Project Data Model & DB Design

-FAMLOG-

CS157A - Section 01

Team 39

Benjamin Wen Shen Lee

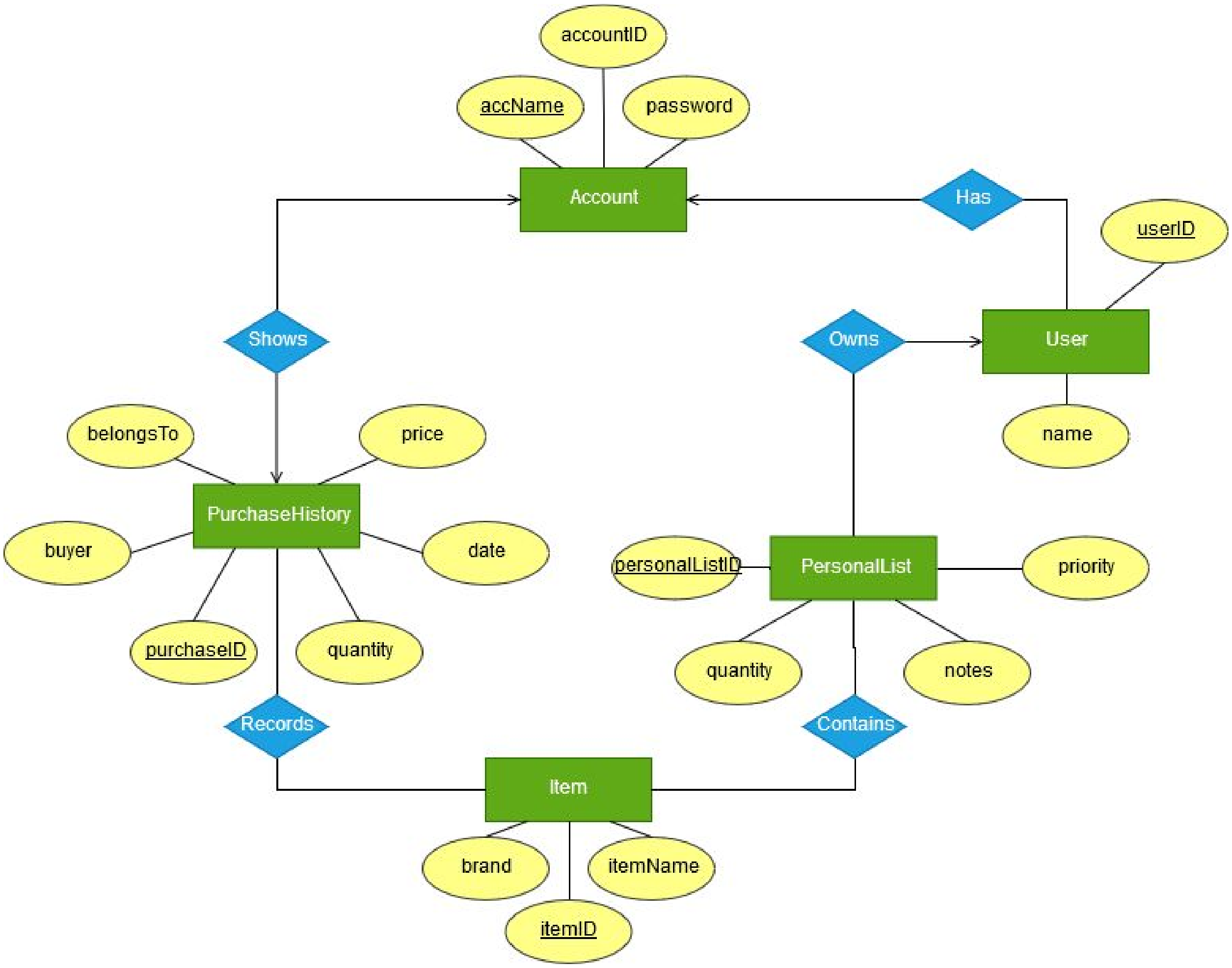
Grace To

Jeffrey Nguyen

-FAMLOG-

For our project, we are building an application that will allow households to maintain a centralized shopping list, based on the separate personal lists created by individuals of the household.

E/R Diagram



Database Schema

Account(accountID, accName, password)

Has(accName, userID)

User(userID, name)

Owns(userID, personalListID)

PersonalList(personalListID, quantity, priority, notes)

Contains(personalListID, itemID)

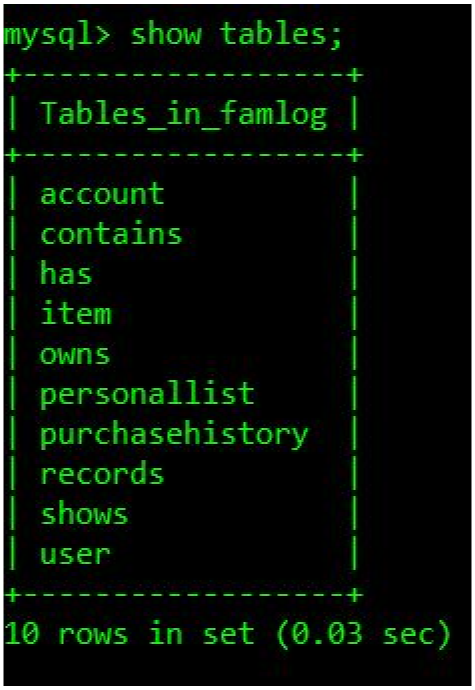
Item(itemID, itemName, brand)

Records(itemID, purchaseID)

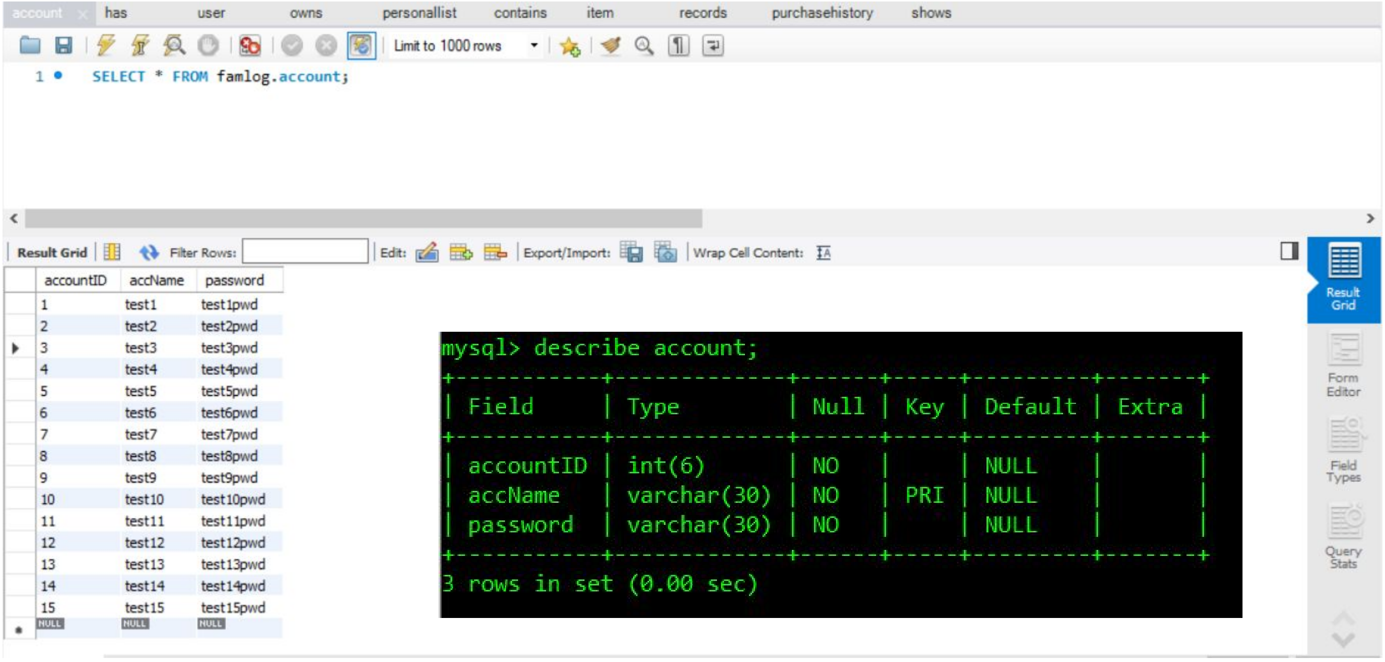
PurchaseHistory(purchaseID, belongsTo, buyer, quantity, date, price)

Shows(accName, purchaseID)

Tables



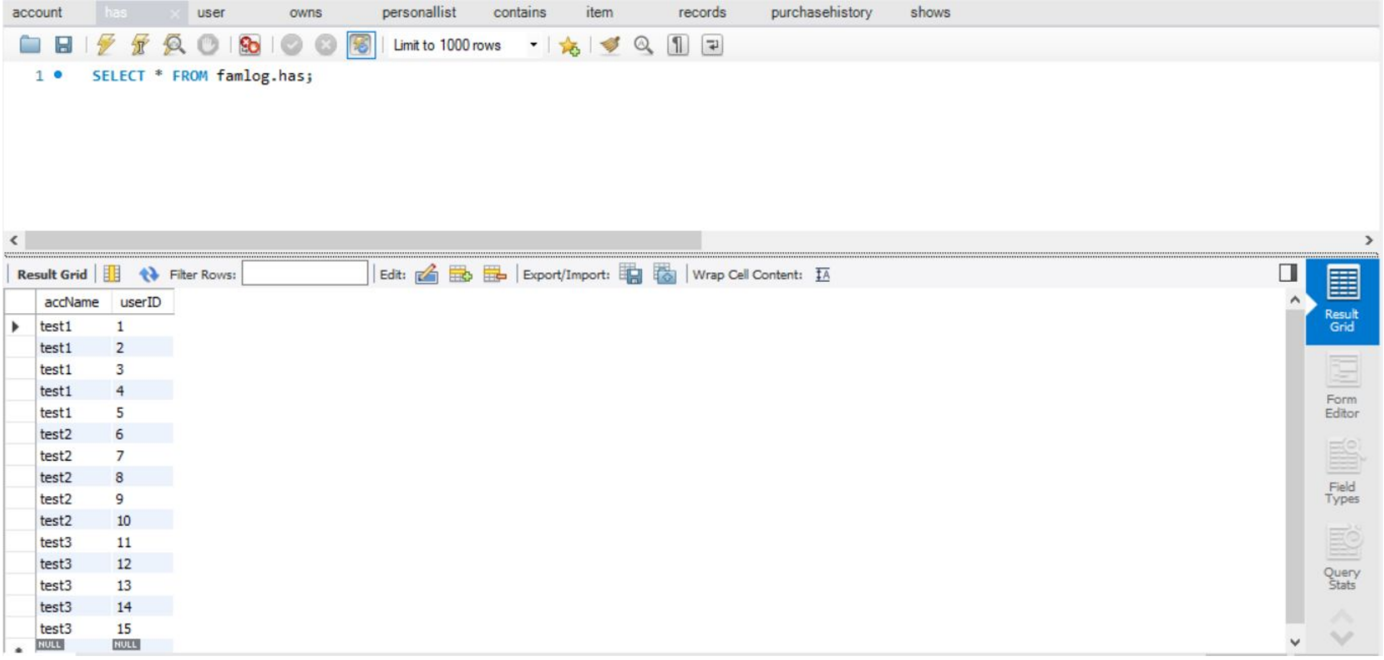
```
mysql> show tables;
+-------------------+
| Tables_in_famlog |
+-------------------+
| account          |
| contains         |
| has              |
| item             |
| owns             |
| personallist     |
| purchasehistory  |
| records          |
| shows            |
| user             |
+-------------------+
10 rows in set (0.03 sec)
```



```
SELECT * FROM famlog.account;
```

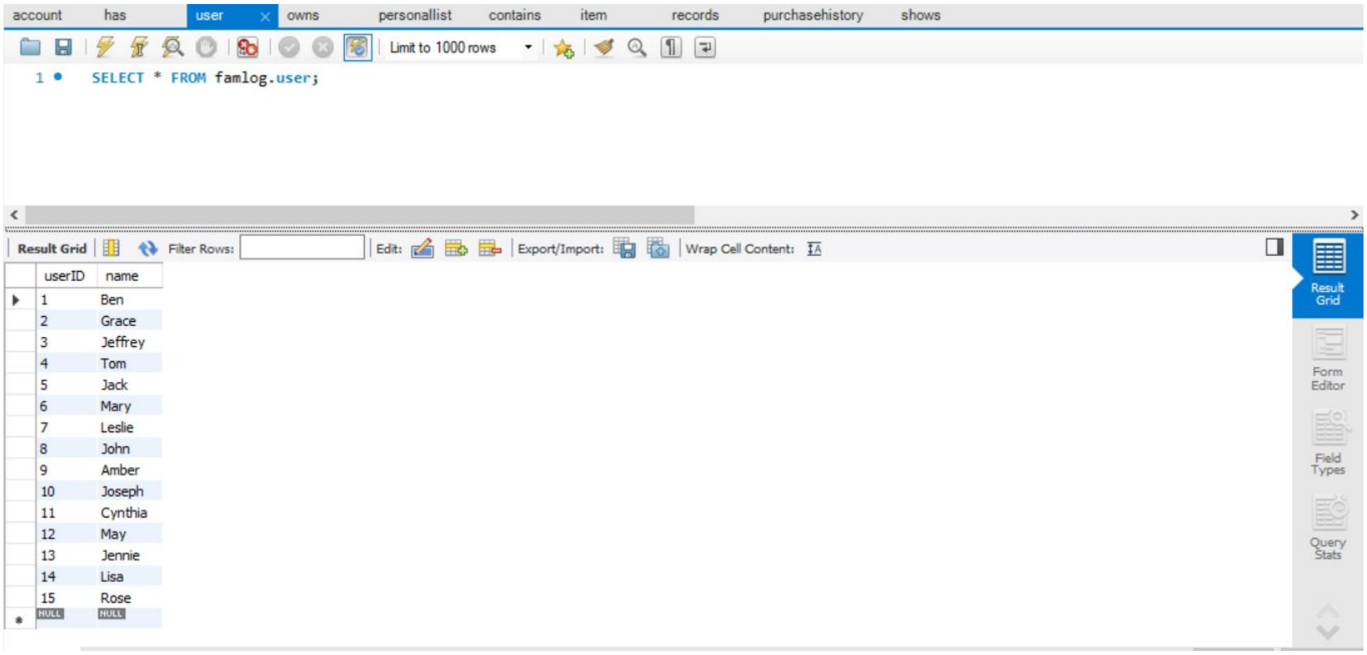
accountID	accName	password
1	test1	test1pwd
2	test2	test2pwd
3	test3	test3pwd
4	test4	test4pwd
5	test5	test5pwd
6	test6	test6pwd
7	test7	test7pwd
8	test8	test8pwd
9	test9	test9pwd
10	test10	test10pwd
11	test11	test11pwd
12	test12	test12pwd
13	test13	test13pwd
14	test14	test14pwd
15	test15	test15pwd
NULL	NULL	NULL

```
mysql> describe account;
+-----------+-------------+------+-----+---------+-------+
| Field     | Type        | Null | Key | Default | Extra |
+-----------+-------------+------+-----+---------+-------+
| accountID | int(6)      | NO   |     | NULL    |       |
| accName   | varchar(30) | NO   | PRI | NULL    |       |
| password  | varchar(30) | NO   |     | NULL    |       |
+-----------+-------------+------+-----+---------+-------+
3 rows in set (0.00 sec)
```



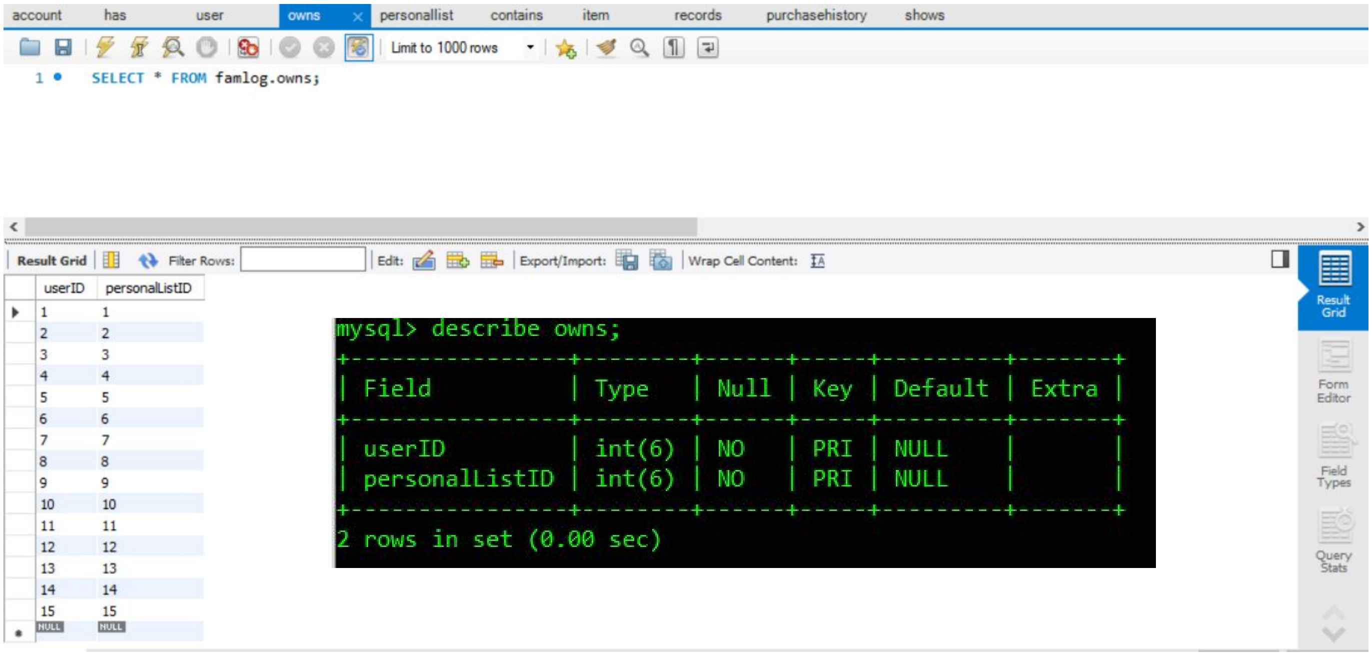
```
SELECT * FROM famlog.has;
```

accName	userID
test1	1
test1	2
test1	3
test1	4
test1	5
test2	6
test2	7
test2	8
test2	9
test2	10
test3	11
test3	12
test3	13
test3	14
test3	15
NULL	NULL



```
SELECT * FROM famlog.user;
```

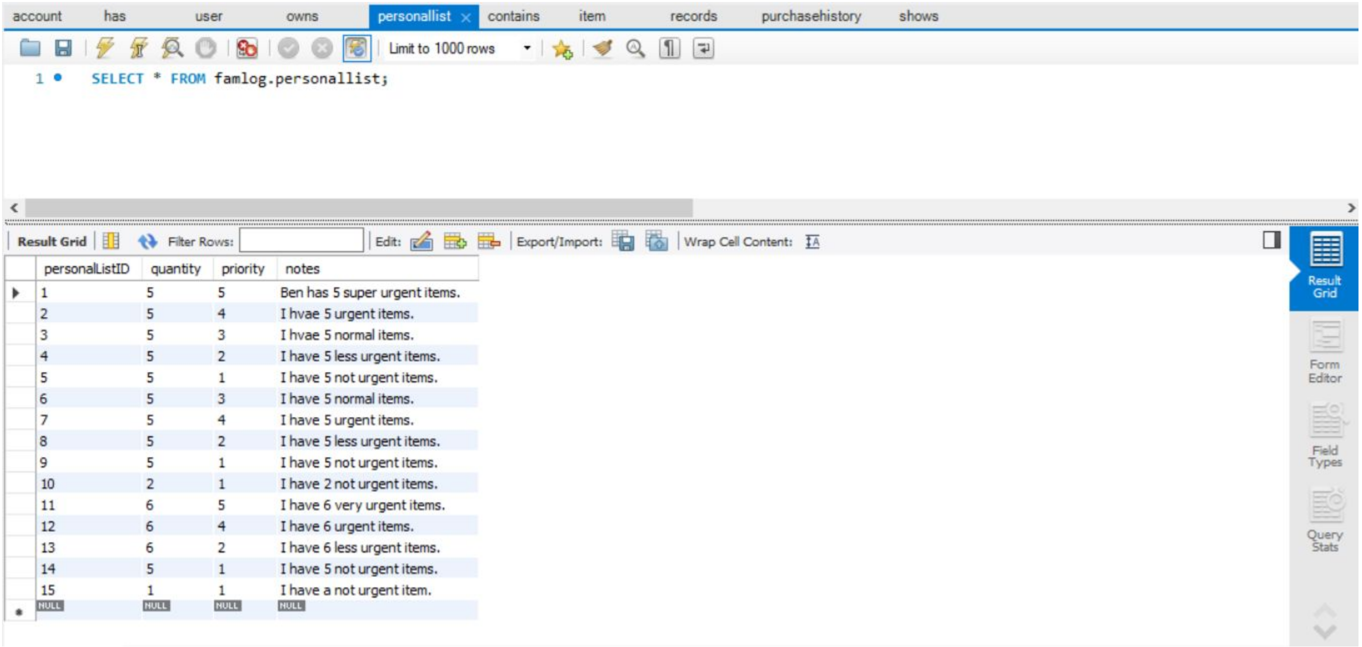
userID	name
1	Ben
2	Grace
3	Jeffrey
4	Tom
5	Jack
6	Mary
7	Leslie
8	John
9	Amber
10	Joseph
11	Cynthia
12	May
13	Jennie
14	Lisa
15	Rose
NULL	NULL



```
SELECT * FROM famlog.owns;
```

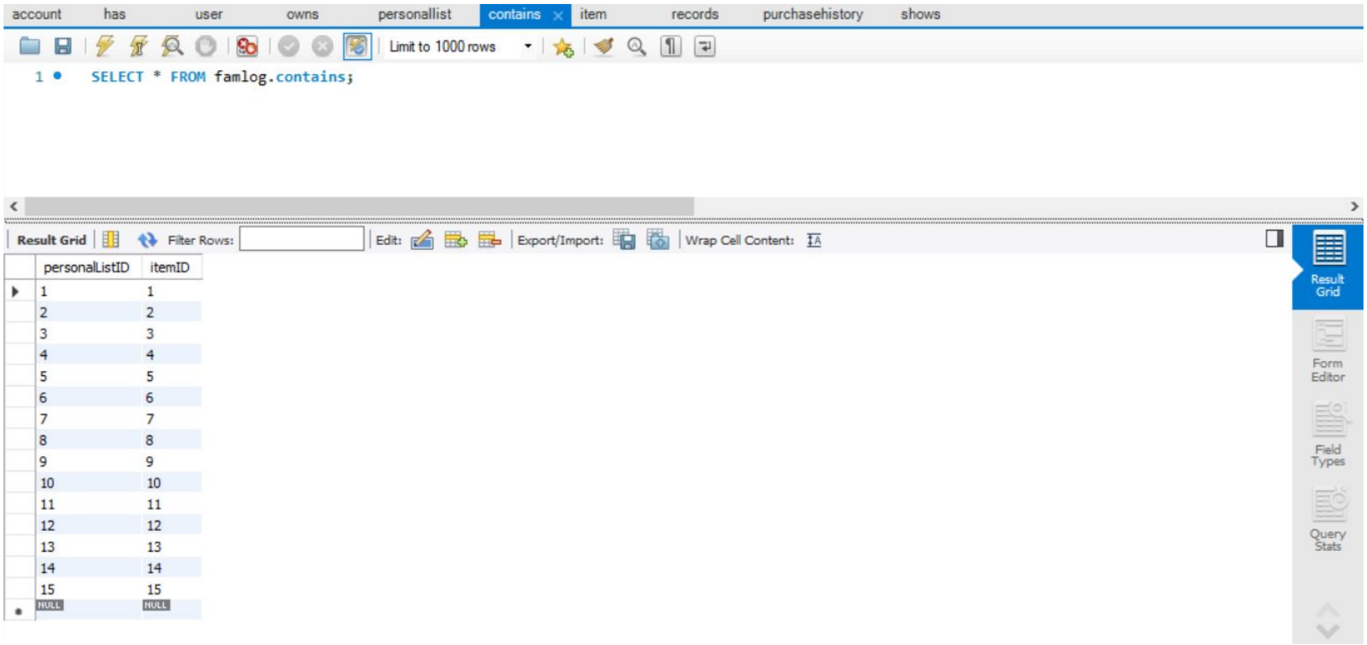
userID	personalListID
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
NULL	NULL

```
mysql> describe owns;
+----------------+--------+------+-----+---------+-------+
| Field          | Type   | Null | Key | Default | Extra |
+----------------+--------+------+-----+---------+-------+
| userID         | int(6) | NO   | PRI | NULL    |       |
| personalListID | int(6) | NO   | PRI | NULL    |       |
+----------------+--------+------+-----+---------+-------+
2 rows in set (0.00 sec)
```



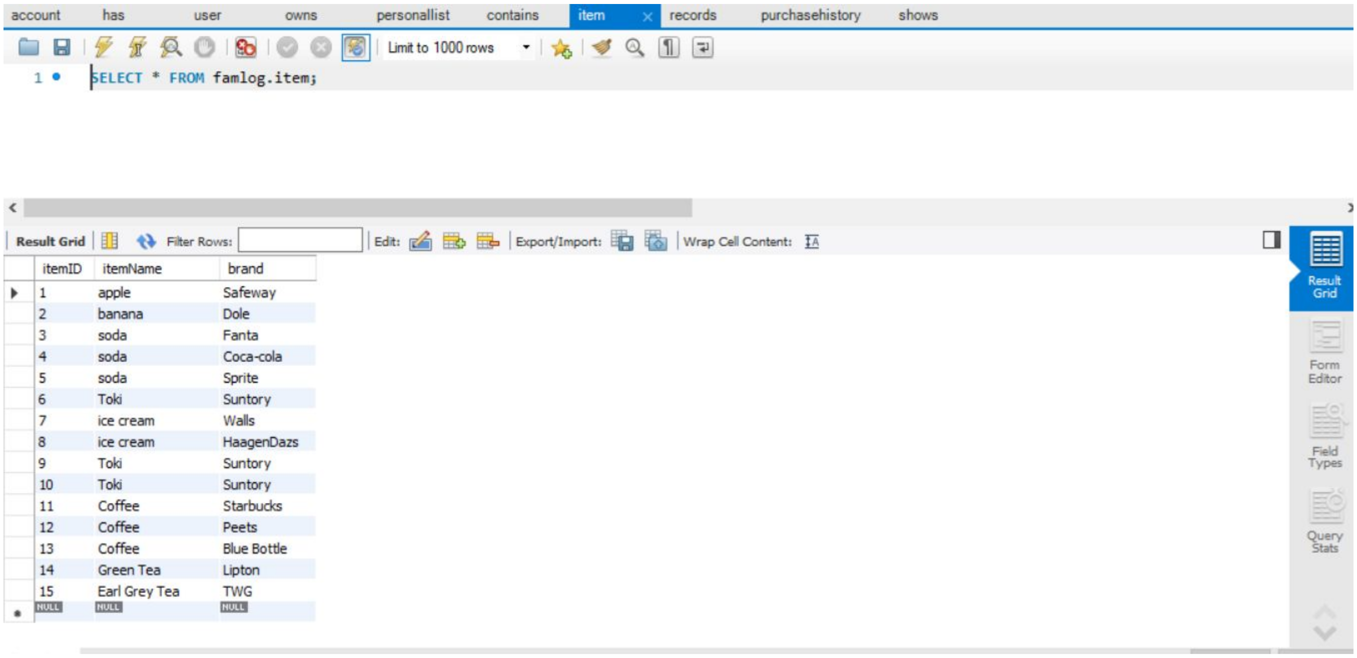
```
SELECT * FROM famlog.personallist;
```

personalListID	quantity	priority	notes
1	5	5	Ben has 5 super urgent items.
2	5	4	I hvae 5 urgent items.
3	5	3	I hvae 5 normal items.
4	5	2	I have 5 less urgent items.
5	5	1	I have 5 not urgent items.
6	5	3	I have 5 normal items.
7	5	4	I have 5 urgent items.
8	5	2	I have 5 less urgent items.
9	5	1	I have 5 not urgent items.
10	2	1	I have 2 not urgent items.
11	6	5	I have 6 very urgent items.
12	6	4	I have 6 urgent items.
13	6	2	I have 6 less urgent items.
14	5	1	I have 5 not urgent items.
15	1	1	I have a not urgent item.
NULL	NULL	NULL	NULL



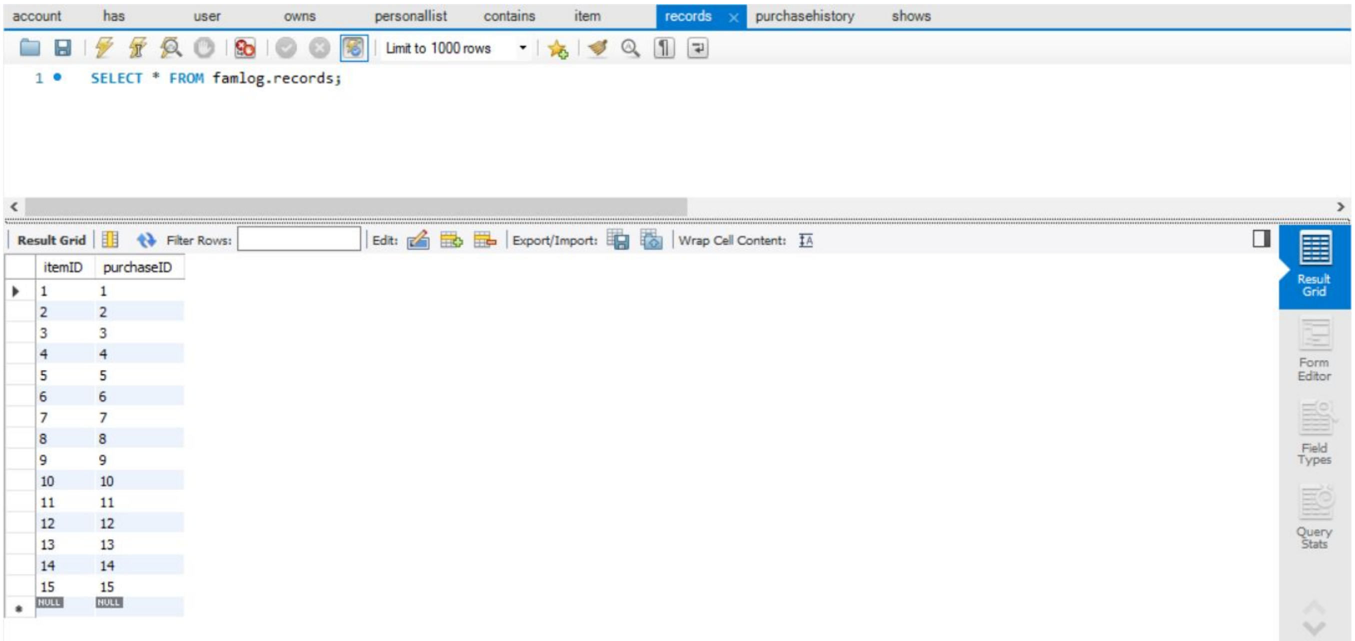
```
SELECT * FROM famlog.contains;
```

personalListID	itemID
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
NULL	NULL



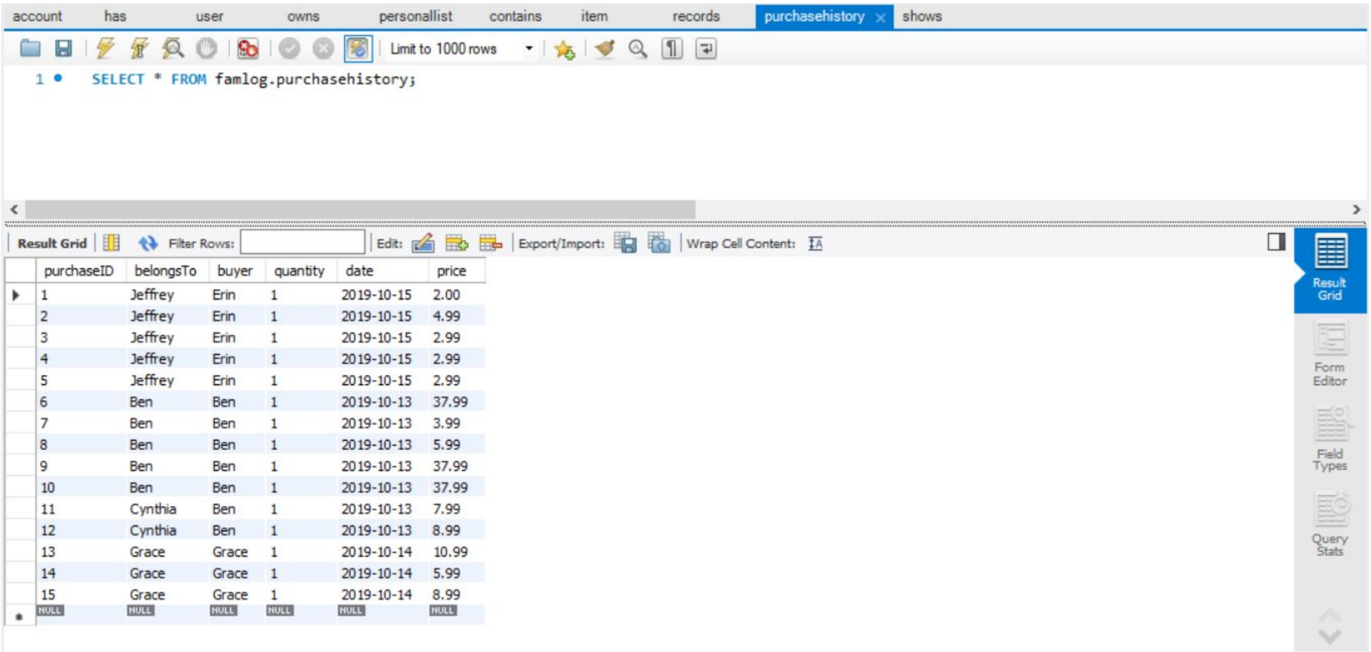
```
1 ● SELECT * FROM famlog.item;
```

itemID	itemName	brand
1	apple	Safeway
2	banana	Dole
3	soda	Fanta
4	soda	Coca-cola
5	soda	Sprite
6	Toki	Suntory
7	ice cream	Walls
8	ice cream	HaagenDazs
9	Toki	Suntory
10	Toki	Suntory
11	Coffee	Starbucks
12	Coffee	Peets
13	Coffee	Blue Bottle
14	Green Tea	Lipton
15	Earl Grey Tea	TWG
NULL	NULL	NULL



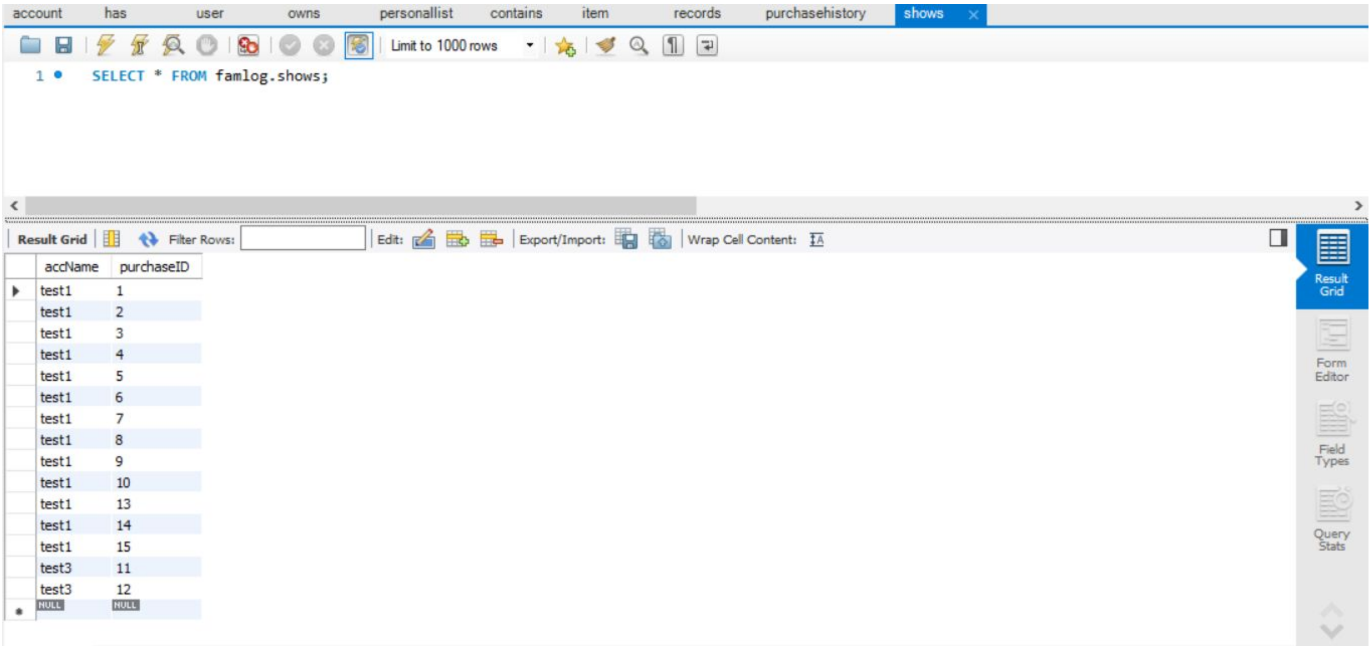
```
1 ● SELECT * FROM famlog.records;
```

itemID	purchaseID
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
NULL	NULL



```
SELECT * FROM famlog.purchasehistory;
```

purchaseID	belongsTo	buyer	quantity	date	price
1	Jeffrey	Erin	1	2019-10-15	2.00
2	Jeffrey	Erin	1	2019-10-15	4.99
3	Jeffrey	Erin	1	2019-10-15	2.99
4	Jeffrey	Erin	1	2019-10-15	2.99
5	Jeffrey	Erin	1	2019-10-15	2.99
6	Ben	Ben	1	2019-10-13	37.99
7	Ben	Ben	1	2019-10-13	3.99
8	Ben	Ben	1	2019-10-13	5.99
9	Ben	Ben	1	2019-10-13	37.99
10	Ben	Ben	1	2019-10-13	37.99
11	Cynthia	Ben	1	2019-10-13	7.99
12	Cynthia	Ben	1	2019-10-13	8.99
13	Grace	Grace	1	2019-10-14	10.99
14	Grace	Grace	1	2019-10-14	5.99
15	Grace	Grace	1	2019-10-14	8.99
NULL	NULL	NULL	NULL	NULL	NULL



```
SELECT * FROM famlog.shows;
```

accName	purchaseID
test1	1
test1	2
test1	3
test1	4
test1	5
test1	6
test1	7
test1	8
test1	9
test1	10
test1	13
test1	14
test1	15
test3	11
test3	12
NULL	NULL

Descriptions

Through our application, any individual can create an *Account* with a unique *accountName* and a *password* for the respective household. A *User* is then created within the *Account*, representing the different individuals within that household.

Every *User* will have a unique *userID* and *name*. Each *User* also has exactly one *PersonalList* which is identified by a unique *personalListID*.

The entity *PersonalList* also contains the attributes which include the *quantity* requested, the *priority* of each item, and the attribute *notes*. This is representative of the individual shopping list, held by each *User* within a household.

PersonalList also has a relationship with the entity *Item*. *PersonalList* contains the *Item* that was chosen by the *User* to add to their list. *Item* has the attributes of *brand, itemName,* and the unique attribute *itemID*. *Item* shares a relationship with *PurchaseHistory. PurchaseHistory* records the *Item*, adding it to the rest of the purchase history.

By default, the *Account* has exactly one *PurchaseHistory*, and each *PurchaseHistory* belongs to exactly one *Account*. This entity has the unique attribute *purchaseID*. Other attributes of *PurchaseHistory* include the *buyer* of the item, the attribute *itemName*, the *date* of purchase, the *price* of each item, the *quantity* of the items bought, and the attribute *belongsTo*, which represents to whom's list the *Item* belongs to.