BLOCK DIAGRAM

VB_10

SmartMatch

Team:

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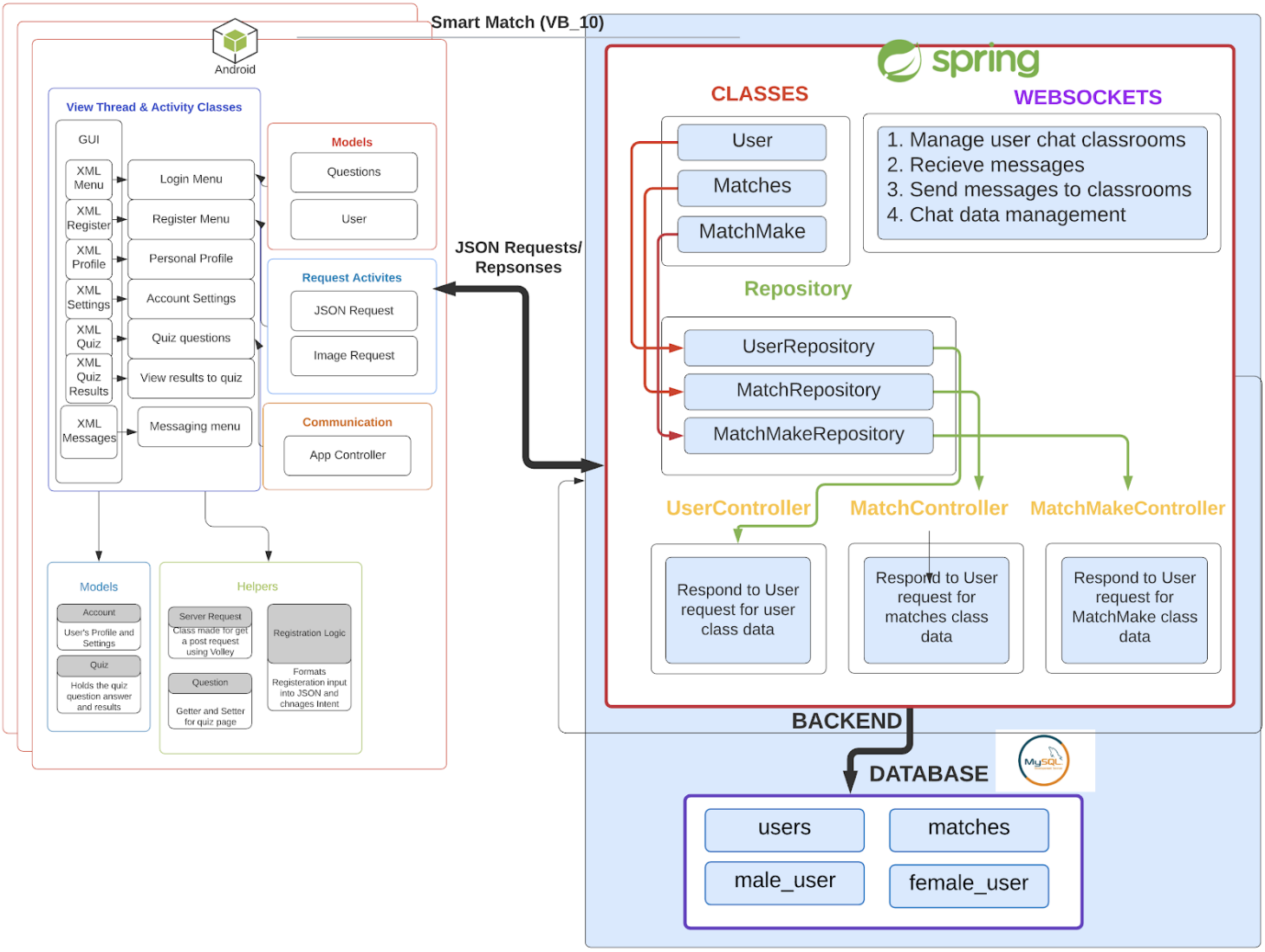
Block Diagram



Design Description

- **Android Client- Technologies Used: Java, Volley, XML**

For the android client, we use Java and XML to display different app screens. The XML pages are where we design the views of the screens such as text, buttons, and other interface components. Java provides the functionality of each of the screens. There are also java helper classes that help the view screens communicate. The user interacts with the server through XML pages. We use Android volley to send HTTP requests to our server through the activity pages on the app. This is seen in the user login, register, posting quiz results, and profile page. This allows us to keep up-to-date information of each user so when they visit the app again their data is the same.

- **Backend**
    - **Database-**

Technology Used: Mysql

There are 4 tables in our database: User, Matches, female_user, and male_user. Each one of the databases corresponds to the java class in the Backend. The User Table stores the Information of the User, while on the other hand the Matches table stores the Matches and the Quiz score of the User. The male_user and the female_user contain the user that has been sorted according to the gender so that it would be easier to make.

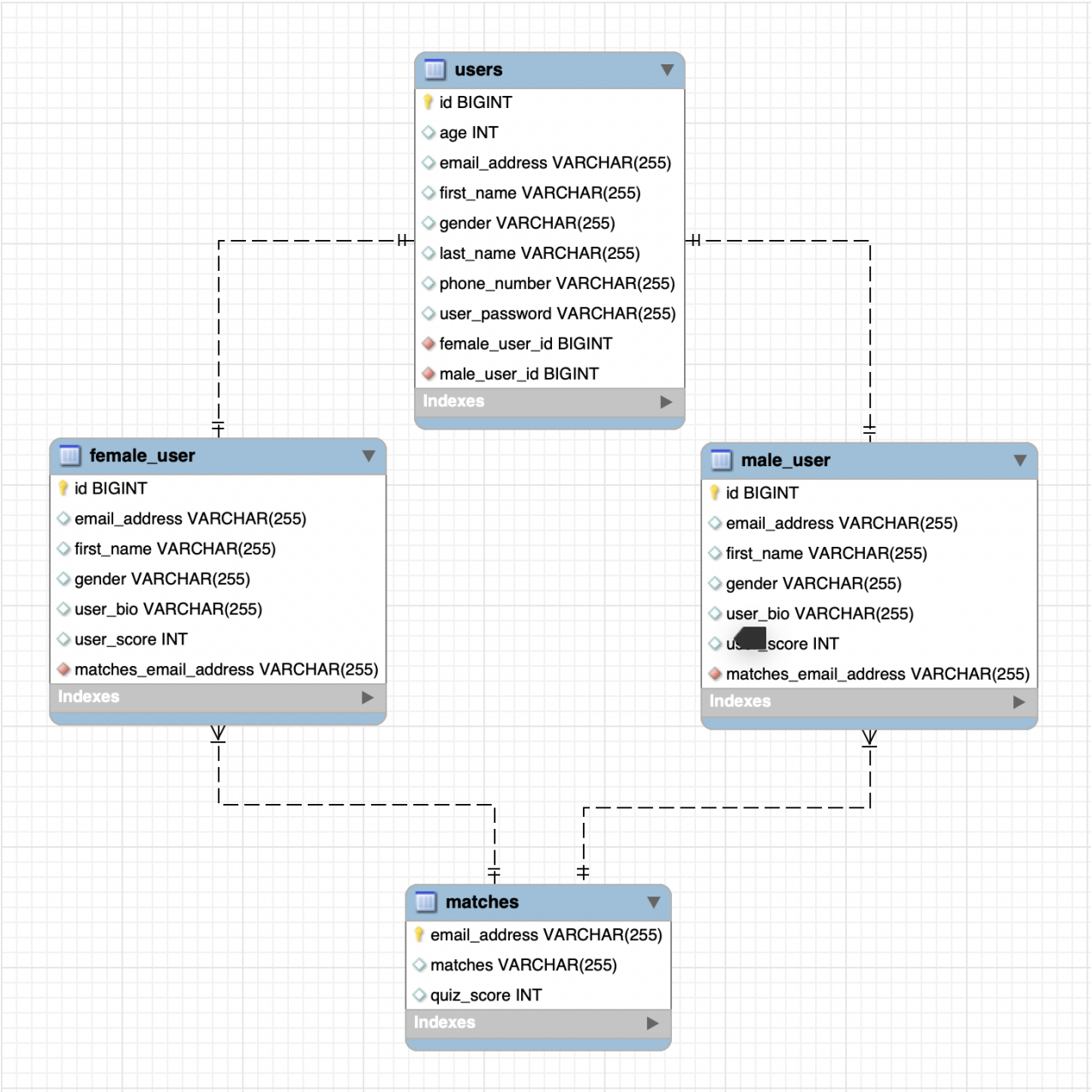
To keep the Track of each user we have Uniquely Defined the User ID(ID) for each user. It helps us to identify a particular user and can be addressed across the different databases.

    - **Server Side -**

Technology Used: Java, SpringBoot Framework

We have got the 3 object classes in the backend: User, Matches, and MatchMake. Each class contains the variables that have been defined in the database for the tables. This includes the get and set method for each class. Each class also contains its own controller and repository class. The controller class is where you write any methods to access information to the database with any CRUD methods (i.e. get, post, put, delete, and patch). We mainly use get and post to save information from the frontend in the database and send information from the database to the frontend.

Tables and Field



1. **Users Table**

id	age	email_address	first_name	gender	last_name	phone_number	user_password
1	19	rbansal@iastate.edu	Eric	Male	Marc	12215567	Mar1$
2	18	xyz@iastate.edu	Rishabh	male	BAnsal	7777777	Rish
3	20	Priyanka@gmail.com	Priyanka	Female	Chopra	703556677	Iamhot
4	21	sana@gmail.com	Sana	Female	Chopra	55566602023	HideIt
5	20	jayant@gmail.com	Jayant	Male	Shah	11223344	Passw
6	20	suraj@gmail.com	Suraj	Male	Pariyar	7038892212	CoolDude
7	18	ananaya@gmail.com	Ananaya	Female	Ahuja	152034456	OmHari
8	50	jaya@gmail.com	Jaya	Female	Bachan	515151523	BachanFamily

2. **Matches Table**

email_address	matches	quiz_score
eric@gmail.com	Jasmin, Jaya	40
jayant@gmail.com	Kamini, Jaya	25
rbansal@gmail.com	Priyanka, Kamini	35

3. **Female_user Table**

id	email_address	first_name	gender	user_bio	user_score
4	sana@gmail.com	Eric	Female	NULL	35
8	jaya@gmail.com	Jaya	Female		35

4. **Male_user Table**

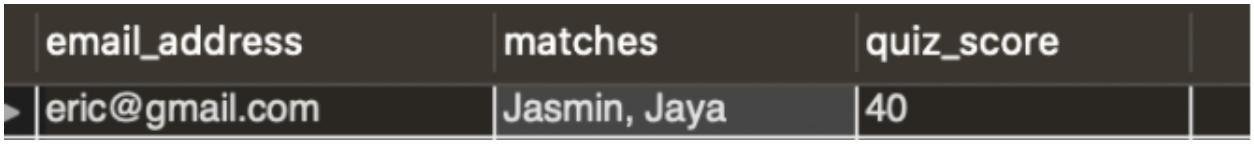
id	email_address	first_name	gender	user_bio	user_score
1	rbansal@iastate.edu	Eric	Male	NULL	40
5	jayant@gmail.com	Jayant	Male		25

Relationships

- **One-to-one:**
  Each user's **"first_name"** has a unique id **"id"** assigned to them, both male and female.

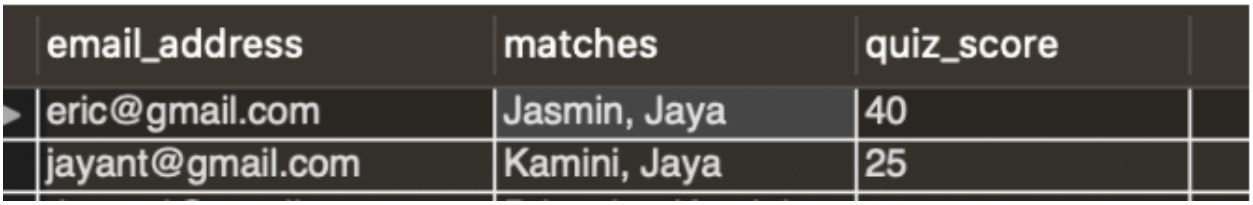
id	email_address	first_name	gender	user_bio	user_score
1	rbansal@iastate.edu	Eric	Male	NULL	40

- **One-to-many:**
  One male user **"email_address"** can have multiple female **"matches"** and vice versa using their quiz score **"user_score"**.



email_address	matches	quiz_score
eric@gmail.com	Jasmin, Jaya	40

- **Many-to-one:**
  There are multiple **"matches"** for one particular user **"email_address"** as seen in the matches table.



email_address	matches	quiz_score
eric@gmail.com	Jasmin, Jaya	40
jayant@gmail.com	Kamini, Jaya	25

- **Many-to-many:**
  One male **"email_address"** can have multiple female **"matches"** and among those matches of the male any female can have multiple male **"matches"**.