CS 501 – Mobile Application Development

App Development Practice and Fragments

Assignment & Worksheet 5

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Team Members: Lesley Chen, Tiffany Chen, Zizhuang Guo, Nick(Sangjoon) Lee, Jinpeng Lyu, Alex Wang

This worksheet is to be done in collaboration with your project team. Although we are working with Android, the concepts apply for any device.

Chapter 9: 9.1-9.10, 9.14, 9.15:

1. Fragments were introduced with API level
    - 11
2. The direct superclass of Fragment is
    - Activity
3. How many fragments can there be in one activity?
    - 0 or more
4. What method of the following is not a lifecycle method of a fragment?
    - onRestart
5. What method can be used by a fragment to access its activity?
    - getActivity
6. What class can be used by an activity to access its fragments?
    - FragmentManager
7. What method of the FragmentTransaction class is used to add a fragment to an activity?
    - add
8. An activity can retrieve one of its fragment via its
    - tag or id
9. We can make a fragment class reusable by transferring all the method calls by its activity inside the fragment class to the activity class via
    - an interface
10. Inside an activity class, retrieve the fragment manager.

```
FragmentManager fragmentManager = getFragmentManager();
```

11. (14) Inside a fragment class, write the code so that the fragment is inflated from the my_fragment.xml file.

```
public View onCreateView( LayoutInflater inflater,
ViewGroup container, Bundle savedInstanceState ) {
// Your code goes here
     View view = inflater.inflate(R.layout.my_fragment.xml,
container, false);
     Return view;
}
```

12. (15) Inside a fragment class, write the code to retrieve the activity that this fragment belongs to. Assume that the activity type is MyActivity.

```
// Your code goes here
MainActivity fragmentActivity=(MainActivity) getActivity();
```

PART I. Inter-Fragment Communication

1. Part1- Send message
   https://github.com/Guo-Zizhuang/CS501-HW5P1-InterFragmentComStep1-Gitt
2. Part2 - Cow, Sheep, Cat, Dog, Lion
   https://github.com/Guo-Zizhuang/CS501-InterFragmentComStep2-Git

PART II: Inter-Fragment Communication Continued

https://github.com/txcchen/W5_P2

PART III: Mini Research Task Identification

Our app is called **GiftMe!** It is a wishlist app for personal events and holidays (eg. Birthday Parties, Christmas Presents, Secret Santas, Thanksgiving, etc.). It allows users to create a wishlist of items they want to receive for specific occasions. Users can send out an invitation link to their friends and family to let them see the possible gifting options. Friends and family will also be able to see which gifts are already taken by others and which ones are available to prevent duplicate gifts. This saves a lot of time and headache from choosing the right gift for many people since oftentimes it is hard to know what gift is the right gift given the person, the occasion, and who else decided on the same gift. For people who aren't so close to each other, this is a great way to choose the right gift and build a closer relationship. Another feature we can implement is to add a collaborator feature–eg for wedding wishlists.

To accomplish this, our app will make use of **Google's Authentication API**. Auth API will be used for connecting the Google account to our app so users can be distinguished in our system. This will allow users to add friends with their Google account (email address) as well as making personalized wishlists. We may use **Firebase** for various database and backend operations for data management. Firebase has both a database (Realtime/Firestore) and backend as a service (BaaS) which is simple and a good fit for the model of our app.

For creating our business model, **Google Play API** will be used for making in-app purchases. We are considering two types of purchases: one-time and subscription-based purchases. One-time purchases will be for purchasing app themes for a wishlist (eg. Christmas theme) and removing advertisements in our app. Subscription purchase will be used for premium features such as allowing a user to see which users have selected which gifts within a wishlist. We are also planning to feature price-tracking from various eCommerce websites (Amazon, Ebay, etc.) for premium users to let them select specific items from specific websites and display their current price for a detailed wishlist description.

Some out of scope features that we would like to implement if we have the time is to create a Chrome Browser extension for our app such that Users can directly add an item from their browser to the wishlist.

These features make up the current design we have come up with so far. This is only the initial draft of it and we are planning to add further details and features as we work down our top-down development of the application.

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https://github.com/AlAuB/W5_P4