# Mobile Apps Necessary Third Party Libraries

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## **Necessary Libraries**

The following is a short list of libraries deemed necessary to finish our group mobile app.

### Google Firebase

Our mobile app needs the ability to store user logins, cards, decks, stats, and other key features on a remote server. Firebase provides a clean set of functions to allow our app to interface with a remote NoSQL server and securely return data to users on creation. Furthermore, the use of Firebase allows for easier recovery and linking of user info if they were to switch to a new device.

#### LibGDX

Although activities will function as a primary method of displaying user information, this app also requires a way to easily draw abstract shapes. LibGDX greatly simplifies the process for drawing the 2D graphics of the app, and integrates with other activities seamlessly. As such, LibGDX is necessary for game animations and graphics.

### Google Maps

One desired feature of the application is to allow users who are close by to battle each other. Although a custom map could be created, it is far more convenient to use Google Maps as a way to display nearby users. Google Maps also handles user interactions, helping to reduce the required work for displaying users and their locations.