

Requirement Analysis and Specification – User Interface

Hui Chen ^a

^aCUNY Brooklyn College, Brooklyn, NY, USA

March 3, 2022

Outline

- 1 Review for Last Class
- 2 Requirements: User-interface Design
- 3 References

Outline

- 1 Review for Last Class
- 2 Requirements: User-interface Design
- 3 References

Topics in Last Class

1. Overview of requirement engineering
2. Agile vs. traditional (plan & document)
3. An agile approach of requirement analysis
 - ▶ Behavior-Driven Development (BDD)
 - ▶ User stories (for requirement analysis, in ConnExtra format)
 - ▶ User stories map into testable scenarios – can use as acceptance test

Today's Topics

Continue the discussion on requirement engineering

- ▶ User-interface (UI) part of the requirements
 - ▶ using storyboarding
- ▶ Techniques for agile project tracking

Outline

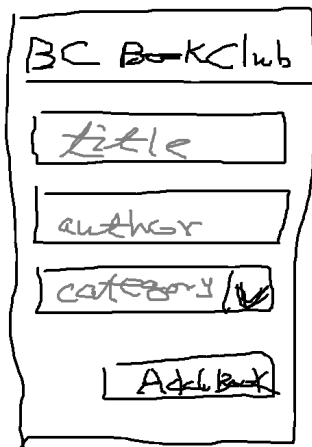
- 1 Review for Last Class
- 2 Requirements: User-interface Design
- 3 References

Building UI

- ▶ Android apps often require user-interactions
 - ▶ User stories need User Interface (UI)
 - ▶ How to get customer to participate in UI design so is happy when complete?
- ▶ Avoid the what-I-said-is-not-what-I-want UIs?
- ▶ Small index cards for UIs? (like user stories)
- ▶ How can we show interactivity without building a prototype?

UI Sketches

Sketching UIs in small index cards – necessary but not adequate



Storyboards

- ▶ Need to show how UI changes based on user actions
- ▶ Use “storyboards ”
- ▶ Like scenes in a movie, but not linear (why?)

Example Storyboards

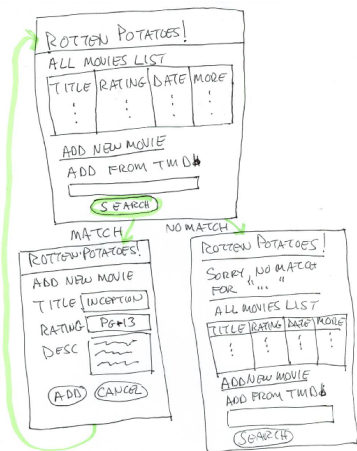


Figure: from "Engineering Software as a Service" by Armando Fox and David Patterson (2nd Eds)

Why Storyboards?

- ▶ Although tedious to create UI sketches and storyboards, they are easier than producing Android App UIs.
 - ▶ Less intimidating to nontechnical stakeholders
 - ▶ Developers and stakeholders are more likely to suggest changes to UI if there is no code behind it
 - ▶ Developers and stakeholders likely to focus on interaction rather than colors, fonts, ...
- ▶ Delay some UI details like making it look nice later – do that when putting together the actual app and polish it

Questions

- ▶ Introduce a low fidelity method to elicit requirements about UI.
- ▶ UI sketches
- ▶ Storyboards

Outline

- 1 Review for Last Class
- 2 Requirements: User-interface Design
- 3 References

“Engineering Software as a Service” by Armando Fox and David Patterson (2nd Edition)

“Essentials of Software Engineering” by Frank Tsui, Orlando Karam, and Barbara Bernal(4th Edition) (Section 7.3.5)