course: CS446 team: BB8 project: WAThub

members:
- Mahammad Ismayilzada [20496519, mismayil@uwaterloo.ca]
- Jeyhun Orujlu [20494639, jorujlu@uwaterloo.ca]
- Samir Musali [20491904, smusali@uwaterloo.ca]
- Nurlan Masimli [20490844, nmasimli@uwaterloo.ca]

final status report

progress...

This is the final status report of the project. We are going to state all the progress we have made since first status report (as we have not submitted the second status report). Let's refer to the estimated breakdown of the project tasks presented in the original proposal and list every item with detailed information on its status (excluding items that were reported in the first status report):

- carpool post

This item has been implemented with all the features indicated in the proposal. Now users can post about carpooling service and also join other people to carpool with. In the future, Google Maps API can be used to extend the functionality of this service to offer location based posting and searching.

- search/filter

This feature is also completed and consists of 2 parts: general and advanced search. With general search users can just search for post content, while advanced search offers much more options to customize the query and get the exact post they want.

- personal activities

This section is mostly done and few adjustments will be made to make it more informative. It will list all your posts and activities in a separate tab.

- post voting

This feature is implemented for all posts and most voted posts will appear first on the post feed if the filter is selected.

- post commenting

This feature will also be available for all the posts so that users can comment on the post to interact in place.

- settings

Basic settings functionality will be offered if there is anything to adjust. This feature is partially implemented.

- notifications and messaging
Unfortunately, due to time limit and complexity of messaging service, this feature won't be available for the demo. Instead, users will be encouraged to use the facebook account or email to connect with the other user for now. In the future, we will most likely implement this feature because our aim was to allow students to do all those activities in one platform. But since commenting will be available, students can also comment on the posts to communicate directly. Notifications might not be fully implemented too, but we hope to finish it by the demo day.

- post swiping and refreshing
As mentioned in the original proposal, users will also be able to swipe posts to the right and left to make it favorite or done respectively. Those posts will be saved to Favorites or Done section to review later on. These posts won't appear in the post feed again and that will give users more flexibility on news feed experience.
News feed is also refreshable by swiping down which will update the existing posts and show any new posts as well. These two features are already implemented.

- material design
One of our goals from the beginning was also not just implement the functionality, but also to materialize it to present a native and elegant user experience. Therefore, Google's material design has been applied in every part of the application which will deliver a nice look and smooth feel when using it.

demo description

For our final demo, we are going to present a few user scenarios in detail and point out other features as well due to time limit. More emphasis will be put on the features that were not presented in the prototype demo. We are going to skip the login screen as this was already implemented and presented before. We will be demoing the features listed above in detail and also will talk about the future of the application and challenges we faced during the development process. Specifically, we will showcase following features:

- post feed
This includes swiping and refreshing posts as well.

- profile linking
This will demonstrate the ability to open other users profile by tapping on their names.

- carpool scenario
A typical user scenario using this service will be demoed.

- search/advanced search
We will also demo various uses of search and/or advanced search to find posts.

Other parts of the app will be mentioned briefly and we also plan to possibly make some slides about the challenges we faced and the future of the app in real world.

project documentation

architecture and design

The architecture of our project is based on the MVC pattern. Models are the actual data classes, Views are XML files and controllers are the activities. Models are associated with Parse classes and provide object oriented interface to facilitate storing and retrieving data. Each XML file defines a view item independently and is reusable in other view files as well. Controllers provide the necessary interaction between models and views. They are represented by activities and fragments in Android application hierarchy. Fragments are the sub-activities that are parts of an activity and can be replaced with one another. Our application consists of a few major activities and more fragments inside those activities. Main activities are the followings:

- MainActivity

This activity is the initial launcher activity to start the application and make any necessary initializations.

- LoginActivity

This activity takes care of login process and if successful, redirects to HubActivity.

- SignUpActivity

This activity handles sign up process and if successful, redirects to LoginActivity to wait until the user verifies the email and logs in.

- HubActivity

This is the core activity that pretty much handles all the functionality. It is composed of several fragments that provide the specific features. Main fragments are the following: BookExchangeFragment, PostFragment, GroupStudyFragment, CarpoolFragment, ProfileFragment, FavoriteFragment, DoneFragment and Action fragments.
These fragments are self-explanatory and provide the respective functionalities. Action fragments implement the actual posting, while those listed above are navigational fragments which handle listing posts.

- SearchActivity

This activity performs the general search. Its view resides on the app action bar.

- AdvancedSearchActivity

This activity handles the advanced search implementation. It is accessible from the application action bar.

- SettingsActivity

This activity represents controller for the Settings.

- ProfileActivity

This activity allows user to click on the user names and redirects to the user profile.

Finally, models are the ParseObject children that wraps up the data storing and retrieving methods. Each Parse class is associated with a class in the application as well.

tools

The most important tool that we used was Parse which provides quite easy and flexible server-side database and backend implementation with rich API and allows the developer to focus on the app itself. Although Parse service will be discontinued the next year, we decided to use it for this course and we will migrate it to another database soon as well.
We also used Android Studio to develop our application, git to maintain the project, Bitbucket to host our project online , Asana to keep of the tasks assigned and finished.

interface standards

One of the main standards of our project was to write a clean, reusable and readable code. This was accomplished through comments, as few hardcodes as possible, meaningful variable names and etc. Our design standard for user interface is the Material Design. We have defined custom styles for the view components we used in the view files and they are used consistently at all places.