

Master Informatique - Université Paris-Sud / Paris-Saclay
Fundamentals of Human-Computer Interaction
Assignment #2 – November 2015

Conceptual model of an e-book reader

You are asked to improve a simple e-book reader for a multitouch tablet that has the following conceptual model. The interface either shows the bookshelf (the set of books) or the current page of the book being read.

Objects table:

Objects	Representations	Properties	Operations
Bookshelf	Set of images of the book covers	List of books	Open a book Navigate the bookshelf
Book	Book cover in the Bookshelf Text of current page when the book is open	Title and author Text of the book (set of pages) Last opened page	Next page Previous page Close

Operations table:

Operations	Commands	Feedback	Responses
Navigate the bookshelf	Tap bookshelf icon in top bar	The screen flips to the bookshelf	The library is displayed
Open a book	Double tap the book cover in the bookshelf	The book highlights	The book opens at the last opened page
Next / Previous page	Horizontal flick gestures, left or right	The page curls and flips to next/prev page	The next/prev page is displayed
Close book	Pinch gesture on the page	The book closes	The bookshelf is displayed

You should re-create the above conceptual model in a spreadsheet or text editor (Google docs, Word, Excel, etc.) and edit it as you go through the questions below. You are asked to provide the final conceptual model at the end.

1. Quickly browsing a book

The first feature to add is a way to quickly navigate the current book, since in the current interface the user has to turn pages one by one.

To do this, you add a scrollbar in the right margin of the book: the user can navigate the content of the book by moving the finger up and down the scrollbar or by tapping anywhere in the scrollbar.

1.1 – Is the scrollbar an object of the conceptual model? Why?

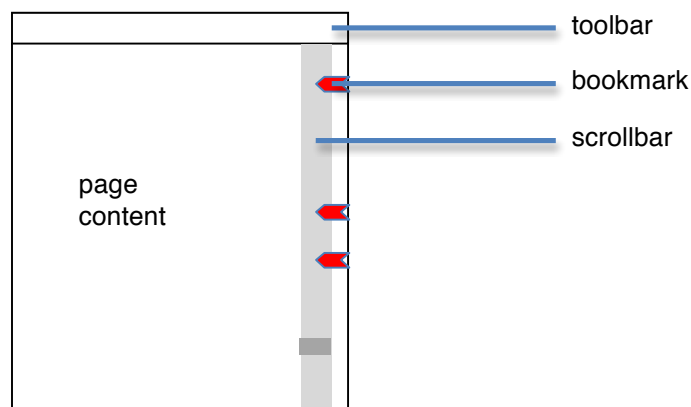
1.2 – If you need new conceptual objects, describe their properties, representations and operations.

1.3 – Describe the interactions (command / feedback / response) for the scrolling operation(s) and specify the objects they apply to.

2. Managing bookmarks

We now want to manage bookmarks so that the user can mark pages in order to get back to them quickly. When a book is open, the bookmarks are displayed in the margin, next to the scrolling area, at the vertical position of the corresponding page in the scrolling area.

We want to be able to manipulate bookmarks as directly as possible. If necessary, you can add a toolbar at the top of the display, which contains interface elements such as buttons.



2.1 – Are bookmarks objects of the conceptual model? Why?

2.2 – Is the toolbar an object of the conceptual model? Why?

2.3 – Describe the properties, representations and operations of any new conceptual object(s) and/or changes to the existing ones.

2.4 – Describe the changes to existing objects, if any.

2.5 – Describe the interactions (command / feedback / response) of the new operation(s).

3. Searching

We want the capability to search text in the current book or in all the books of the bookshelf.

When searching in the bookshelf, the results of the search appear as a number of matches, under the cover of each book.

When searching inside the current book, or when opening a book after searching in the bookshelf, the matches appear as yellow tick marks in the margin area and as text highlighted in yellow in the pages (like the search interface that was shown in class).

3.1 – Are search results a new type of object of the conceptual model or are they properties of existing objects ? Explain.

3.2 – How does the user enter the search text?

3.3 – How does the user navigate the search results?

3.4 – Describe the new objects of the conceptual model, if any.

3.5 – Describe the changes to the existing objects of the conceptual model, if any.

3.6 – Describe the interactions for the new operations related to search.

4. Managing comments

You want to let users add comments to the books. A comment is a text note that appears as an icon in the left margin of the page, and that opens when the user taps it. Again, we want the interface to be as direct as possible for the various interactions.

4.1 – Are comments a new type of object of the conceptual model or are they properties of existing objects ? Explain.

4.2 – How will the user see what comments are in the current book (not just on the current page)?

4.3 – Describe the new objects of the conceptual model, if any.

4.4 – Describe the changes to the existing objects of the conceptual model, if any.

4.5 – Describe the interactions for the new operations related to search.

5. Final conceptual model

Please provide, as a link or a PDF document sent to mb1@lri.fr, the final conceptual model of your e-book reader.

