

Design Reflection

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We pledge our honor that we have abided by the Stevens Honor System

Thomas Ung
Lakshya Vegiraju
Spurthi Setty
Gianna Cerbone

One part of our ExchangeForStudent app where we applied thoughtful design was the **BrowseScreen**, where we carefully designed the filtering system to adapt dynamically to different product categories. This allowed us to give users a smooth browsing experience by only showing filters relevant to the selected category and by providing price range controls that worked across all categories. We also put effort into ensuring that sold items and the user's own posts were excluded from browser results, which improved the relevance and usability of the marketplace.

This implementation would not have been possible if not for the changes we made earlier in the development process. Originally **Posts** were just stored in the database with different fields for category as well as categories specific fields which were decided during creation. However we changed this so that there were **subclasses** for each category: **Books, Clothing, Electronics, Furniture, and Sports Gear**. This is good because it allowed us to encapsulate category-specific attributes and behaviors within their respective subclasses. This also helped simplify filtering logic by accessing the different category specific fields via their subclasses. This structure also makes the code more easily scalable and maintainable via encapsulation.

