CPSC 481
Human-Computer Interaction

Week 2

Fateme Rajabiyazdi

What are we doing today

- Presentations – 8 minutes each team
- Talk about project - phase 3 and 4
- Library example
- Talk about next week presentation

Prototype

- For step 3 you will need to develop low fidelity prototypes based on your **prioritized list of requirements**
- Your prototypes should fulfill the **major requirements** you have specified in step 2
- Your prioritized list of requirements will give you a good idea of the areas of the prototype you need to focus on

Cont.

- Come up with several prototyping
- At least **2 iteration** prototypes and **1 for walkthrough** evaluation

Quantity is important…

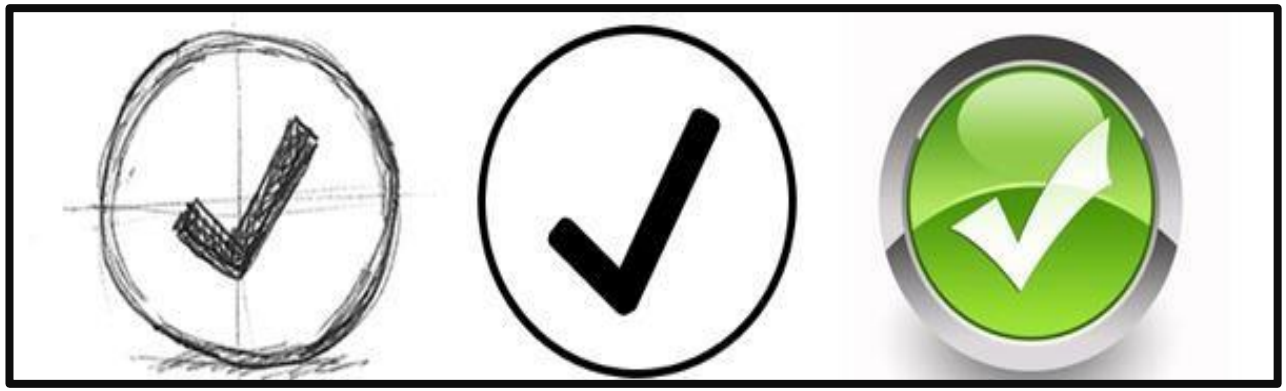
- But the evolution of the prototypes are also important so we want to see how you are improving from one prototype to the next
- Think about them from different angles

Low fidelity prototypes

Prototypes that are very quick and easy to create and are intentionally very rough so you don't feel committed to any of the designs you come up with.

Cont.

The idea is to come up with several designs and **critically** evaluate each to decide on which one has the most potential.



Puzzle Pieces

- Think about which individual components of each design have potential
- Steal the good aspects of each prototype
- be engaged in at least 2 iterations of prototyping

To sum up…

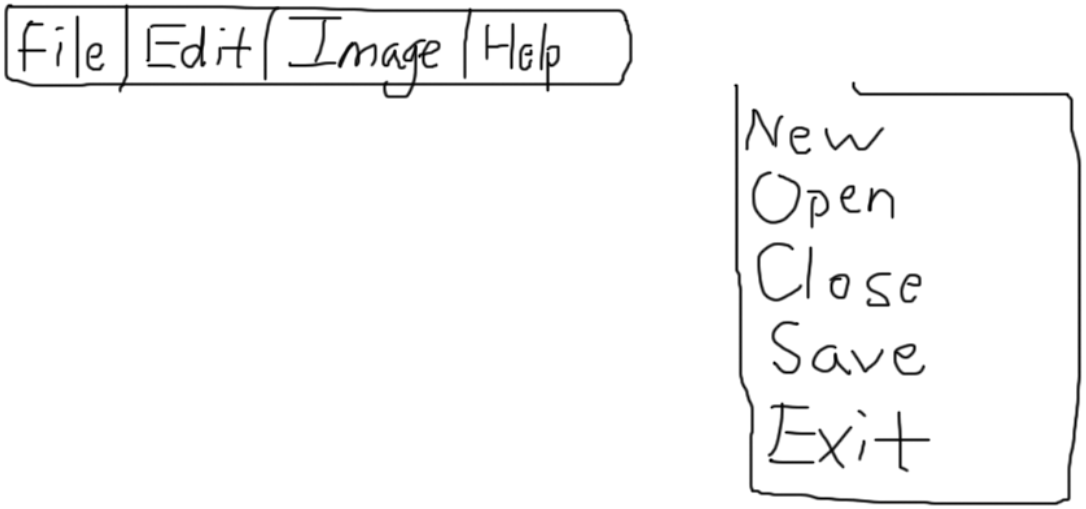
- Quantity: to explore various design ideas
- Quality: evolution to improve across iterations 3 different ways to create prototypes

Prototype – Paper Sketches

- Define rough layout of the interface
- Simple and quick
- But each prototype should still contain the core screens that illustrate how the system will look as a whole
- Good for layout but limited as to what you can show
- Good for live demos

Prototype – Pictive Method

- Use transparencies to represent different layers of your interface such as windows and drop down menus (can also draw on transparencies during the demo to show how the interface is changing
- Uses sticky notes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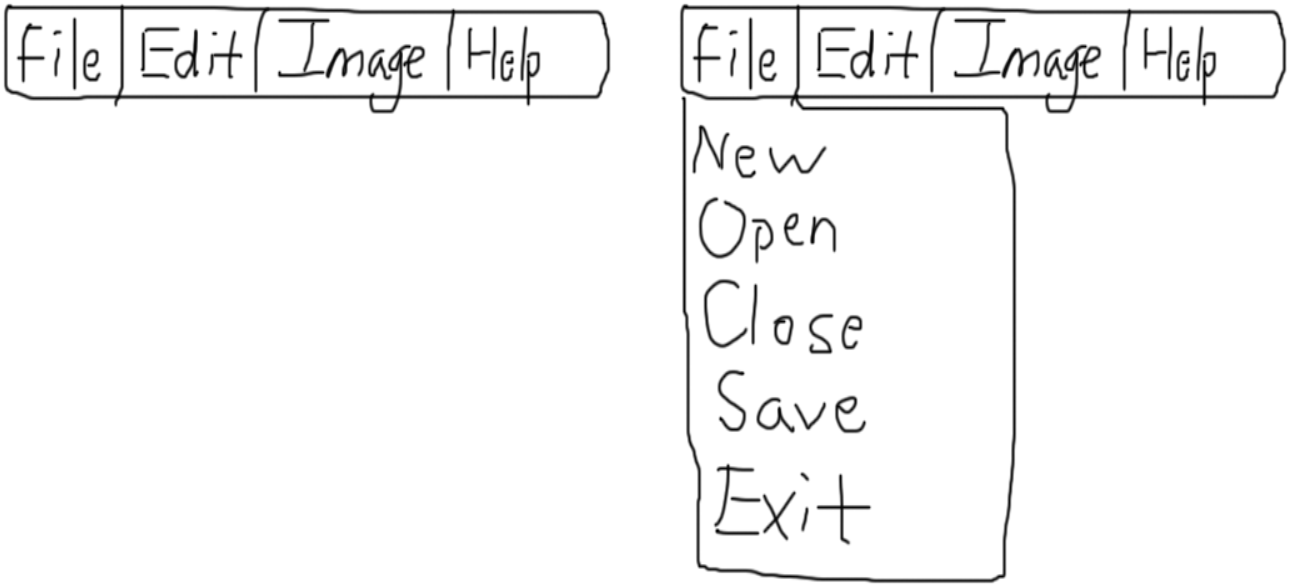
Prototype – Storyboard method

- You can use poster boards, flip pads or paper cutouts for representing a series of screens
- Hint: if you have a consistent background you can photocopy it to save some time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Exit

For Assignment prototype

For the version of the prototype you will be performing a walkthrough on (presentation in tutorial), use the pictive method for presentation and the storyboard method when you write it up in A1.

This is an exercise in rapid, dynamic prototyping

NOT precision or fanciness

Unless they are 100% drawn on the computer, it's fine (probably a rare case).

Must be hand-drawn

No interface builders

Try not to focus on prettiness or completeness

But make sure it is still legible

- Focus on key parts and general interaction styles
- Each prototype should contain core screens
- Include sample interaction based on key tasks
- Remember we don’t expect you to design a perfect interface at this stage
- It’s more about the exploration of ideas and recognizing your design mistakes
- Develop several low fidelity prototypes

- Pick promising ones and write brief descriptions for each prototype
  - Tell me: how did it improve over other iterations, why did you decide to go in a radically different direction, etc.
- Pick 1 for your presentation
- Probably the most evolved prototype

Scenario - Walkthrough

- You need to first convert your task examples into scenarios before performing the walkthrough evaluation
- Do not confuse scenarios with task examples
- Scenario ≠ User-Task Example
- A scenario is a step by step description of how a user accomplishes the tasks involved in a task example using the prototype interface

Walkthrough Algorithm

- Select one of the task scenarios
- For each of the user's step/action in the task:
  - Can you build a believable story that motivates the user's actions?
  - Can you rely on user's expected knowledge and training about system?
  - If you cannot: You have located a problem in the interface
  - Note the problem and any comments or solutions that come to mind
  - Once a problem is identified, assume it has been repaired

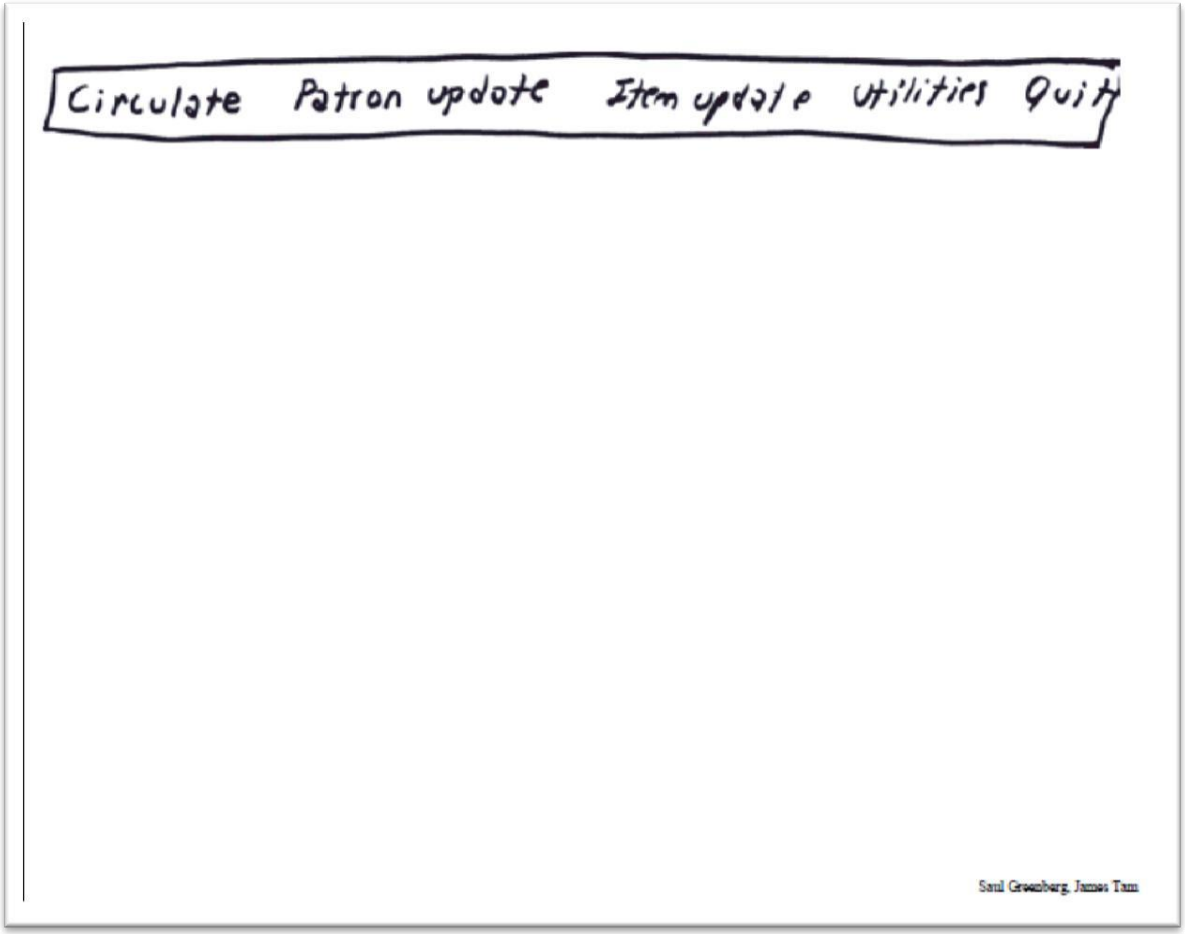
Walkthrough

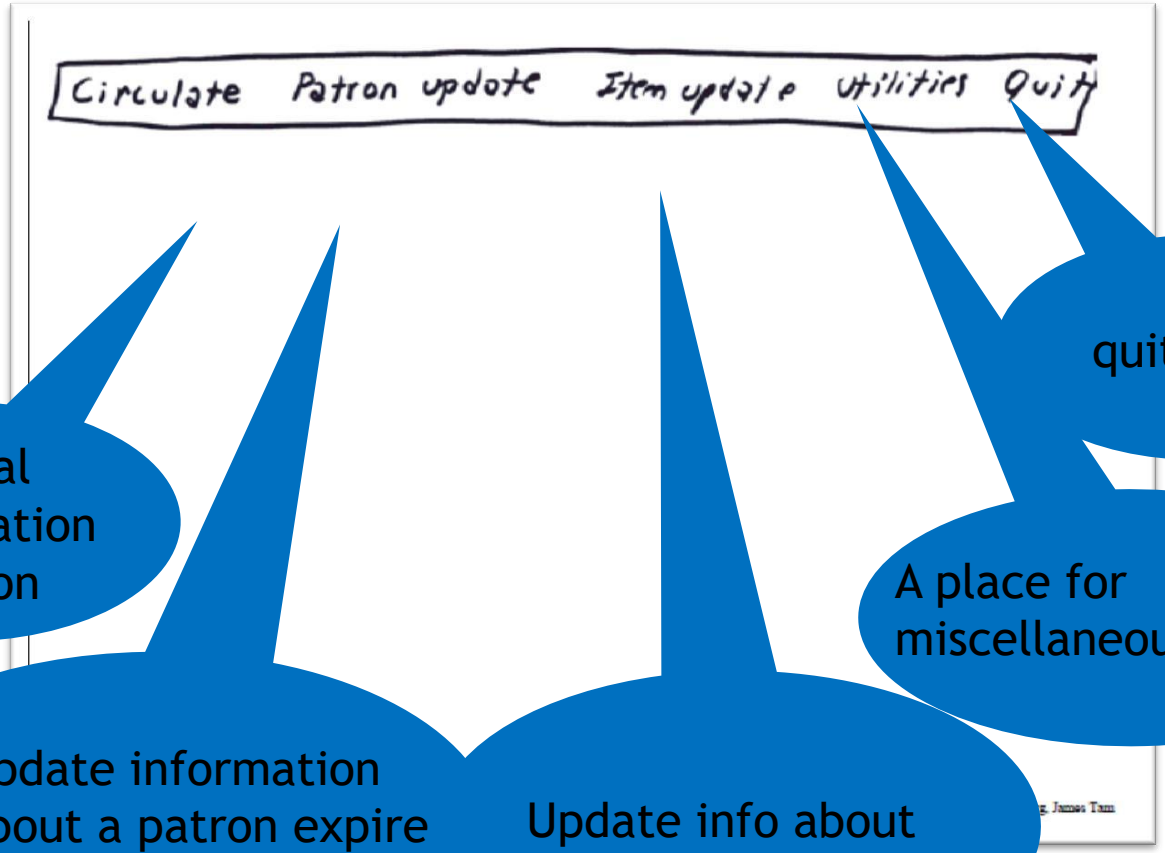
- For the 1 prototype design you pick, convert your tasks to scenarios to perform walkthrough evaluations (use the upcoming table for the A1 write up)
- For each walkthrough, synthesize and summarize the problems, successes, and major areas for improvement (this can be done in point form)

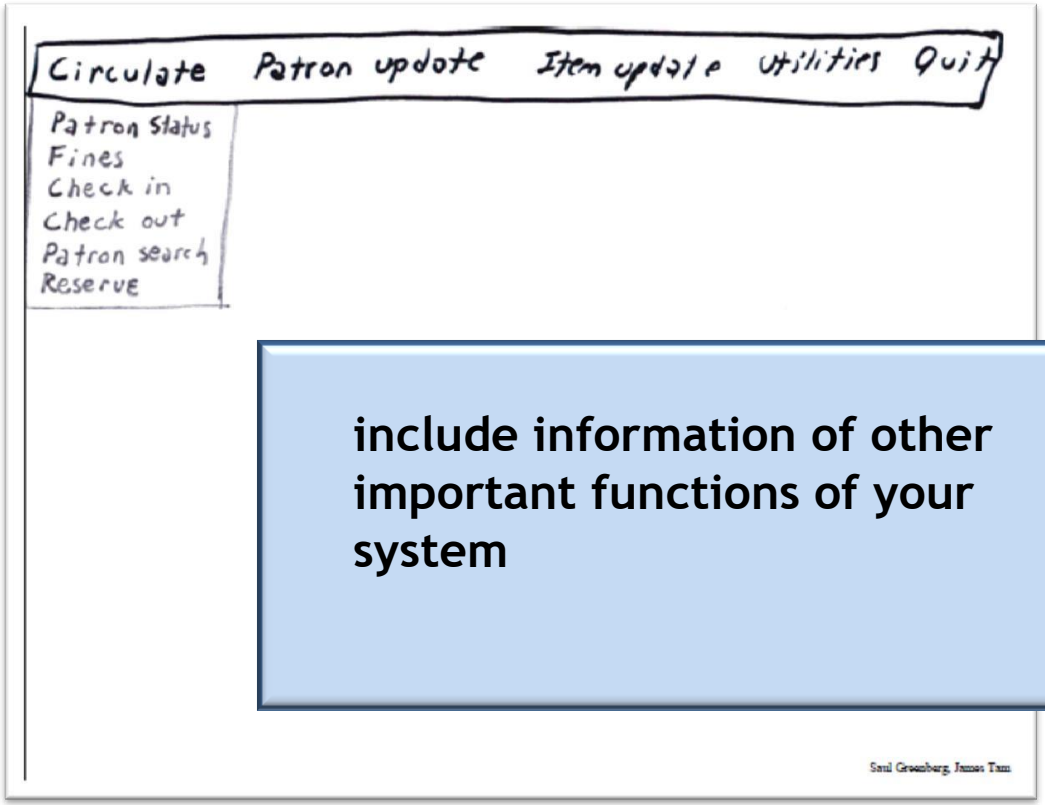
How to write …

- Write a summary paragraph of all the walkthroughs to make general comments about the entire prototype and walkthroughs as a whole
- i.e. Problems specific to walkthrough may be finding the search patron menu is difficult.
- Then a generalization of this problem in the summary paragraph can be this prototype suffers from poor organization of menus

Library example

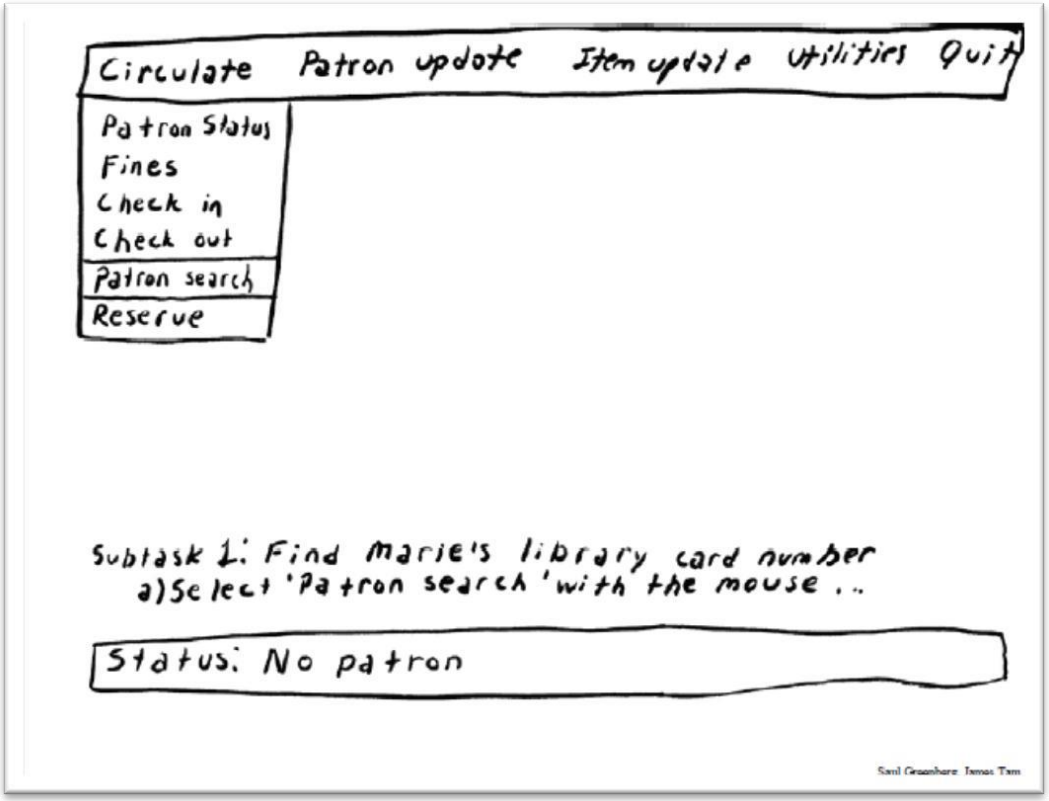



Circulate Patron update Item update utilities Quit
quit
General Circulation function
A place for miscellaneous function
Update information about a patron expire date, personal info
Update info about holdings

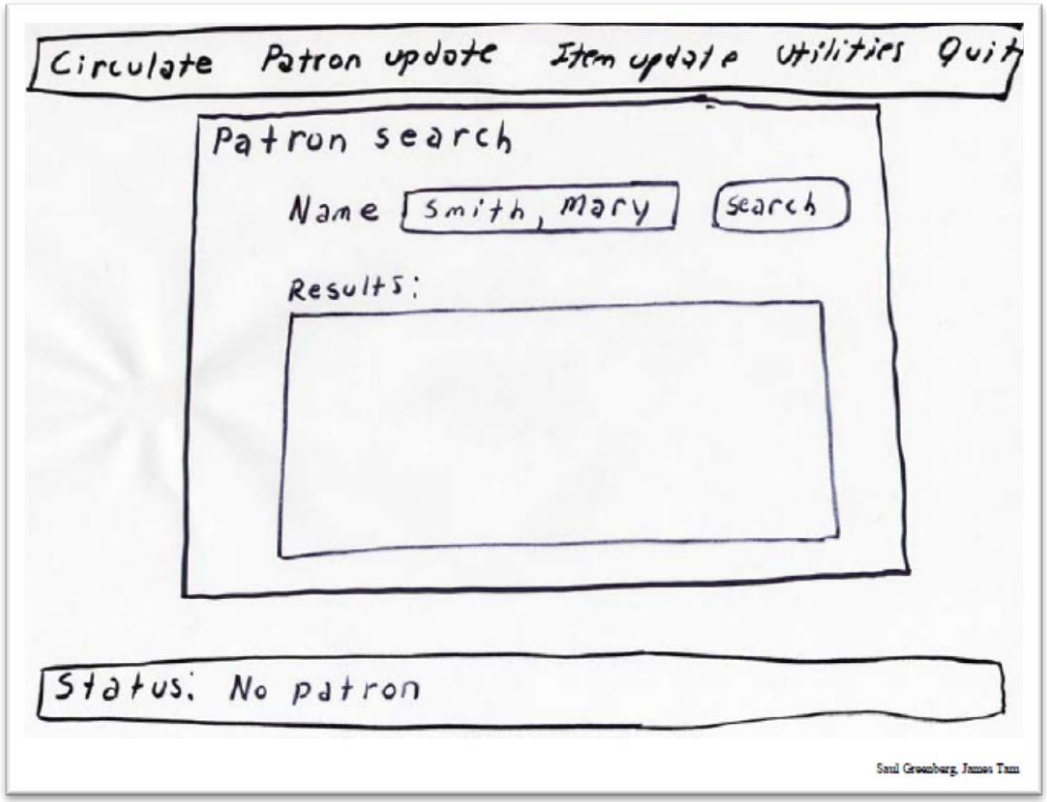

Circulate
Patron update
Item update
Utilities
Quit
Patron Status
Fines
Check in
Check out
Patron search
Reserve
include information of other important functions of your system
Saul Greenberg, James Tam

User-Task Example

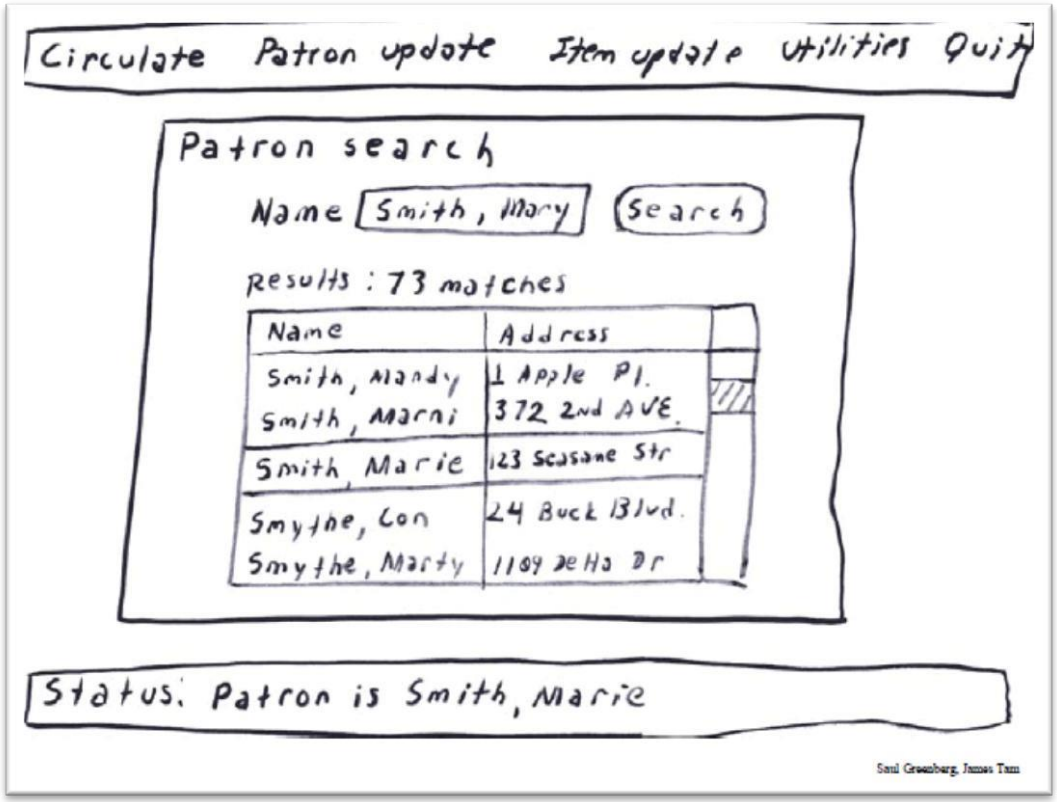
Joan Hart, a regular and experienced library employee, is working behind the counter. Marie Smith, a regular library customer brings three books to the counter <The Lions of Al Rassan, Ender's Shadow, Self-Help Books for Dummies> and asks that they be checked out. Marie doesn't have her library card so Joan finds Marie's library number, checks out the books for her and reminds Marie that she has some late fines to pay. Marie says she will pay for them next time. Joan gives Marie the books, and Marie leaves.

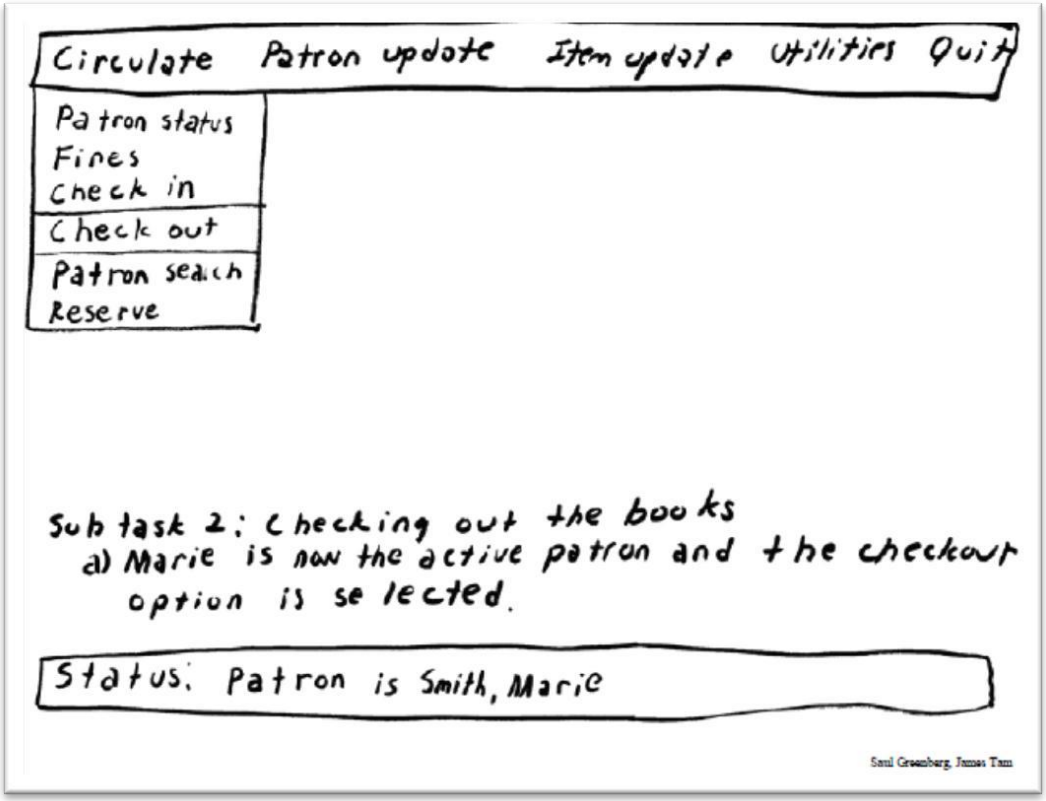


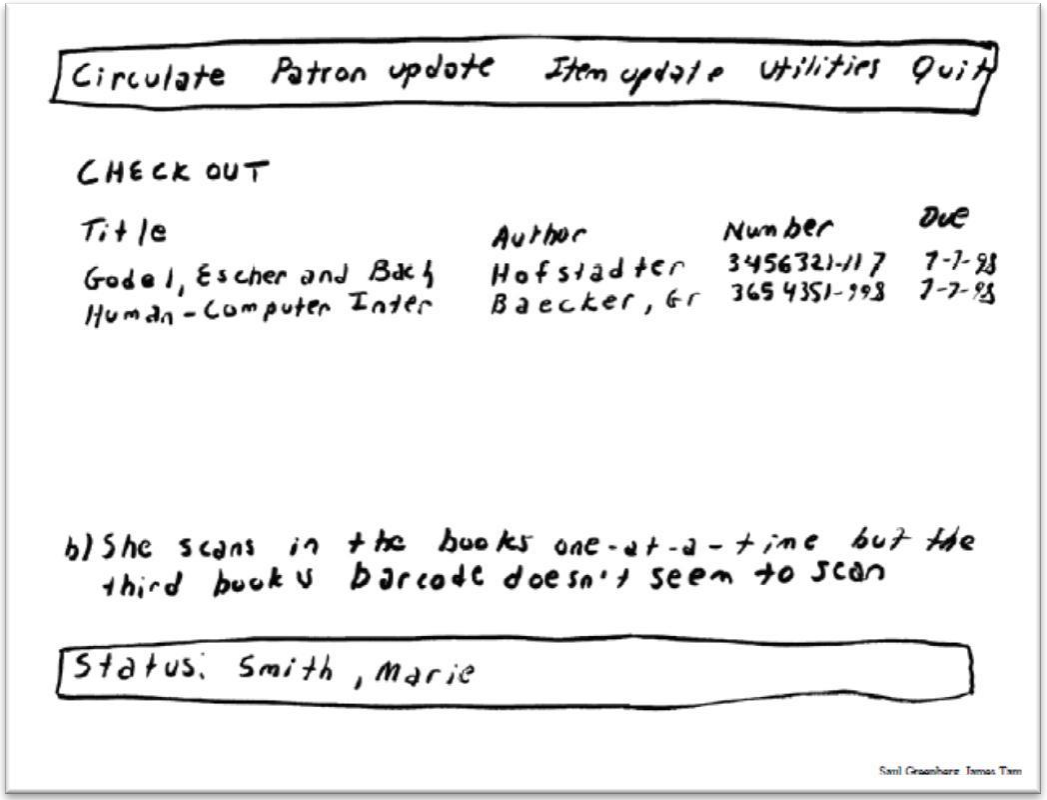
To find Marie library card, Joan must navigate to search the screen by selecting patron search option

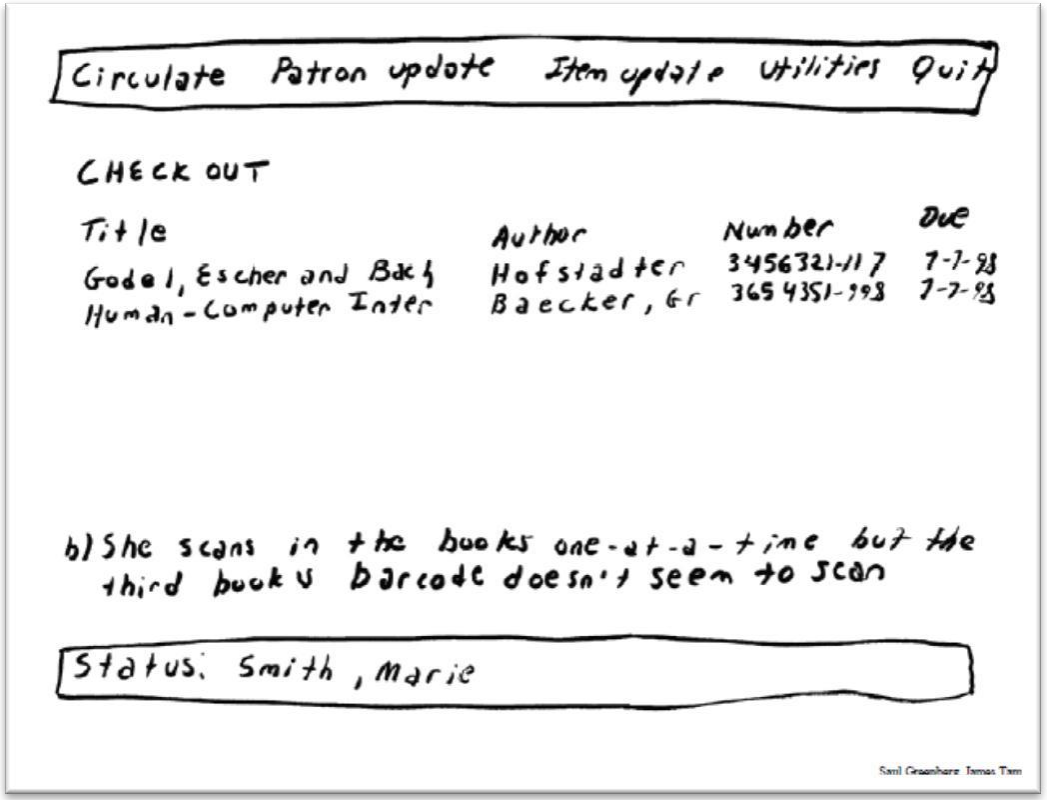


Then enter Mary's name and pressed return or search button


Circulate Patron update Item update Utilities Quit
Patron search
Name Smith, Mary
Search
Results : 73 matches
Name
Address
Smith, Mandy
1 Apple Pl.
Smith, Marni
372 2nd AVE.
Smith, Marie
123 Seasame Str
Smythe, Con
24 Buck Blvd.
Smythe, Marty
1109 Delta Dr
Status: Patron is Smith, Marie
Saul Greenberg, James Tam


Circulate Patron update Item update Utilities Quit
Patron status
Fines
Check in
Check out
Patron search
Reserve
Sub task 2: Checking out the books
a) Marie is now the active patron and the checkout option is selected.
Status: Patron is Smith, Marie
Saul Greenberg, James Tam


Circulate Patron update Item update Utilities Quit
CHECK OUT
Title
Author
Number
Due
Godel, Escher and Bach
Hofstadter
3456321-117
7-7-93
Human-Computer Inter
Baecker, Gr
3654351-998
7-7-93
b) She scans in the books one-at-a-time but the third book's barcode doesn't seem to scan
Status: Smith, Marie
Saul Greenberg Iames Tam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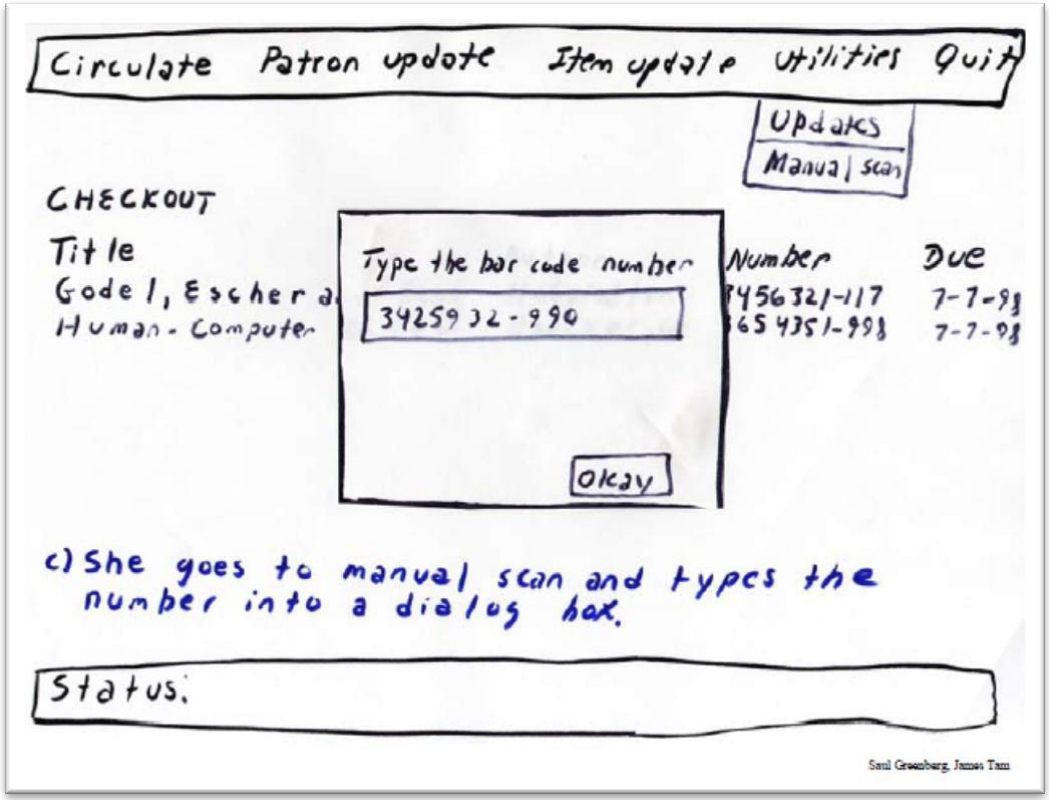
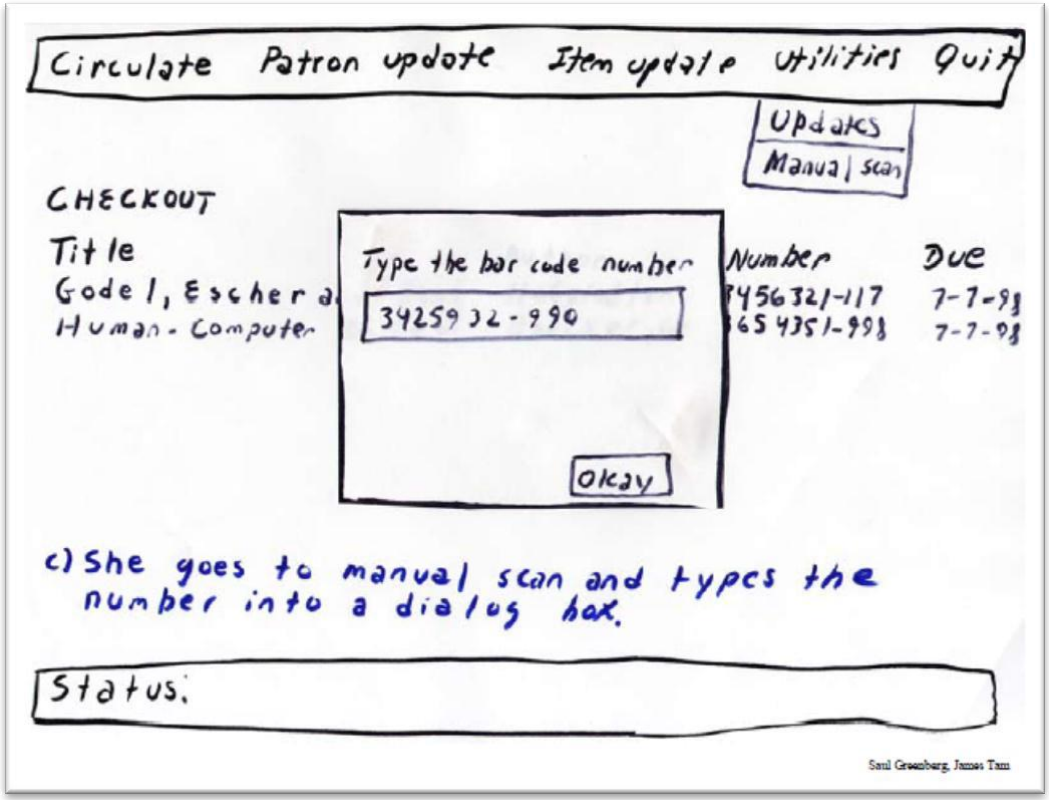

Circulate Patron update Item update Utilities Quit
Updates
Manual | scan
CHECKOUT
Title
Godel, Escher a
Human-Computer
Type the bar code number
342592-990
Okay
Number
Due
7456321-117
7-7-98
7654351-998
7-7-98
c) She goes to manual scan and types the number into a dialog box.
Status:
Saul Greenberg, James Tam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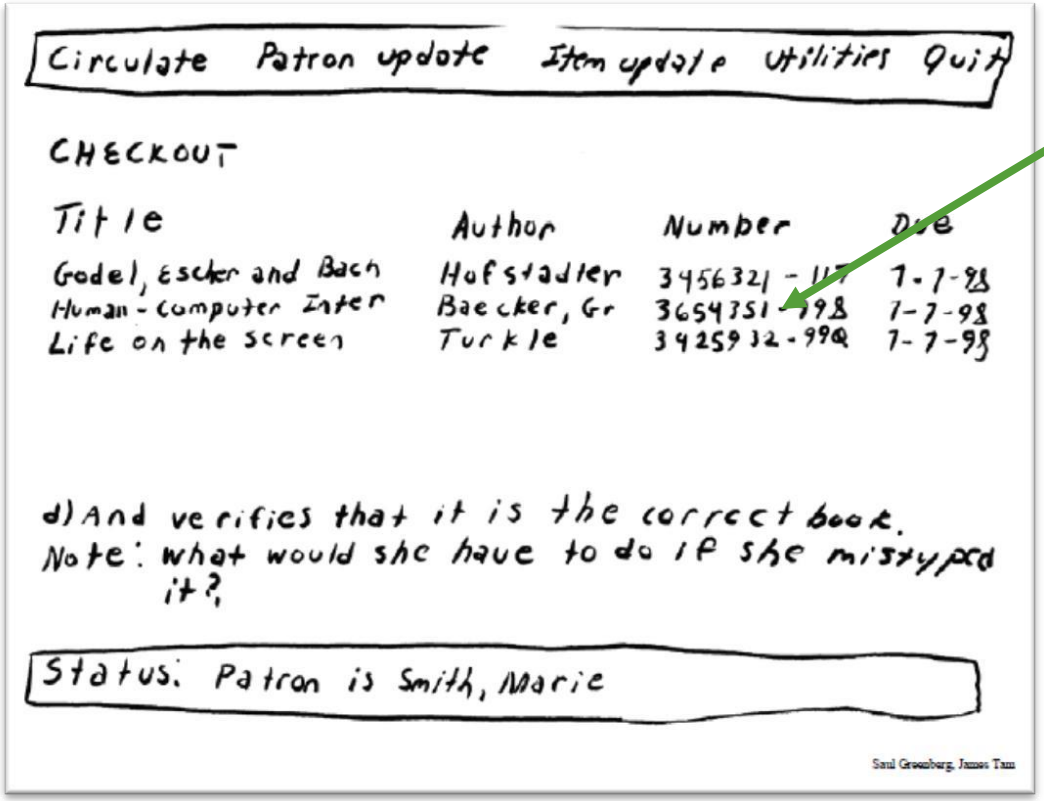
Circulate Patron update Item update Utilities Quit
CHECKOUT
Title
Author
Number
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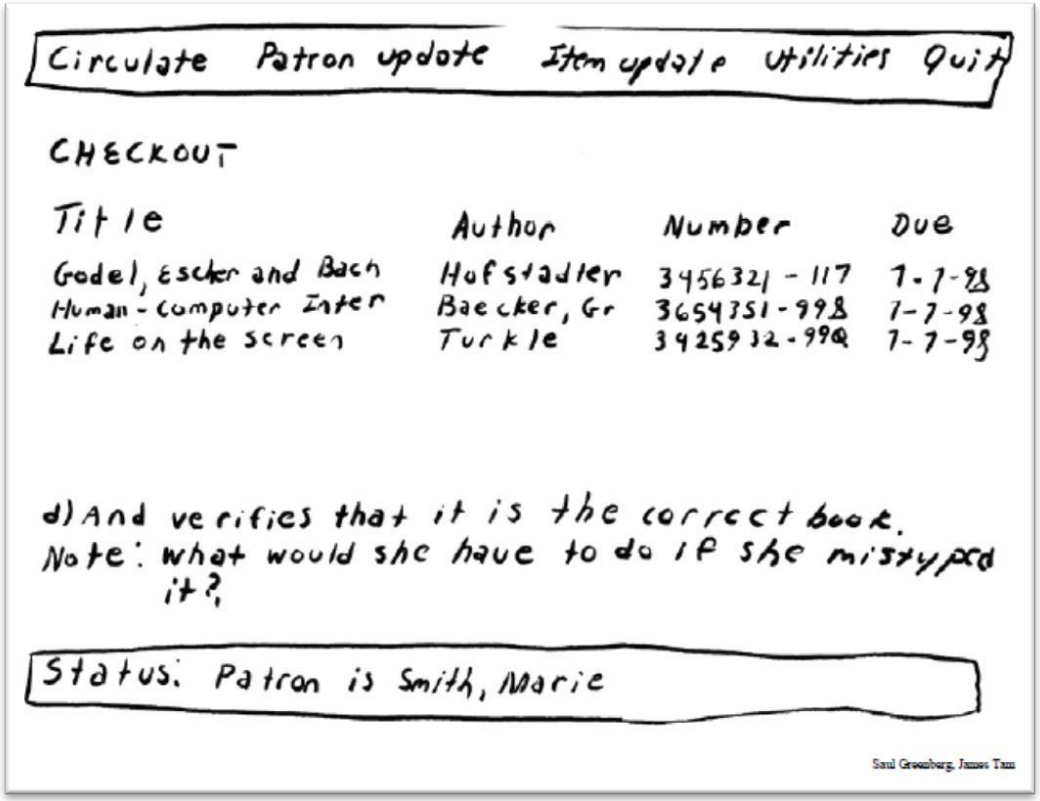
Godel, Escher and Bach
Hofstadter
3456321 - 117
7-7-98
Human-Computer Inter
Baecker, Gr
3654751 - 998
7-7-98
Life on the screen
Turkle
3425932 - 990
7-7-98
d) And verifies that it is the correct book.
Note: what would she have to do if she mistyped it?
Status: Patron is Smith, Marie
Saul Greenberg, James Tam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7-7-98
Human - Computer Inter
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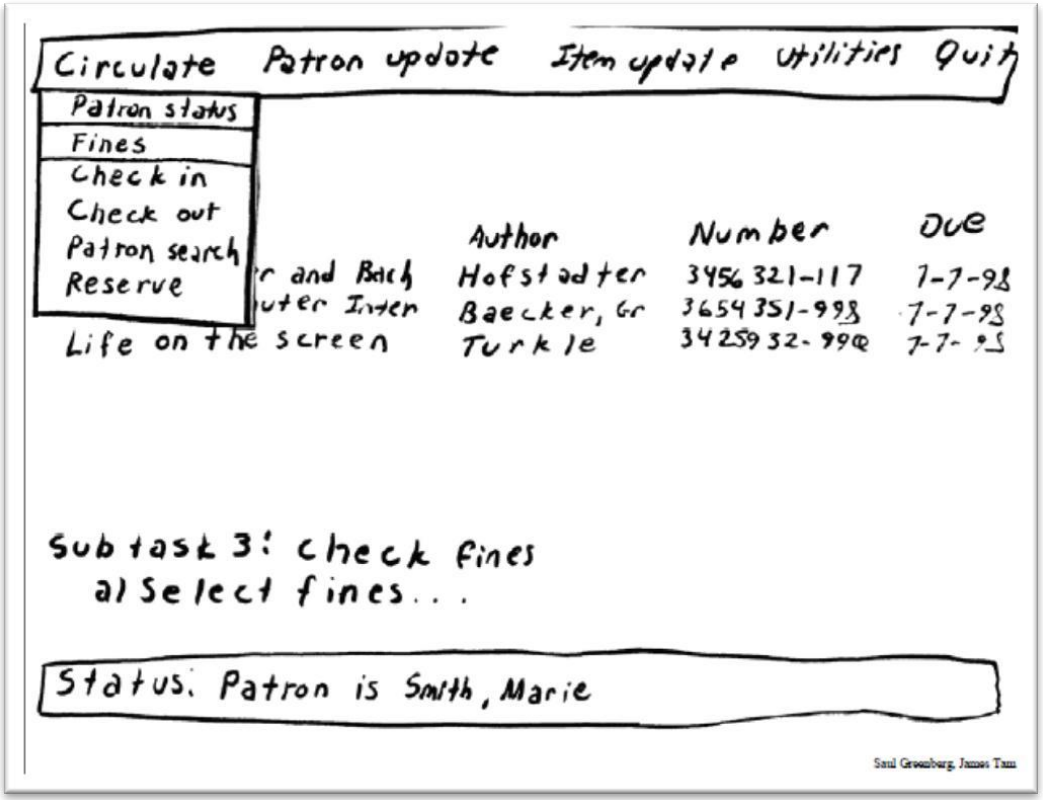
Circulate
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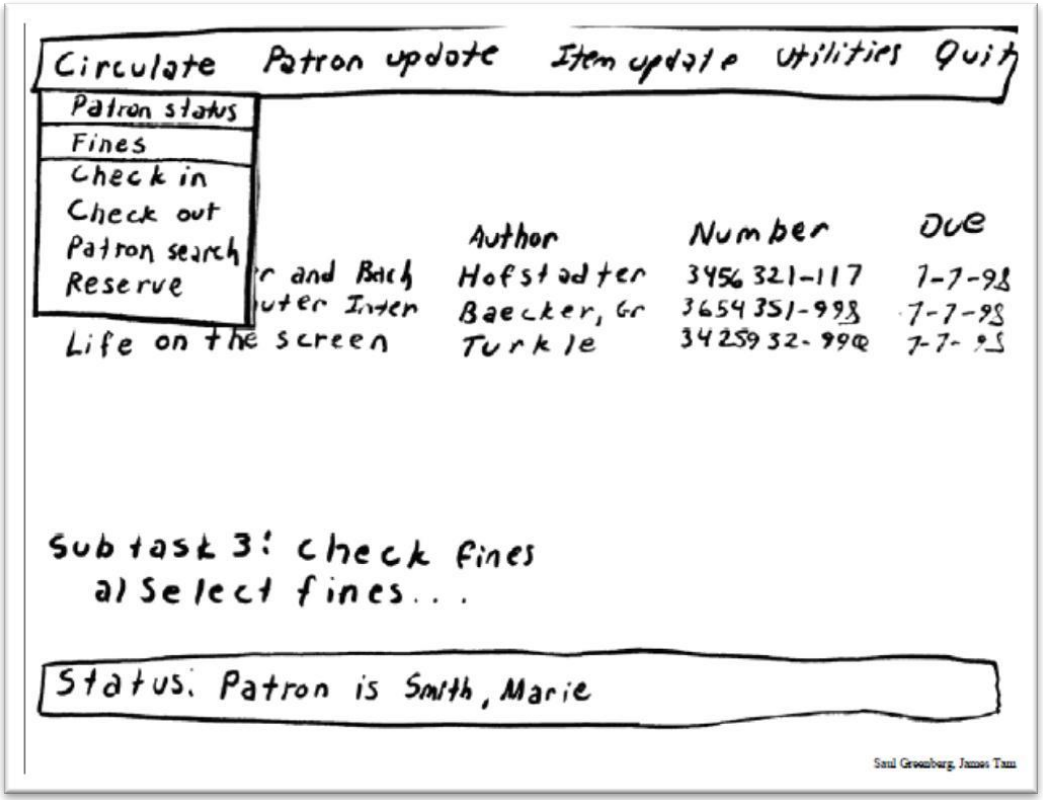
Patron search
Reserve
Author
Number
Due
Hofstadter
3456321-117
7-7-98
Baecker, Gr
3654351-998
7-7-98
Turkle
3425932-990
7-7-98
Life on the screen
Subtask 3: check fines
a) Select fines...
Status: Patron is Smith, Marie
Saul Greenberg, James Tam


Circulate
Patron update
Item update
Utilities
Quit
Patron status
Fines
Check in
Check out
Patron search
Reserve
Author
Number
Due
Hofstadter
3456321-117
7-7-98
Baecker, Gr
3654351-998
7-7-98
Turkle
3425932-990
7-7-98
Life on the screen
Subtask 3: check fines
a) Select fines...
Status: Patron is Smith, Marie
Saul Greenberg, James Tam

Circulate Patron update Item update Utilities Quit

FINES

Title	Due	Returned	Amount
The Tao of Poo	8/3/98	20/3/98	$1.20
All that Jazz	6/4/98	17/4/98	1.35
Chopin, Tape 1	4/5/98	1/5/98	1.50
Chopin, Tape 2	4/5/98	1/5/98	1.50
Chopin, Tape 3	4/5/98	1/5/98	1.50
Chopin, Tape 4	4/5/98	1/5/98	1.50

b) She sees the fines, adds them up in her head and reminds the patron about the outstanding amount of $8.55. The patron says she will pay later so she types in 0.00, presses return and goes back to the start.

Status: Patron is Smith, Marie

Saul Greenberg, James Tam

Summary

- Librarian had to navigate too many screens to do this task
- Some sub-dialogs were awkward
  - Why do searches span all of Alberta instead of just the local area?
  - Why can't she type the bar code directly on the screen, and see the results immediately?
  - Why does she have to go to a separate screen to see the fines, why does she have to sum the fines up herself?

- Heavy functional emphasis indicates high level of practice and training required
- Suggests major redesign
  - Can functions be integrated on a single screen?
  - Can the design be simplified?

Next week

- **Come up with a low-fidelity prototype based on the tasks and list of requirements you have already defined.**
- **Select 1 scenario you created from your task examples and demonstrate a walkthrough for the scenario**

Prototypes

- Brainstorm using sketching but you need to use either Pictive or storyboard for the presentation.
- The prototype should contain the core screens that show how the system will work as a whole as well as some sample interactions.
- Indicate what each component of the interface does.
- Show some sample interactions with your interface (e.g. searching or entering information).
- Show what the interface will look like at each step.
- Talk about whether the user has enough knowledge to perform the action at each step.

Scenario and Walkthrough

- Talk about whether the user is motivated to perform the action at each step (e.g. do I really want to scroll through 200 names)
- Comment on the user's action at each step (e.g. possible solutions to problems or why the interface works well here)
- Hint: be honest with the critiques for your interface (think critically); it's an iterative design process so you're expected to improve upon your ideas