

# Block Diagram

**Team:**

**SB\_4**

**Team Members:**

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**Project:**

***Getit***

## Project Design:

### Model:

Our application makes use of Spring Boot and SQL for both server-side interactions as well as data storage. We were given the task to work with Spring Boot, but later realized the benefits to this framework. Spring Boot has allowed for efficient client-side and server-side communication through our project. One of the benefits to using the Spring Boot Framework is the ability to create Java unit and integration tests with ease. This framework is also fully reactive and scalable when implemented correctly allowing us to fulfill some of our non-functional application objectives. Spring Boot also does a great job at making it easy to develop spring applications when working with Java. When combined with Maven, we are able to create dependant, efficient, and effective RESTful applications. Implementing volley into our application has allowed for us to perform tasks asynchronously. This means that when the application communicates with the back-end, we are able to run it in a background thread so it does not interrupt the main threads processes. This is critical to our application development because it allows the user to keep performing tasks in the application while it is being processed through our network in the background.

### Controller:

Whenever a user logs into our application, the request is sent as a JSON object to our server. After the server receives the request, it will check our existing database of users, and respond to the request promptly and accurately. When a new user attempts to create an account, a similar process happens. However, the server takes the JSON object request and the server will add the account to our database. In addition, when a user adds a course, it will send a JSON request to the server, check existing courses, and add the course as requested to the client-side while updating the user's course list on the back-end.

### View:

Our application's front-end makes extensive use of Java programming in Android Studio. The design to create a feature requires the combination of XML and java classes. Our XML allows us to create the UI for the feature, and Android Studio provides many beneficial resources to help us with UI development. On the other hand, our class that will be run allows us to make these UI components effective in the application.

Course: Com S 309  
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Java / XML	Database
Libraries	SQL

