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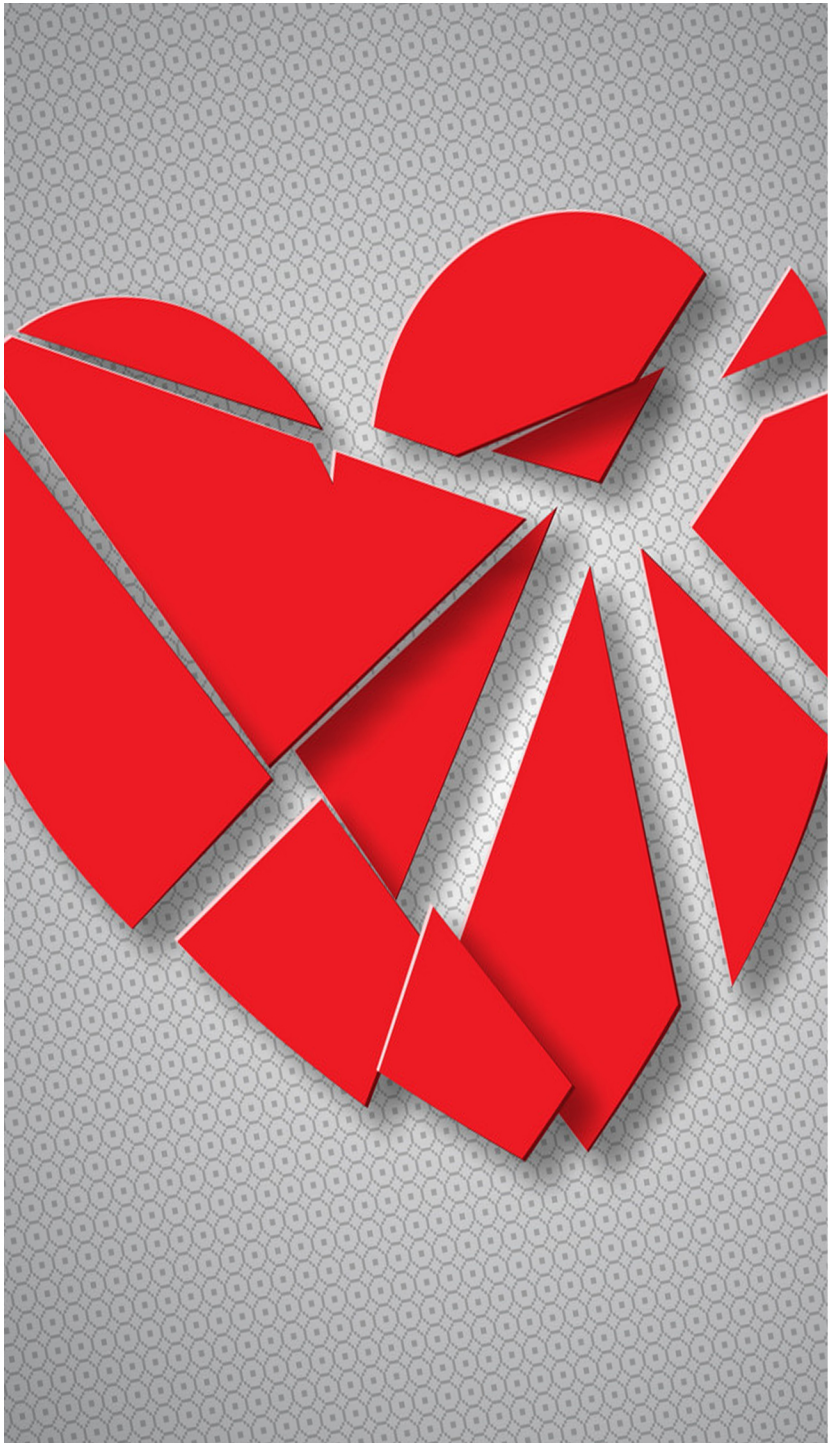
CS435 Term Project

Matchmaking Application

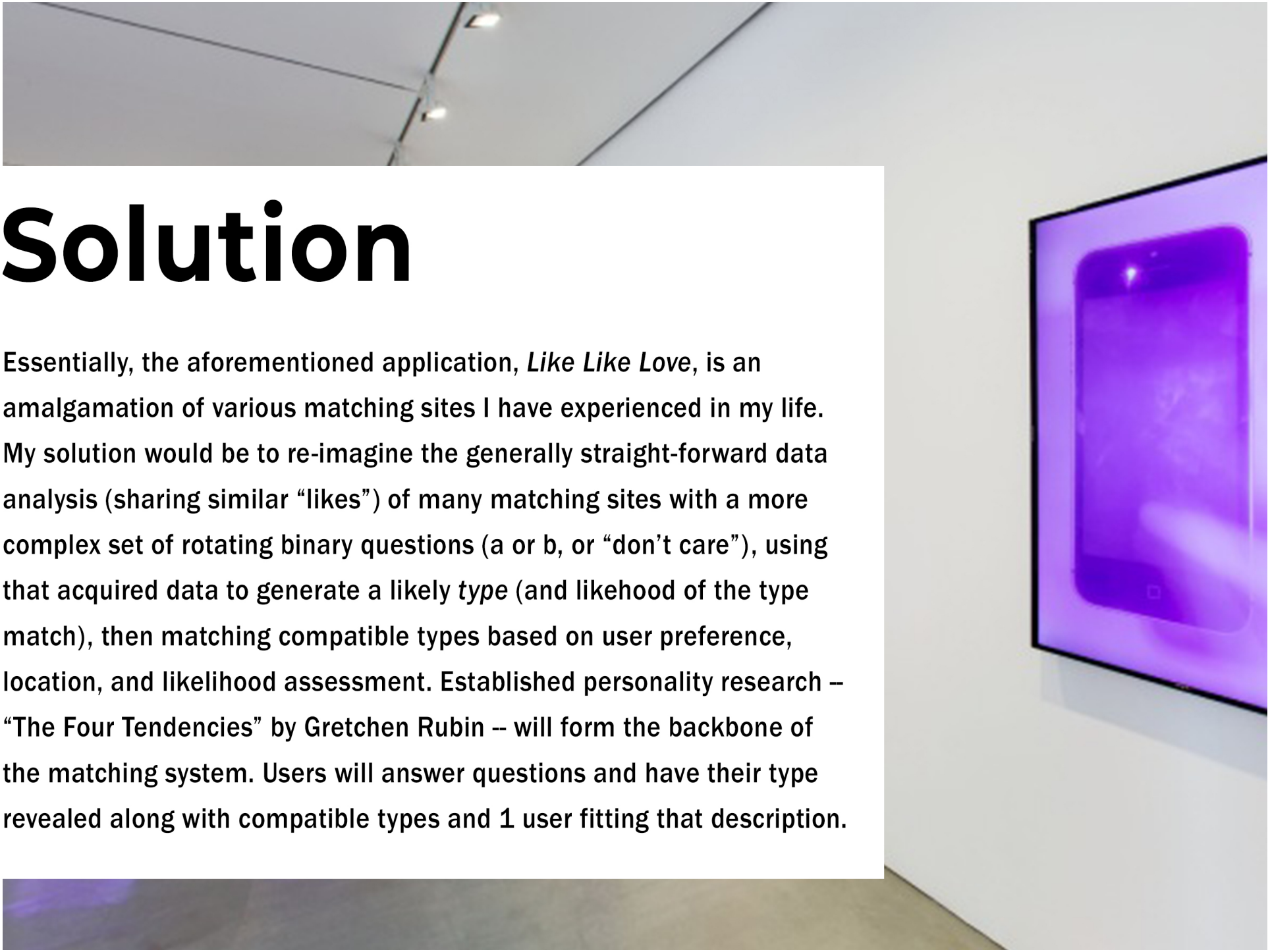


The Problem

Popular match-making site, *Like Like Love*, has been riding the high of its refreshing take on dating -- or rather blind-dating -- to a boom in user activity. The service asks users to complete a questionnaire and connects people based on percentage of shared answers.

Recently, however, the site has seen a sharp decline in usage as existing patrons have been reporting a lack of depth in their matches. For the site to continue operating, user confidence in the site must be restored.

Business problem: revamp existing match algorithm by creating a system for pairing-up users that looks deeper into data relationships to create more likely matches, restore patron confidence, and renew interest.

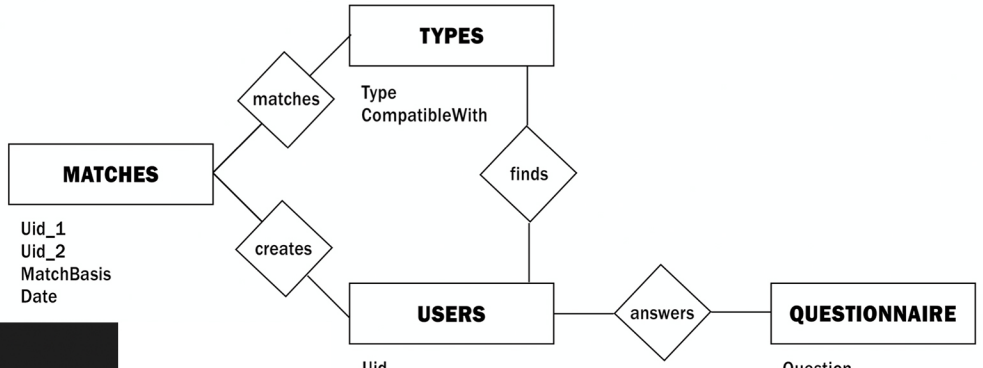


Solution

Essentially, the aforementioned application, *Like Like Love*, is an amalgamation of various matching sites I have experienced in my life. My solution would be to re-imagine the generally straight-forward data analysis (sharing similar “likes”) of many matching sites with a more complex set of rotating binary questions (a or b, or “don’t care”), using that acquired data to generate a likely *type* (and likehood of the type match), then matching compatible types based on user preference, location, and likelihood assessment. Established personality research -- “The Four Tendencies” by Gretchen Rubin -- will form the backbone of the matching system. Users will answer questions and have their type revealed along with compatible types and 1 user fitting that description.

Discovery

```
### What my answers say about me

SELECT c.question, c.choice, types.type
FROM chooses
JOIN
  (SELECT questions.question question, choices.choice choice, choices.choice_id choice_id, choices.type
    FROM choices
    JOIN
    questions ON questions.question_id=choices.question_id) c
  ON chooses.choice_id=c.choice_id
JOIN
  types ON types.type_id=c.type_id
WHERE account_id=3;


### Retrieve profile data

SELECT auth.email, det.phone_number, det.zipcode, det.looking_for, t.type, min(pairings.type_id2) type_pair1,
max(pairings.type_id2) type_pair2
FROM accounts auth
JOIN
  accounts_details det ON auth.account_id=det.account_id
LEFT JOIN
  (SELECT type_of.account_id account_id, type_of.type_id, types.type type
    FROM type_of
    JOIN
    types ON types.type_id=type_of.type_id) t
  ON t.account_id=auth.account_id
LEFT JOIN
  pairings ON pairings.type_id1=t.type_id
WHERE auth.account_id = 5;


### Retrieve profile data with match types

SELECT auth.email, det.phone_number, det.zipcode, det.looking_for, t.type, p.type_pair1, p.type_pair2
FROM accounts auth
JOIN
  accounts_details det ON auth.account_id=det.account_id
JOIN
  (SELECT type_of.account_id account_id, type_of.type_id type_id, types.type type
    FROM type_of
    JOIN
    types ON types.type_id=type_of.type_id) t
  ON t.account_id=auth.account_id
JOIN (
  SELECT pair1.type_id type_id, pair1.type1 type_pair1, pair2.type2 type_pair2
  FROM (
    SELECT a.type_id1 type_id, a.type_pair1 type_pair1, types.type type1
    FROM types
    JOIN (
      SELECT type_id1, max(type_id2) type_pair1
      FROM pairings
      WHERE type_id1=4) a
    ON types.type_id=a.type_pair1) pair1
  JOIN (
    SELECT a.type_id1 type_id, a.type_pair2 type_pair2, types.type type2
    FROM types
    JOIN (
      SELECT type_id1, min(type_id2) type_pair2
      FROM pairings
      WHERE type_id1=4) a
    ON types.type_id=a.type_pair2) pair2
  ON pair1.type_id=pair2.type_id) p
  ON p.type_id=t.type_id
WHERE auth.account_id = 3;
```



Schema:

```
show tables;
+------------------------+
| Tables_in_likelikelove |
+------------------------+
| accounts               |
| answers                |
| matches                |
| questions              |
+------------------------+
```

[descriptions below]

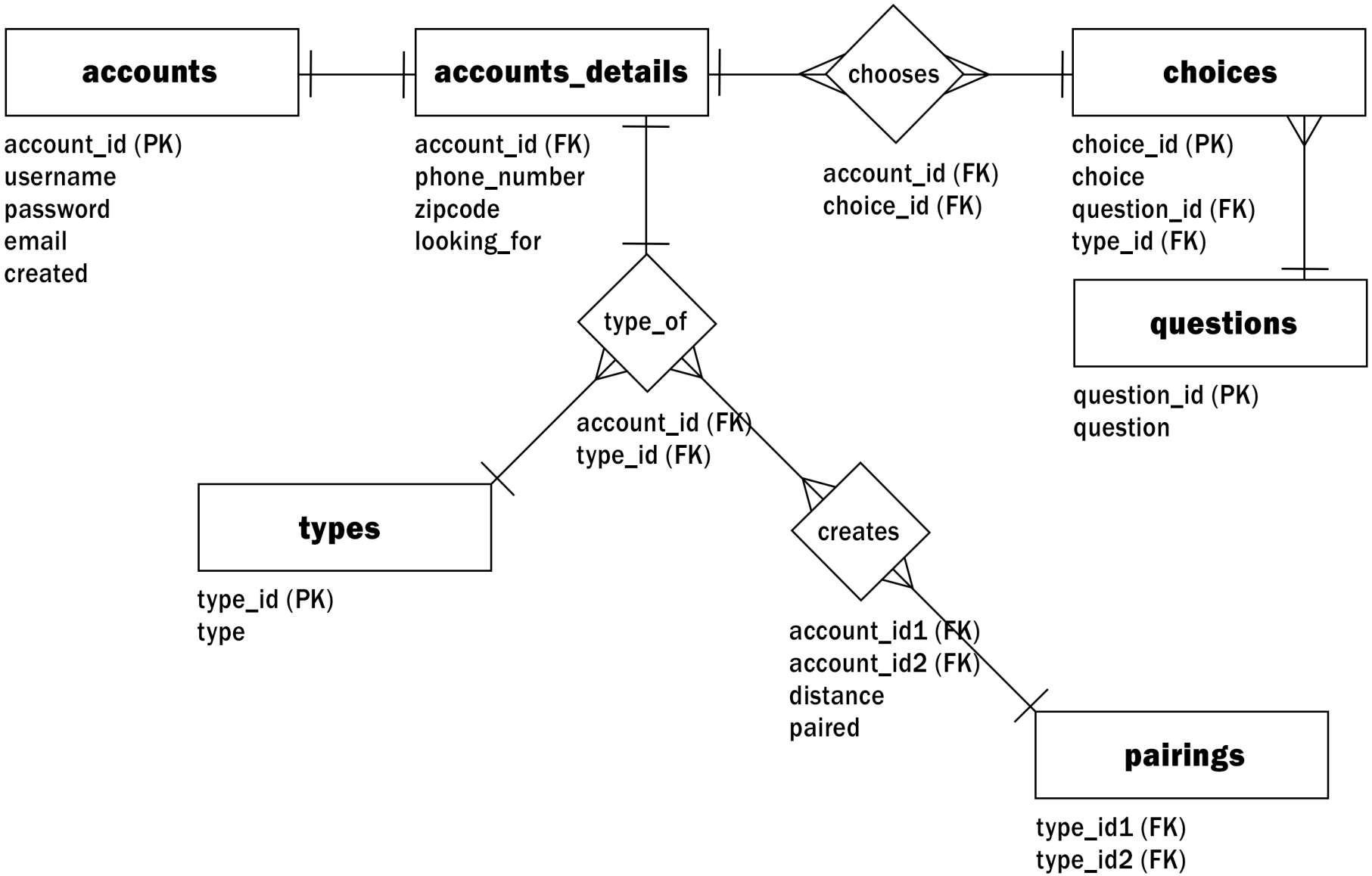
```
desc accounts;
+--------------+--------------+------+-----+---------------------+----------------+
| Field        | Type         | Null | Key | Default             | Extra          |
+--------------+--------------+------+-----+---------------------+----------------+
| id           | int(11)      | NO   | PRI | NULL                | auto_increment |
| username     | varchar(50)  | NO   |     | NULL                |                |
| password     | varchar(255) | NO   |     | NULL                |                |
| email        | varchar(100) | NO   |     | NULL                |                |
| zipcode      | varchar(5)   | NO   |     | NULL                |                |
| gender       | varchar(255) | NO   |     | NULL                |                |
| looking_for  | varchar(255) | NO   |     | NULL                |                |
| ans_id       | int(11)      | YES  |     | NULL                |                |
| type         | varchar(255) | YES  |     | NULL                |                |
| created      | datetime     | YES  |     | current_timestamp() |                |
+--------------+--------------+------+-----+---------------------+----------------+
```

```
desc questions;
+------------+--------------+------+-----+---------+----------------+
| Field      | Type         | Null | Key | Default | Extra          |
+------------+--------------+------+-----+---------+----------------+
| q_id       | int(11)      | NO   | PRI | NULL    | auto_increment |
| question   | varchar(255) | NO   |     | NULL    |                |
| answer_a   | varchar(255) | NO   |     | NULL    |                |
| meaning_a  | varchar(255) | NO   |     | NULL    |                |
| answer_b   | varchar(255) | NO   |     | NULL    |                |
| meaning_b  | varchar(255) | NO   |     | NULL    |                |
+------------+--------------+------+-----+---------+----------------+
```

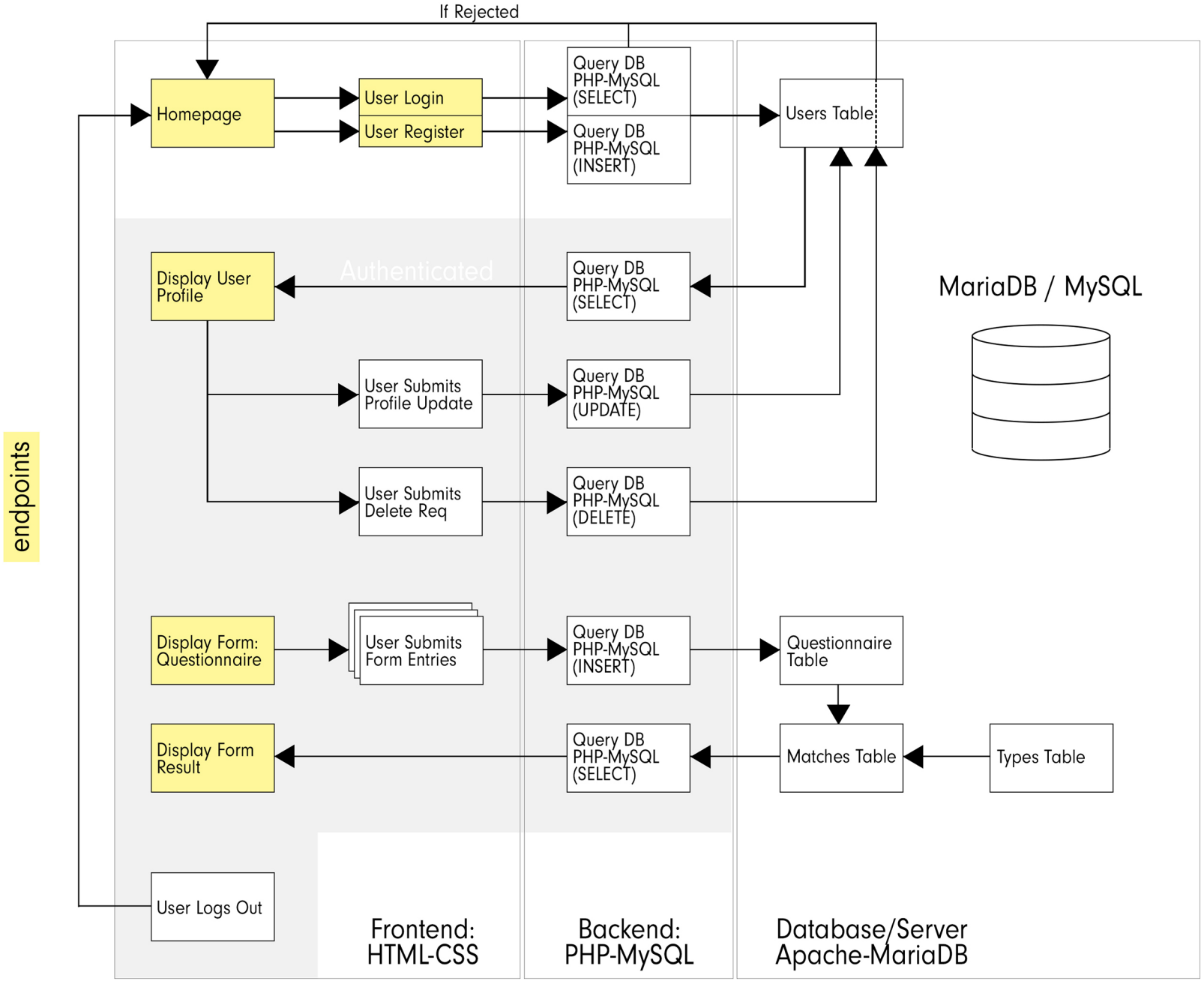
```
desc answers;
+---------+--------------+------+-----+---------+----------------+
| Field   | Type         | Null | Key | Default | Extra          |
+---------+--------------+------+-----+---------+----------------+
| ans_id  | int(11)      | NO   | PRI | NULL    | auto_increment |
| q_id    | int(11)      | NO   |     | NULL    |                |
| answer  | varchar(255) | NO   |     | NULL    |                |
| id      | int(11)      | NO   |     | NULL    |                |
+---------+--------------+------+-----+---------+----------------+
```

```
desc matches;
+-------------+--------------+------+-----+---------------------+----------------+
| Field       | Type         | Null | Key | Default             | Extra          |
+-------------+--------------+------+-----+---------------------+----------------+
| m_id        | int(11)      | NO   | PRI | NULL                | auto_increment |
| id_a        | int(11)      | NO   |     | NULL                |                |
| id_b        | int(11)      | NO   |     | NULL                |                |
| match_date  | datetime     | YES  |     | current_timestamp() |                |
| distance    | int(11)      | NO   |     | NULL                |                |
| basis       | varchar(255) | NO   |     | NULL                |                |
+-------------+--------------+------+-----+---------------------+----------------+
```

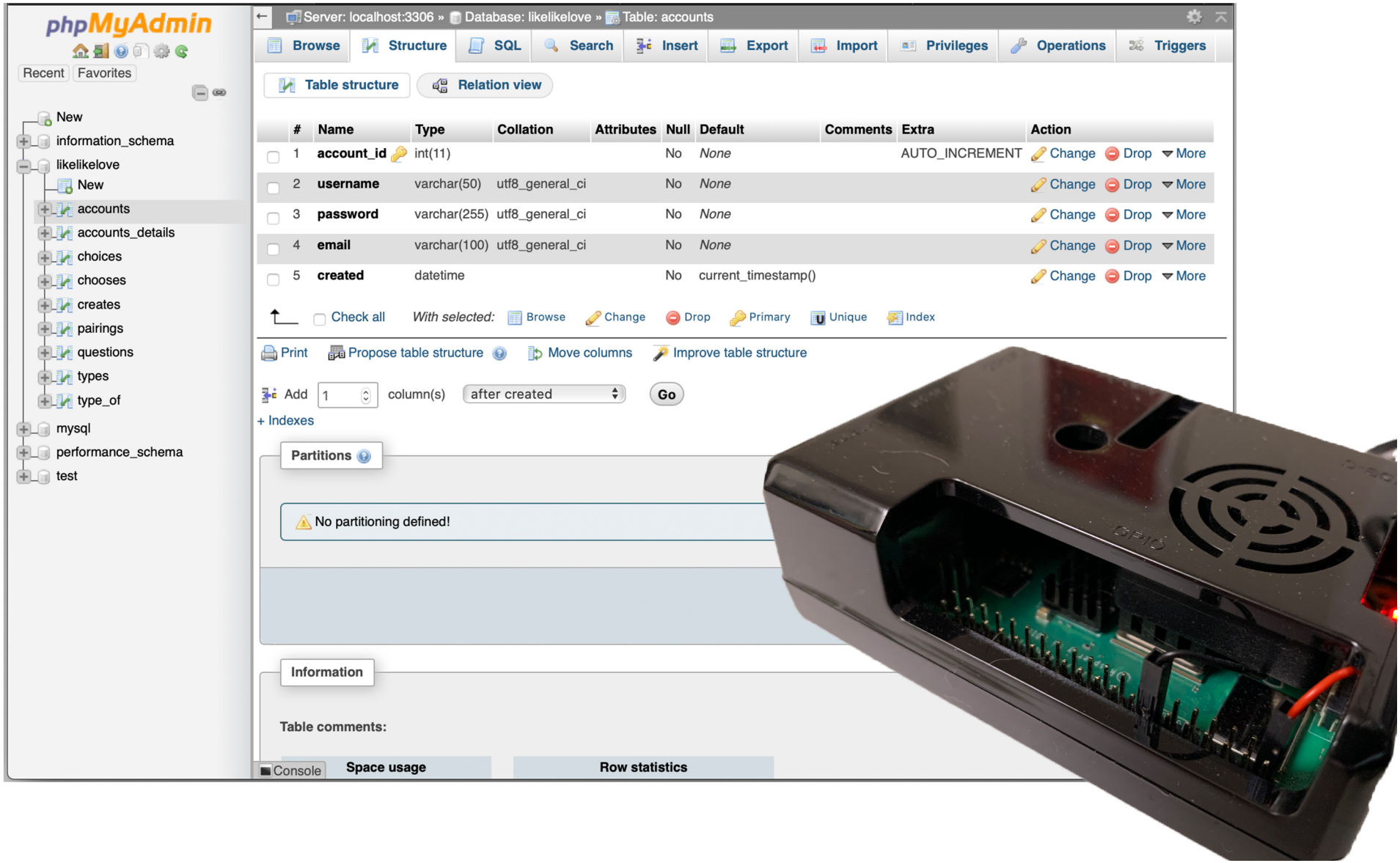
ER Diagram


accounts
account_id (PK)
username
password
email
created
accounts_details
account_id (FK)
phone_number
zipcode
looking_for
chooses
account_id (FK)
choice_id (FK)
choices
choice_id (PK)
choice
question_id (FK)
type_id (FK)
questions
question_id (PK)
question
type_of
account_id (FK)
type_id (FK)
types
type_id (PK)
type
creates
account_id1 (FK)
account_id2 (FK)
distance
paired
pairings
type_id1 (FK)
type_id2 (FK)

Flow


If Rejected
Homepage
User Login
User Register
Query DB PHP-MySQL (SELECT)
Query DB PHP-MySQL (INSERT)
Users Table
Authenticated
Display User Profile
Query DB PHP-MySQL (SELECT)
MariaDB / MySQL
User Submits Profile Update
Query DB PHP-MySQL (UPDATE)
User Submits Delete Req
Query DB PHP-MySQL (DELETE)
endpoints
Display Form: Questionnaire
User Submits Form Entries
Query DB PHP-MySQL (INSERT)
Questionnaire Table
Display Form Result
Query DB PHP-MySQL (SELECT)
Matches Table
Types Table
User Logs Out
Frontend: HTML-CSS
Backend: PHP-MySQL
Database/Server Apache-MariaDB

Implementation



UI Skeleton


PERSONALITYQUIZ
I am more likely to break a commitment to:
Myself
Others
Skip

Actual Product