Reflection for Plan Your Trip

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One thing we learned from this project was that a thorough consideration of features is very important to the design from the beginning, and a well organized design could have been more helpful.
Since we chose time and features over the cost from the project triangle,we were a little bit struggling on how we are going to manage and control such factors. The compromise in that case was the design. As we left the offline implementation until the end, we did not have much time at that point to switch our xml files to fragments instead. Because of such decision, the sliding menu was only included in the launcher page, while we wanted it to be on each window. Refactoring at that stage would have been very risky.

About the UI design, we were keeping a file about all the colors and sizes we used for widgets so that we keep them consistent. But when we had time to actually learn Android Studio, the software we used to develop our app, there were better ways to achieve consistency like create a resource file or customizing the theme.

One thing that our group found was that it was hard for us to think about implementing design patterns while doing this project. The reason is because many of us are still very inexperienced with large coding projects, and so there is still a lot to learn on the technical side before being comfortable enough to think about high-level architecture. Towards the end, we found that rather than using separate Activities for page (ie. an activity for favorites, next buses, etc.), we can instead use different fragments within a single activity to take advantage of object-oriented principles such as encapsulation.There were also many other opportunities to apply designs, such as using Observer pattern to implement GPS tracking, and using the Strategy pattern for encapsulating different data retrieval behaviours (ie. TranslinkHandler, DatabaseAccess). Again, the Android development environment was new to a lot of us, and so we became consumed with learning and applying what we learned instead of thinking back from an organizational perspective. But because of this project, we learned a lot about how to manage a relatively large-scale project, and especially the importance of using design patterns, how it can convey ideas to different developers

and how it can produce maintainable code. It is a very valuable experience for us to have and we cannot wait to apply what we learned to our projects in the future.