Design Document for Palo

Group TZ-02

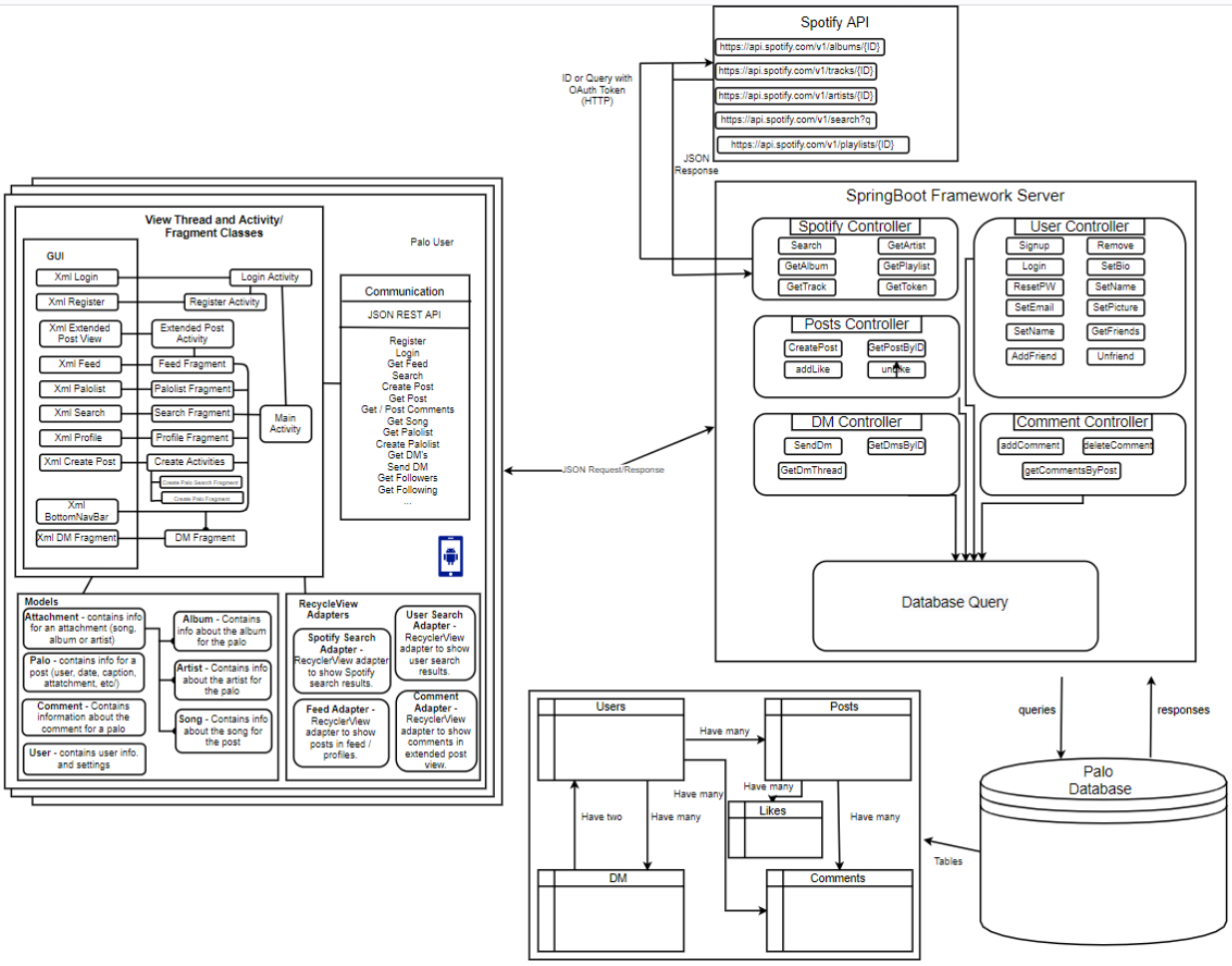
Tom: 25% (frontend)

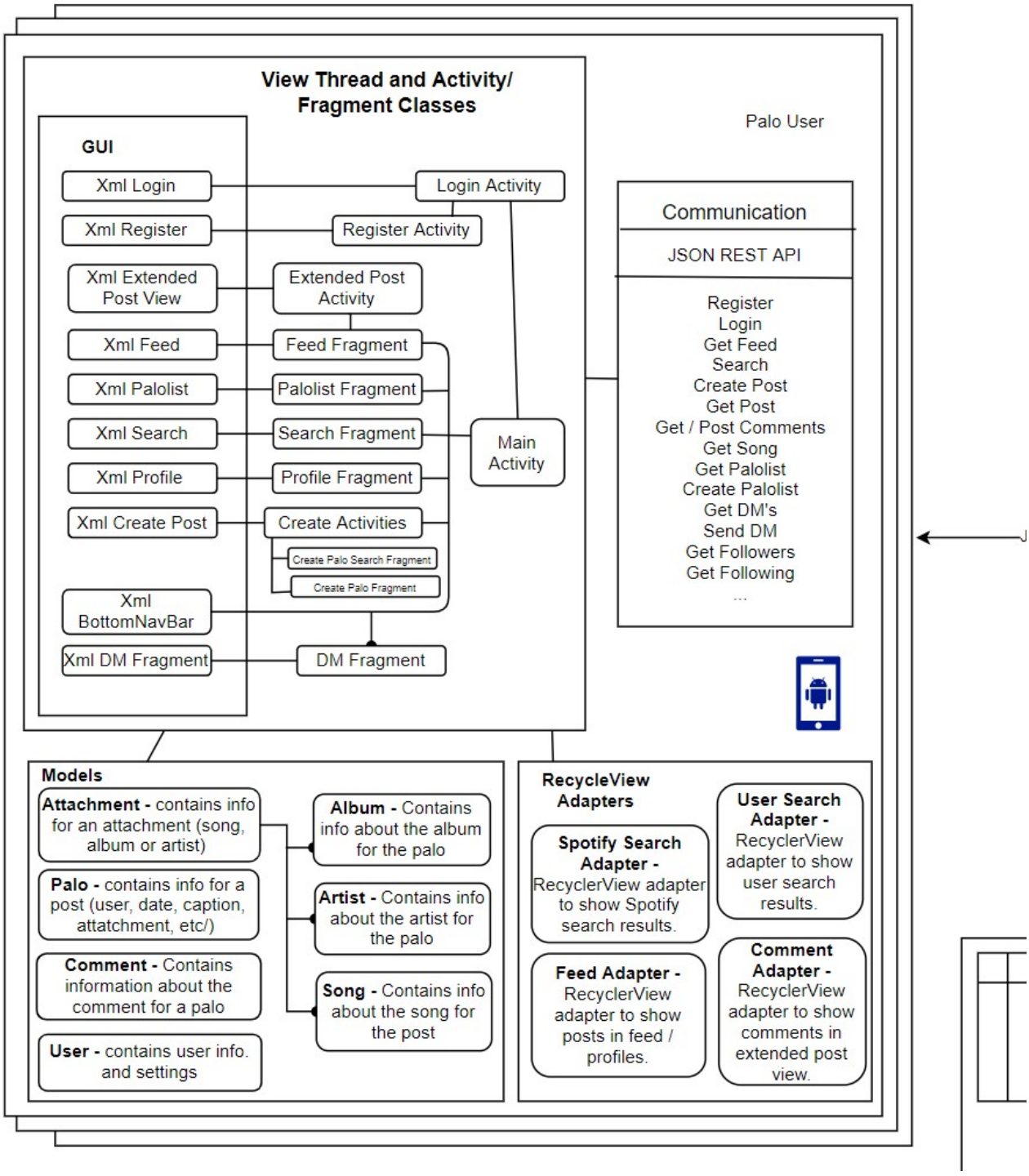
Marshall: 25% (backend)

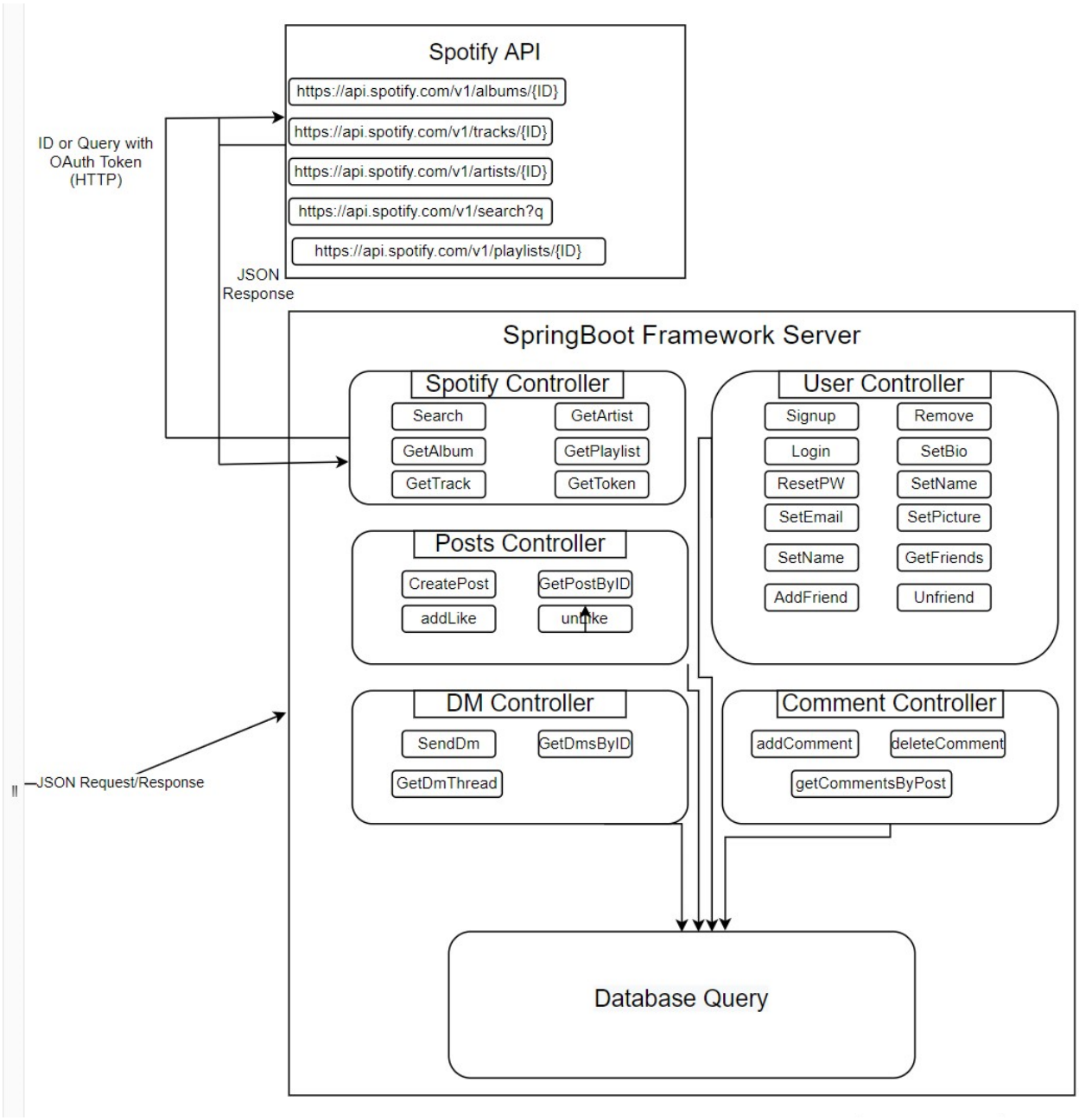
David: 25% (backend)

Tiffany: 25% (frontend)

Block Diagram




View Thread and Activity/ Fragment Classes
GUI
Xml Login
Login Activity
Xml Register
Register Activity
Xml Extended Post View
Extended Post Activity
Xml Feed
Feed Fragment
Xml Palolist
Palolist Fragment
Xml Search
Search Fragment
Xml Profile
Profile Fragment
Xml Create Post
Create Activities
Create Palo Search Fragment
Create Palo Fragment
Xml BottomNavBar
Xml DM Fragment
DM Fragment
Main Activity
Palo User
Communication
JSON REST API
Register
Login
Get Feed
Search
Create Post
Get Post
Get / Post Comments
Get Song
Get Palolist
Create Palolist
Get DM's
Send DM
Get Followers
Get Following
...
Models
Attachment - contains info for an attachment (song, album or artist)
Palo - contains info for a post (user, date, caption, attatchment, etc/)
Comment - Contains information about the comment for a palo
User - contains user info. and settings
Album - Contains info about the album for the palo
Artist - Contains info about the artist for the palo
Song - Contains info about the song for the post
RecycleView Adapters
Spotify Search Adapter - RecyclerView adapter to show Spotify search results.
Feed Adapter - RecyclerView adapter to show posts in feed / profiles.
User Search Adapter - RecyclerView adapter to show user search results.
Comment Adapter - RecyclerView adapter to show comments in extended post view.


Spotify API
https://api.spotify.com/v1/albums/{ID}
https://api.spotify.com/v1/tracks/{ID}
https://api.spotify.com/v1/artists/{ID}
https://api.spotify.com/v1/search?q
https://api.spotify.com/v1/playlists/{ID}
ID or Query with OAuth Token (HTTP)
JSON Response
SpringBoot Framework Server
Spotify Controller
Search
GetArtist
GetAlbum
GetPlaylist
GetTrack
GetToken
User Controller
Signup
Remove
Login
SetBio
ResetPW
SetName
SetEmail
SetPicture
SetName
GetFriends
AddFriend
Unfriend
Posts Controller
CreatePost
GetPostByID
addLike
unlike
DM Controller
SendDm
GetDmsByID
GetDmThread
Comment Controller
addComment
deleteComment
getCommentsByPost
JSON Request/Response
Database Query

Design Description

Android User GUI

Our Palo Application will consist of different fragments that make up the bulk of the app. On startup the first time, the user will be presented with a login page. If the user doesn't have an account already, they can register themselves to the app (register page). This will create an account on our database. When they login, they will be put on the feed fragment. These fragments are designed for easy access to other parts of the app. All of the fragments and pages are located on the "View Thread and Activity/Fragment Classes" section. They all have a corresponding xml page that will include their design. The activity and fragment classes will hold their functionality and what we want the pages to do.

Android Models

We have four planned models: User, Posts (Palos), Attachment (Song, Album and Artist), and Comment. These models allow us to keep related data together and allows us to retrieve/send data back and forth between the client and the server more cleanly.

Android Communication

To communicate with our backend, we will use different JSON requests to get information for our users. Different activities and fragments will use different requests to our server to organize the information properly and store it in our database.

Spotify API

For our application we want to use the Spotify API to be able to create a user experience that will include songs, artists, and albums right on the app. This will make it easier for users to share their stories without having to switch back and forth between Spotify and our app.

Framework/Server

For our server we're using springboot to host our java based api. This api will consist of a number of different url endpoints that will take in data in json format from our frontend application. The data will then be processed differently based on the endpoint it is tied to. Any endpoint that is using the Spotify API will not touch the database, but instead ping the Spotify API using the given information, parse the response and return a json string back to the requesting application. We are accessing our sql database using the hibernate as a framework for managing our relational database.

Table Relationships Diagram

PUT THE TABLE RELATIONSHIPS DIAGRAM on this fourth page! (Create the picture using MySQLWorkbench)