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CheckedOut Group Reflection Statement

This was the first major software project that we had worked on and various mistakes were made in the different project stages despite trying to adhere to the practices and knowledge provided to us. The main aspect of software engineering that we struggled with was the tradeoff between features and time. This was because our project was much more work than we had initially estimated and therefore, we provided excess features rather than refining key ones. We believe that not developing more thought out requirements and specifications for our product was our biggest downfall.

In terms of our design method, we followed the SCRUM development lifecycle. One of the largest faults in following the SCRUM model was ensuring that a feature was shippable before moving on to the next sprint. We were unable to complete many of our requirements within the time that we had estimated due to being so unfamiliar with some of the languages and frameworks being used. This led to many requirements being extended past their initially estimated sprint. This flaw was one of the reasons why some of our initially planned features were unable to be implemented, such as autocomplete.

We vastly underestimated the amount of time required to learn new languages, frameworks, and APIs. In particular, we spent excessive time researching web development techniques, database organization and good UI design frameworks. During the development of this software project, we all decided to work with programming languages that we had not originally had experience with (except Java on Android), and as such, initial development was slowed. Despite being a hindrance initially, this allowed us to understand the importance of not being restricted to a single language, and that different languages fit different purposes more suitably than others.

In retrospect, we believe it would have been better to focus on one platform: web or Android. While the product obviously could be expanded in the future, focusing on one platform for the duration of the term would have allowed our group to flesh out a solid application. It would have also allowed us to devote more time to each aspect of software engineering explored in the course (requirements, design, etc.).

Although we had some experience with software testing, we have come to realize that testing is more than just verifying that the current functionality is correct. We realize that it also plays a vital role in streamlined development as it allows us to extend, modify and add additional features without the overhead of manually re-testing our entire software system. It was unfortunate that we did not develop tests earlier (partly due to excessive time spent on research and prototyping) as it would have allowed us to develop our initial features such as web crawling and item searching more easily.

In addition to software testing, usability testing was a completely new concept, and due to the complexity our design, it had to be put aside until some key features were implemented. Although carrying out tests was comparatively easy, it was difficult to integrate the results into our project

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because of time and design constraints. We would've liked to properly integrate further feedback and usability tests into our design process to achieve a more refined product.