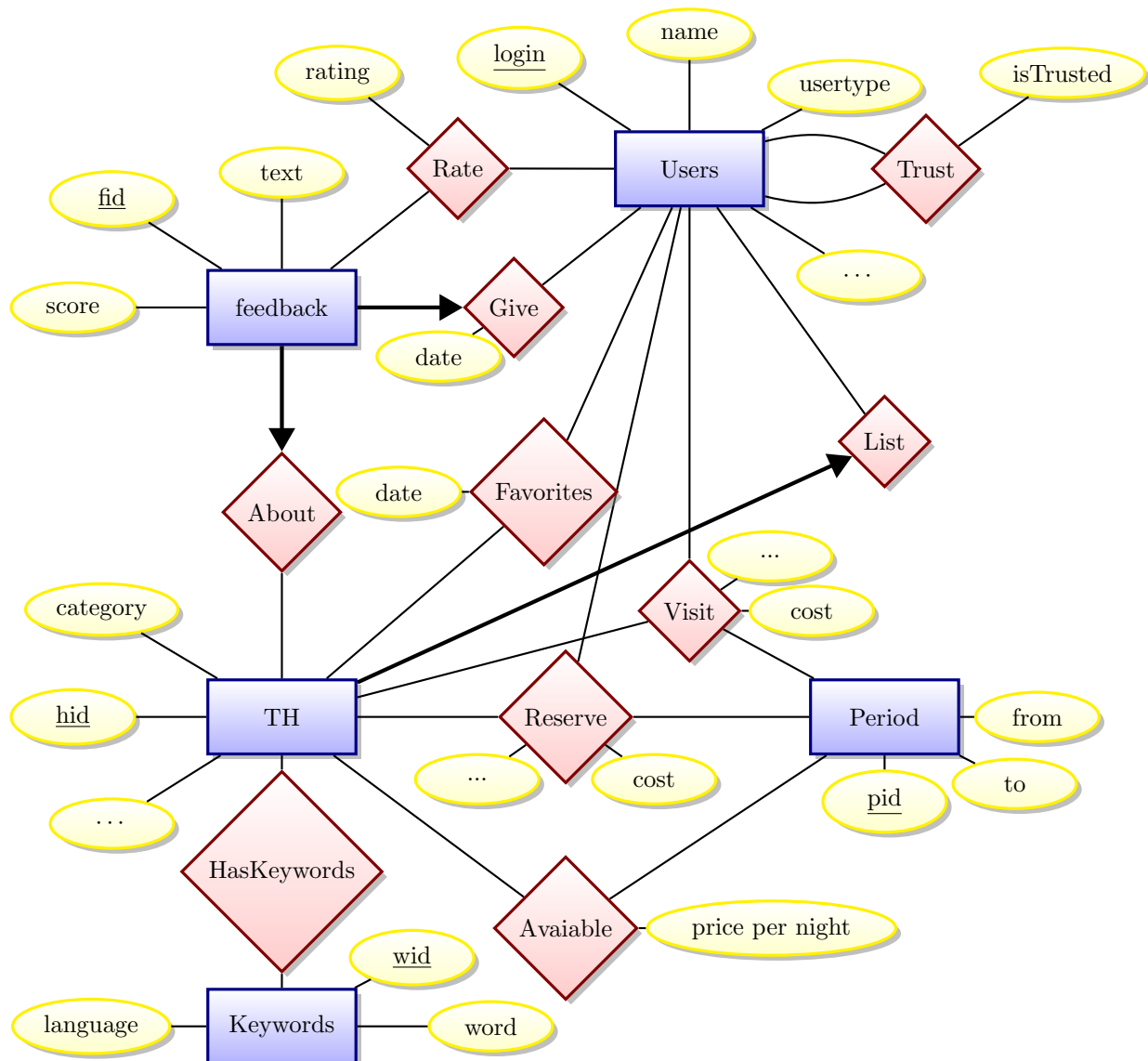# Project Phase 1 Solution [1]

February 21, 2017

Phase 1: Solution (note that it is possile 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(<u>hid</u> int primary key, category varchar[50], $\cdots$, login foreign key references Users NOT NULL);

Users(<u>login</u> char[30] primary key, name varchar[40], userType boolean, $\cdots$);

Period(<u>pid</u> int primary key, from date, to date);

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

Visit(<u>login, hid, pid</u> primary key, cost int, login foreign key references Users, hid foreign key references

TH, pid foreign key references Period);

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

Trust(<u>login1, login2</u> primary key, isTrusted boolean, login1 foreign key references Users, login2 foreign key references Users);

Feedback(<u>fid</u> int primary key, $\cdots$, text char[100], fbdate date, hid foreign key references TH NOT NULL, login foreign key references Users NOT NULL)

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

Favorites(<u>hid, login</u> primary key, fvdate date, hid foreign key references TH, login foreign key references Users)

Keywords(<u>wid</u> int primary key, word char[50], language char[20])

HasKeywords(<u>hid, wid</u> primary key, hid foreign key references TH, wid foreign key references Keywords)

1.a Another possible ER design; See the figure below.
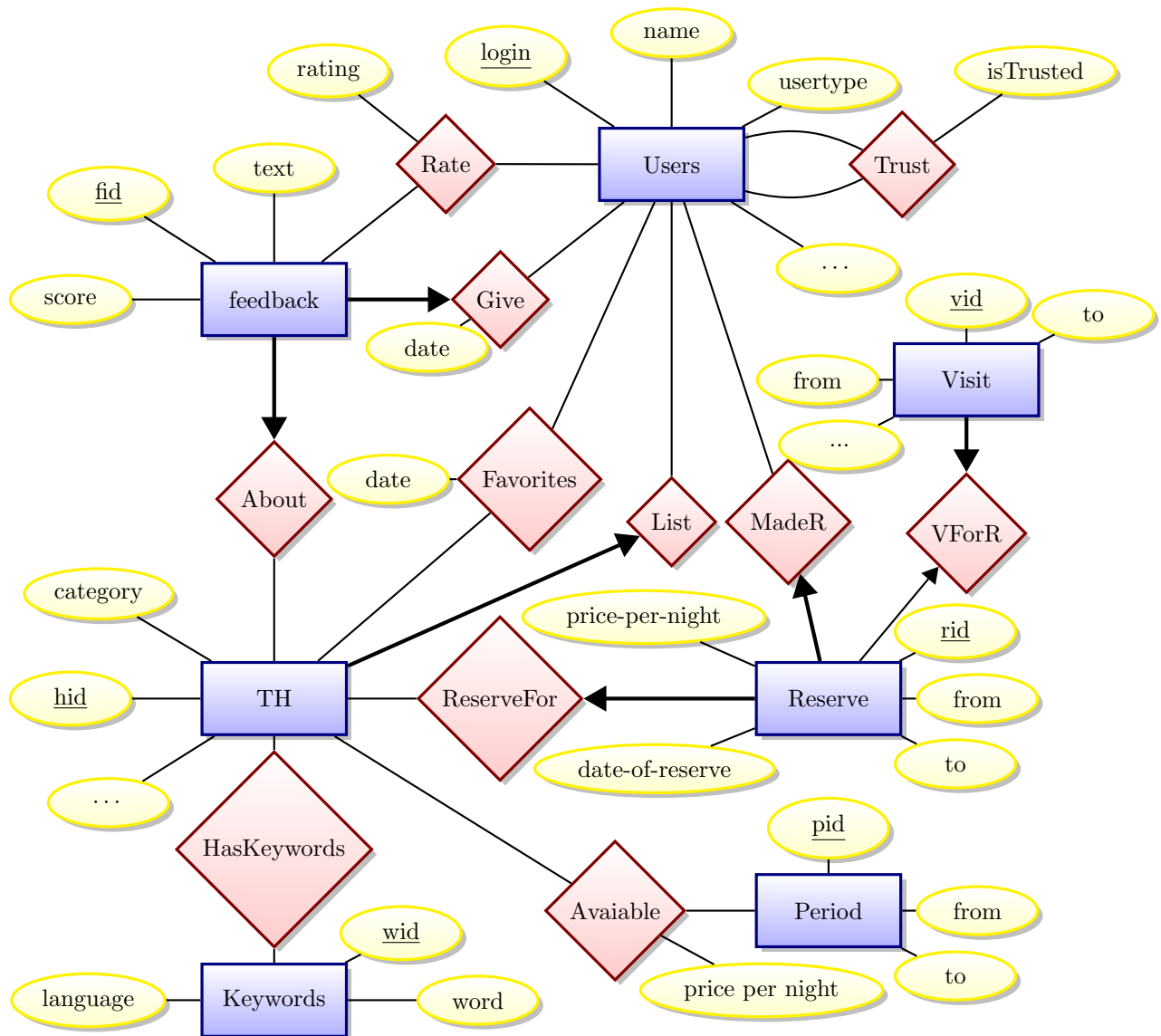
1.b The relational schema. See the schemas below:

TH(<u>hid</u> int primary key, category varchar[50], · · ·, login foreign key references Users NOT NULL);

Users(<u>login</u> char[30] primary key, name varchar[40], userType boolean, · · ·);

Period(<u>pid</u> int primary key, from date, to date);

Reserve(<u>rid</u> 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(<u>vid</u> primary key, from date, to date, rid foreign key references Reserve NOT NULL);

Available(<u>hid, pid</u> 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, $\cdots$, 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)