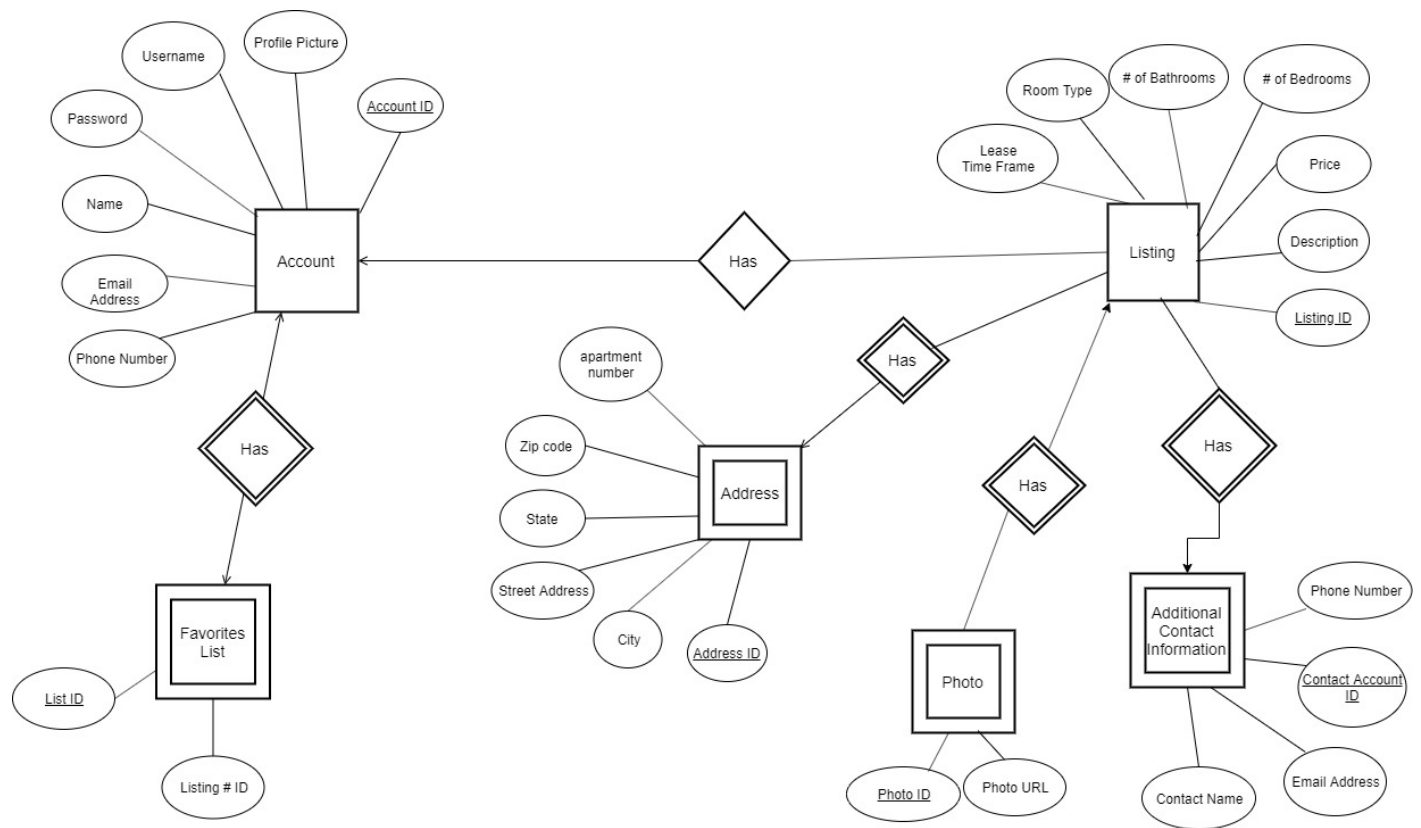


Project Data Model and DB Design  
Revised

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## Entity Sets and Relationships Explanation:

### Entity Set

- The Account entity set will be used for each user, whether a leaser or a renter. A unique Account ID will be used as the primary key for this entity set.
- The Listing entity set will be used for each post by a leaser for renters to be able to scroll through and search for a good fit. Every post will have its own Listing ID, which may be reused when a posting opens up again after a lease ends.
- The Favorites List entity set will be used as a weak entity set for each strong Account entity set, where a user prioritizes favorite listings posted. The list will have an id tied to it as the primary key and will use the Account entity's primary key as a secondary key.
- The Photo entity set will be used for both the Listing entity set and the Account entity set, because each of those entity sets will need to provide pictures to help in identification. Each photo uploaded will have a unique Photo ID used as its primary key.
- The Contact Information entity set will be used as a weak entity set for each strong Listing entity set, where a leaser can choose to add several other people to contact for inquiries or more information about the Listing posted.
- The Address entity will be used as a weak entity for each strong Listing Entity. Each listing entity will have 1 address, but multiple addresses can be used for different listings, such as different rooms for a single house.

### Relationship

- Each Listing has an Account that created it, and every Account will have 0 or more Listings created by it.
- Each Favorites List belongs to an Account, and every account will have 0 or 1 Favorites List to prioritize posts.
- Each Listing has 0 or more Photos, and each Photo exists on 1 Listing.
- Each Listing can have 0 or more additional Contact Information, and each piece of Contact information belongs to 1 or more Listings.
- Each listing has exactly 1 address tied to it, and every address can be tied to 0 or more Listings.

## Sample Tables:

```
[mysql> select * from User_Favorites;
+-----+-----+
| user_id | list_id |
+-----+-----+
| 10001   | 10001   |
| 10002   | 10002   |
| 10003   | 10003   |
| 10004   | 10004   |
| 10005   | 10005   |
| 10006   | 10006   |
| 10007   | 10007   |
| 10007   | 10008   |
| 10009   | 10009   |
| 10009   | 10010   |
| 10015   | 10011   |
| 10015   | 10012   |
| 10015   | 10013   |
| 10015   | 10014   |
| 10015   | 10015   |
+-----+-----+
15 rows in set (0.00 sec)
```

```
[mysql> select * from Listings_Photos;
+-----+-----+
| photo_id | listing_id |
+-----+-----+
| 100001   | 100001   |
| 100002   | 100001   |
| 100003   | 100002   |
| 100004   | 100002   |
| 100005   | 100002   |
| 100006   | 100002   |
| 100007   | 100003   |
| 100008   | 100003   |
| 100009   | 100003   |
| 100010   | 100004   |
| 100011   | 100004   |
| 100012   | 100005   |
| 100013   | 100006   |
| 100014   | 100006   |
| 100015   | 100006   |
| 100016   | 100007   |
| 100017   | 100007   |
| 100018   | 100007   |
| 100019   | 100007   |
| 100020   | 100007   |
| 100021   | 100007   |
| 100022   | 100008   |
| 100023   | 100008   |
| 100024   | 100008   |
| 100025   | 100008   |
| 100026   | 100008   |
| 100027   | 100009   |
| 100028   | 100009   |
| 100029   | 100012   |
| 100030   | 100013   |
| 100031   | 100014   |
| 100032   | 100015   |
| 100033   | 100015   |
+-----+-----+
33 rows in set (0.00 sec)
```

```
[mysql> select * from Accounts;
+-----+-----+-----+-----+-----+-----+
| accID | username | password | fullName | profilePicURL | email | phoneNum |
+-----+-----+-----+-----+-----+-----+
| 10001 | kylek    | kylek2000 | kyle kennedy | www.kyle.com/profilepic | kyle@gmail.com | 408-000-0001 |
| 10002 | lennyl   | lennyl2001 | lenny leonard | www.lenny.com/profilepic | lenny@gmail.com | 408-000-0002 |
| 10003 | mom      | mom2002   | mo matsbe   | www.mo.com/profilepic   | mo@gmail.com   | 408-000-0003 |
| 10004 | nickn    | nickn2003 | nick noran   | www.nick.com/profilepic | nick@gmail.com | 408-000-0004 |
| 10005 | oscaro   | oscaro2004 | oscar obrien | www.oscar.com/profilepic | oscar@gmail.com | 408-000-0005 |
| 11111 | alexa    | alexa1990 | alex armedano | www.alex.com/profilepic | alex@gmail.com | 408-012-3456 |
| 12345 | bobb     | bobb1991 | bob barnes   | www.bob.com/profilepic  | bob@gmail.com  | 408-123-4567 |
| 23456 | candacec | candace1992 | candace conney | www.candace.com/profilepic | candace@gmail.com | 408-234-5678 |
| 34567 | dannyd   | dannyd1993 | danny davis  | www.danny.com/profilepic | danny@gmail.com | 408-345-6789 |
| 45678 | elliee   | ellie1994 | ellie eyamore | www.ellie.com/profilepic | ellie@gmail.com | 408-456-7890 |
| 56789 | frankf   | frankf1995 | frank feeney | www.frank.com/profilepic | frank@gmail.com | 408-567-8901 |
| 67890 | garyg    | garyg1996 | gary gomez   | www.gary.com/profilepic  | gary@gmail.com | 408-678-9012 |
| 78901 | harryh   | harryh1997 | harry holmes | www.harry.com/profilepic | harry@gmail.com | 408-789-0123 |
| 89012 | ivani    | ivani1998 | ivan isador  | www.ivan.com/profilepic  | ivan@gmail.com | 408-890-1234 |
| 90123 | johnnj   | johnnj1999 | john jacobson | www.john.com/profilepic  | john@gmail.com | 408-901-2345 |
+-----+-----+-----+-----+-----+-----+
15 rows in set (0.00 sec)
```

Database changed

```
[mysql> show tables;
```

Tables_in_search4houses
Accounts
Accounts_Listings
AdditionalContacts
Addresses
Favorites
Listing_Address
Listings
Listings_AdditionalContact
Listings_Photos
Photos
User_Favorites

11 rows in set (0.00 sec)

```
mysql> select * from Accounts;
```

accID	username	password	fullName	profilePicURL	email	phoneNum
11111	alexa	alexa1999	alex armedano	www.alex.com/profilepic	alex@gmail.com	408-0123-4567
12345	billyb	billyb1990	billy barnes	www.billy.com/profilepic	billy@gmail.com	408-123-4567
23456	candacec	candacec1991	candace conney	www.candace.com/profilepic	candace@gmail.com	408-234-5678
34567	dannyd	dannyd1992	danny davis	www.danny.com/profilepic	danny@gmail.com	408-345-6789
45678	ellye	ellye1993	elly eyamore	www.elly.com/profilepic	elly@gmail.com	408-456-7890
56789	frankf	frankf1994	frank feeney	www.frank.com/profilepic	frank@gmail.com	408-567-8901
67890	garyg	garyg1995	gary gomez	www.gary.com/profilepic	gary@gmail.com	408-678-9012
78901	harryh	harryh1996	harry holmes	www.harry.com/profilepic	harry@gmail.com	408-789-0123
89012	ivani	ivani1997	ivan isador	www.ivan.com/profilepic	ivan@gmail.com	408-890-1234
90123	johnj	johnj1998	john jacobson	www.john.com/profilepic	john@gmail.com	408-901-2345

10 rows in set (0.00 sec)

```
[mysql> select * from Listings_AdditionalContact;
```

listing_id	addContact_id
100008	10016
100008	10017
100008	10018
100008	10019
100008	10020
100008	10021
100015	10022
100006	10023
100002	10024
100003	10025
100007	10026
100015	10027
100006	10028
100007	10029
100015	10030

15 rows in set (0.00 sec)

```
mysql> select * from Listings;
```

listingID	roomType	price	leaseTimeframe	roomNum	bathroomNum	description	photosID
100001	Shared Room	600	10	2	2	no pets allowed	100001,100002
100002	Single Room	1000	12	3	3	living with a family	100003,100004,100005,100006
100003	Single Room	800	12	3	2	living with a family	100007,100008,100009
100004	Single Room	1200	3	2	1	no partying	100010,100011
100005	Shared Room	500	1	1	1	NULL	100012
100006	House	4500	18	6	4	ready for immediate move-in	100013,100014,100015
100007	House	5000	9	5	3	nice neighborhood	100016,100017,100018,100019,100020,100021
100008	Apartment	3000	6	4	2	gated community	100022,100023,100024,100025,100026
100009	Apartment	3500	25	4	3	safe	100027,100028
100010	Shared Room	300	1	1	1	affordable place in downtown	NULL
100011	House	8500	24	6	8	NULL	NULL
100012	Apartment	3500	4	2	1	NULL	100029
100013	Shared Room	450	4	2	1	NULL	100030
100014	Apartment	2000	1	1	1	NULL	100031
100015	Studio	1500	12	1	1	roomy place for one with lots of space	100032, 100033

15 rows in set (0.00 sec)

```
mysql> mysql> select * from Listing_Address;
```

listing_id	addr_id
100001	100001
100002	100002
100003	100003
100004	100004
100005	100005
100006	100006
100007	100007
100008	100008
100009	100009
100010	1000010
100011	100011
100012	100012
100013	100013
100014	100014
100015	100015

15 rows in set (0.00 sec)

```
mysql> select * from Favorites;
```

listID	accID	listing1ID	listing2ID	listing3ID	listing4ID	listing5ID
10001	10001	100001	100005	NULL	NULL	NULL
10002	10002	100002	100003	100004	NULL	NULL
10003	10003	100003	100002	100004	NULL	NULL
10004	10004	100004	NULL	NULL	NULL	NULL
10005	10005	100002	10003	NULL	NULL	NULL
10006	10006	NULL	NULL	NULL	NULL	NULL
10007	10007	100006	100008	100009	NULL	NULL
10008	10007	100002	100003	100001	100005	100004
10009	10009	100006	100007	100008	100009	NULL
10010	10009	100015	NULL	NULL	NULL	NULL
10011	10015	100006	100007	100011	NULL	NULL
10012	10015	100008	100009	100012	100014	NULL
10013	10015	100015	NULL	NULL	NULL	NULL
10014	10015	100002	100003	100004	NULL	NULL
10015	10015	100001	100005	100010	100013	NULL

15 rows in set (0.00 sec)

```
mysql> select * from Addresses;
```

addrID	listingID	streetAddress	city	state	zipCode
100001	100001	123 Sesame Street	San Jose	CA	95131
100002	100002	234 Main Street	San Jose	CA	95110
100003	100003	345 Fumia Place	San Jose	CA	95136
100004	100004	456 Ryland Court	San Jose	CA	95152
100005	100005	567 Scott Street	San Jose	CA	95190
100006	100006	678 Central Road	San Jose	CA	95196
100007	100007	789 Washington Road	San Jose	CA	95106
100008	100008	111 San Fernando	San Jose	CA	94088
100009	100009	112 Paseo Padre	San Jose	CA	95002
100010	100010	113 Osgood Road	San Jose	CA	95054
100011	100011	114 Santa Clara Street	San Jose	CA	95050
100012	100012	115 7th Street	San Jose	CA	94560
100013	100013	116 Los Gatos Boulevard	San Jose	CA	95123
100014	100014	117 Fremont Street	San Jose	CA	95151
100015	100015	118 Santa Cruz Road	San Jose	CA	95173

```
15 rows in set (0.00 sec)
```

```
mysql> select * from Accounts_Listings;
```

user_id	listing_id
10001	100011
10002	100012
10003	100013
10004	100014
10005	100015
11111	100001
12345	100002
23456	100003
34567	100004
45678	100005
56789	100006
67890	100007
78901	100008
89012	100009
90123	100010

```
15 rows in set (0.00 sec)
```