

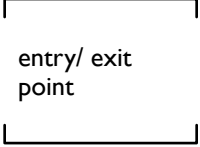
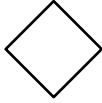

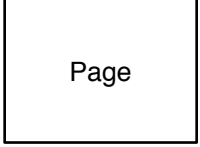

Lab Task Flows and Wireframes

Version: Lab Task Flows VI.6.graffle

Modified: Tue Feb 28 2012

Created: Sat Nov 12 2011

Legend

	Entry/ Exit point
	Decision
	Simultaneous event
	Screen
	Background Event, no Screen

Document History


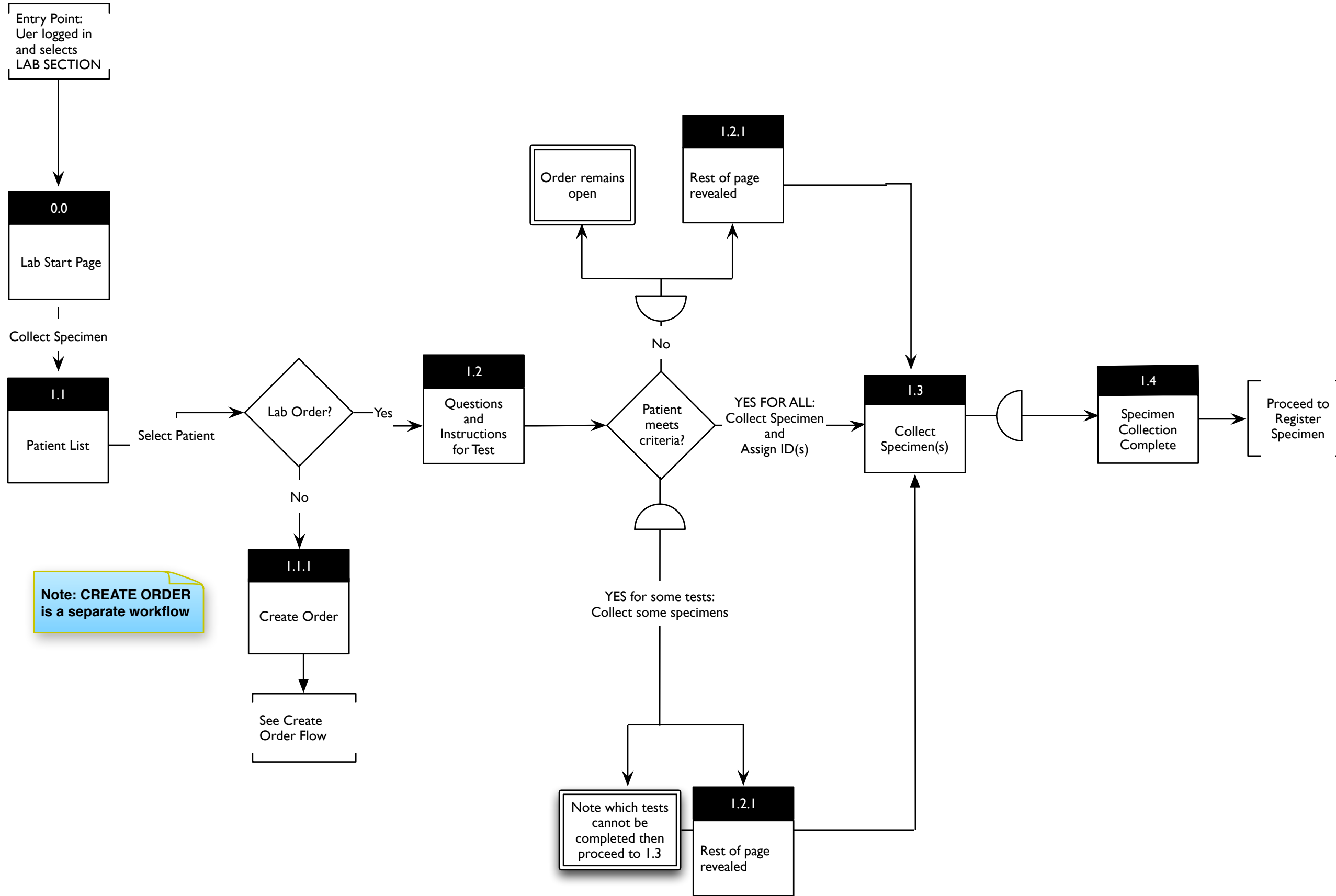
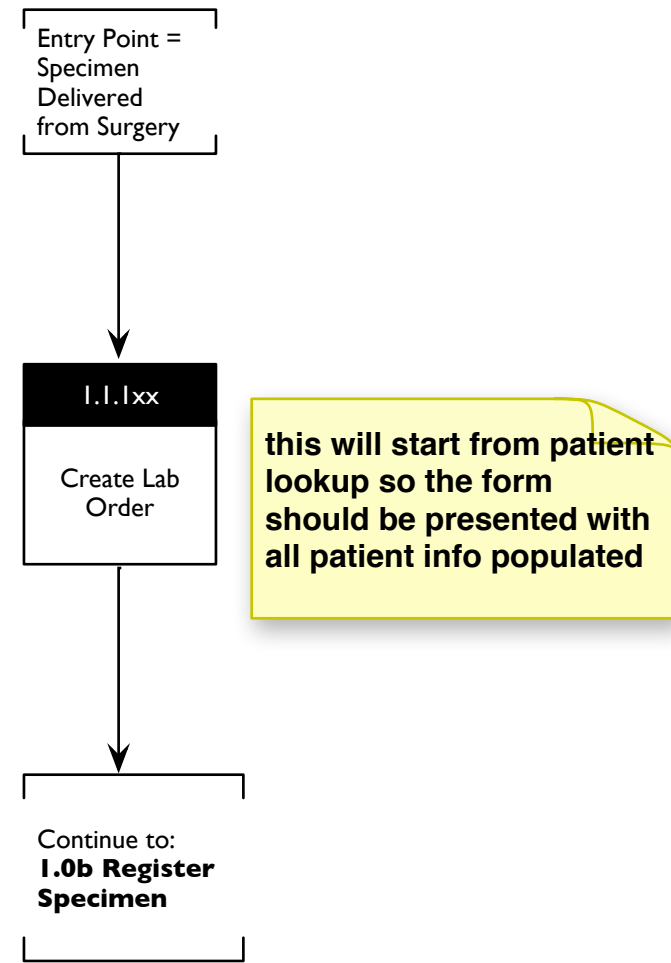
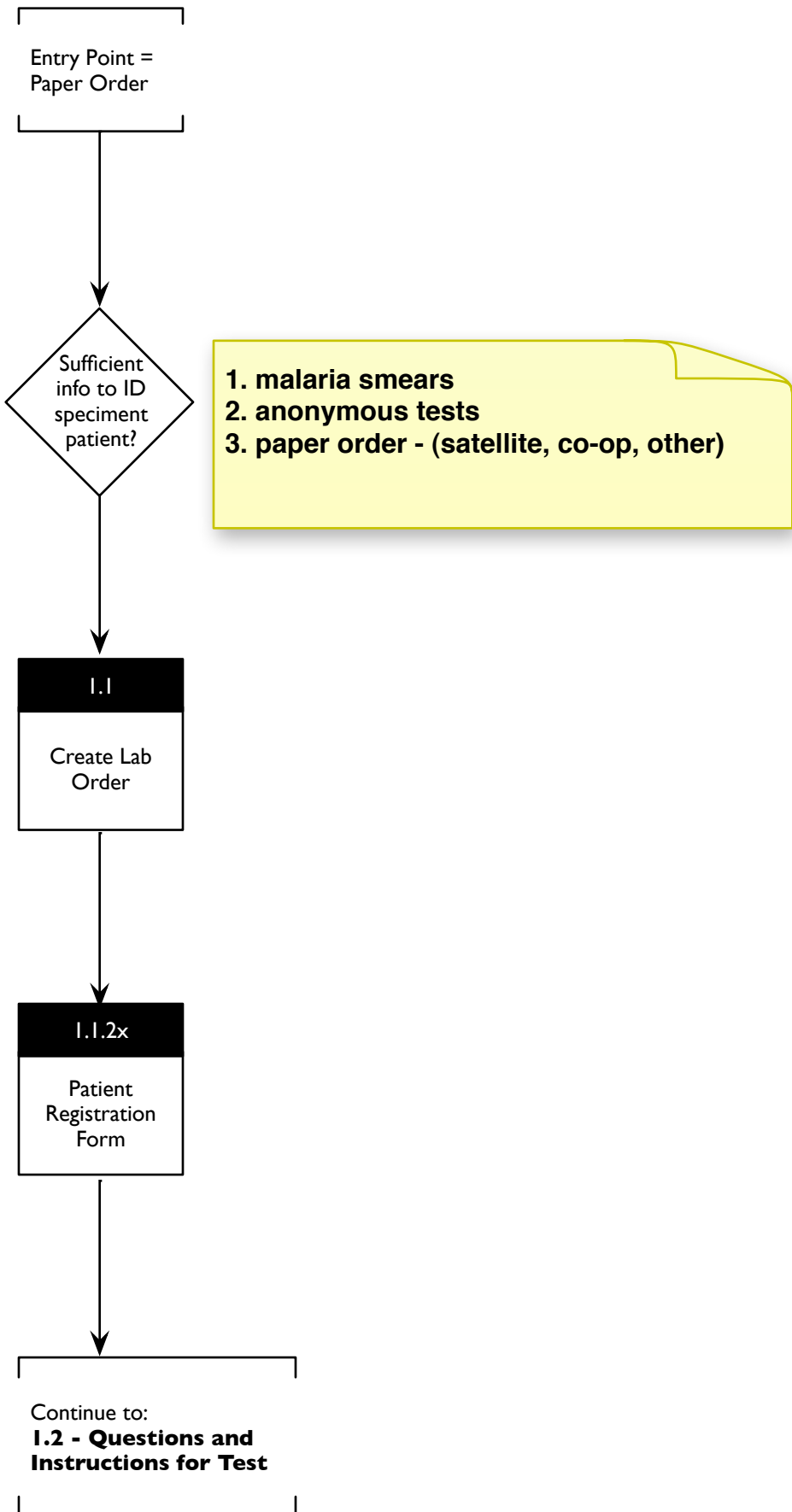
Date	Notes
28 February 2012	Discussion points in ORANGE. Discuss:  v1.6 - updated per some email feedback and PDF comments of 14/15 February. added interactivity to wireframes.
10 February 2012	Updated. Discussion points in ORANGE. near completed: Collect and Register Specimen.
6 February 2012	Updated per notes in 2 February email.
30 December 2011	Incorporate amends and ideas following conversation w/Roger Friedman 20 December 2011. All outstanding queries are on
15 December 2011	Added Number keys in preparation of handover. Inserted table of contents. Inserted outstanding questions.
29 November 2011	Amends per conversation with Roger Friedman
25 November 2011	Added some more questions and incorporated feedback.
23 November 2011	Removed Patient-Centric Flow; Amended Specimen Collection Task Flow
22 November 2011	Wireframes for Specimen Collections
18 November 2011	Added questions.
16 November 2011	Inserted replies to questions; added specimen prep flow.
12 November 2011	Document created

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1.2 - lab order with sufficient info to ID patient - satellite order / co-op agreement order as of today - lab order is on paper and patient id on paper - lab creates order and initiates patient registration (to be completed by registration team, the idea is to get enough data points in there to ID a patient)

Yes, except that this is not completed by registration team but rather by someone in the lab itself. Lab can register this patient into the system if they haven't been inputted previously. No need to shuffle files between different parts of the hospital.

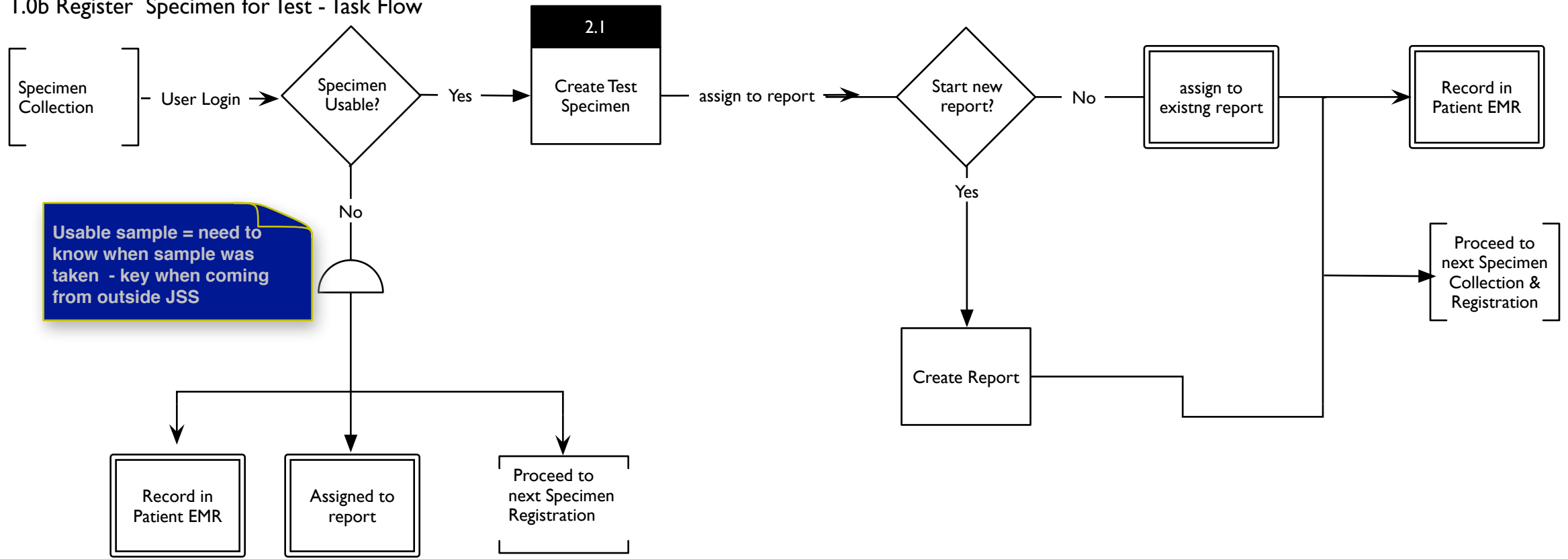
1.3 yellow form - malaria smear lab creates order + nodes to ID patient (does this patient get registered later?) OR is it just nodes to ID specimen (so how, exactly are anonymous tests going to go through the system?)

No patient ID with malaria smear – just an ID specimen. Roger – could we get your inputs on how these anonymous tests are going through the system?

1.4 - specimen + order from hospital/surgery OR specimen + paper order from hospital/surgery

Patients in in-patient wards / surgery will already have registered; specimens will arrive with their patient registration number and test type requested.

1.0b Register Specimen for Test - Task Flow



Usable sample = need to know when sample was taken - key when coming from outside JSS

Even unacceptable specimens are recorded in the system. Every order and specimen received must be accounted for. There is a list of reasons for unacceptability from which the user will select.

difference btwn report and batch
 report - tests ordered by the same doctor for the same patient
 report = single doctor + single patient
 report = single doctor + multiple patients (e.g. anonymous tests)
REPORT is DOCTOR-CENTRIC



User Name [Log Out](#)

What do you need to do:

- Collect & Register a specimen?
- Enter Results?
- Approve a single report?

1

updated to reflect email of 2 February 2012

Notes

1. User selects a task

Browser Stuff

JSS Logo [Lab Home](#) > Collect and Register Specimen User Name [Log Out](#)

Patient queue

First Name	Last Name
First Nam	Last Name
First Nam	Last Name
First Name	Last Name
First Nam	Last Name
First Nam	Last Name
First Name	Last Name
First Nam	Last Name
First Nam	Last Name
First Nam	Last Name

Create Order

Doctor responsible

DR ABCDEF ▼

Is the investigation request:

Investigation Investigation ▼ Test Test ▼

Special Instructions

enter text

+ Add another order

[Cancel](#) Save

Notes

Discuss:

- "Freeze" the area outlined so that the information is always visible, even when the page scrolls.

User starts to enter items into the form and the PATIENT QUEUE fades out/hides.



Notes

Browser Stuff

JSS Logo

[Lab Home](#) > Collect and Register Specimen

User Name [Log Out](#)

Patient queue

Create Order

Doctor responsible
DR ABCDEF

Is the investigation request: URGENT? RETEST?

Investigation: Investigation 1 Test: Test Name

Special Instructions
enter text

+ Add another order

[Cancel](#) [Save](#)

Notes

Browser Stuff

JSS Logo [Lab Home](#) > Collect and Register Specimen User Name [Log Out](#)

Patient queue

Create Order

Doctor responsible

DOCTOR ABCDEF

Is the investigation request: URGENT? RETEST?

Investigation Test

Investigation 1 Test Name

Special Instructions

enter text

+ Add another order

Register Patient

Patient Lookup

search w/advanced search options


Cancel Save

Discuss:
1. Does specimen label need time/date stamp?
If yes, display. And consider displaying time and date on screen at all times.

There may be a learning curve here so the user knows he can enter any of the data points to return search results. The results should display under the search box - a list of auto-suggest.

Patient Lookup successful: name displays and auto-generated ID for specimen displays

Browser Stuff

 [Lab Home](#) > Collect and Register Specimen User Name [Log Out](#)

Patient queue

Create Order

Doctor responsible

Is the investigation request: URGENT? RETEST?

Investigation Test

Special Instructions

+ Add another order

Register Patient

Patient Lookup

Patient Name

Specimen ID ABCDEFG9876 Specimen labelled?

[Cancel](#) Order Created, continue to [Specimen Registration](#)

Notes

Discuss:
1. Does specimen label need time/date stamp?
If yes, display. And consider displaying time and date on screen at all times.

**Patient Lookup successful:
name displays and auto-generated
ID for specimen displays**

off-line process - specimen must be labelled.

**Button disabled until all fields
complete. Error/Help messages
displayed as per universal service
convention (to be determined).**

Browser Stuff

JSS Logo

[Lab Home](#) > Collect and Register Specimen

User Name [Log Out](#)

Patient queue

Order

Register Patient

Patient Lookup

search w/advanced search options ▼

Discuss:

1. Once user enter REGISTER portion of the form - CREATE ORDER panel folds up and change label to ORDER or leave it as one scrolling form always visible.

need to flush this out - patient lookup shows no results so the page reveals the patient registration form AND prompts.

Notes

Browser Stuff

Notes



[Lab Home](#) > Collect and Register Specimen

User Name [Log Out](#)

Patient queue

Order

Register Patient

Discuss:

1. Once user enter REGISTER portion of the form - CREATE ORDER panel folds up and change label to ORDER or leave it as one scrolling form always visible.

need to flush this out - patient lookup shows no results so the page reveals the patient registration form AND prompts.

Patient Lookup

search w/advanced search options ▼

First name:

First Name

Surname:

Surname

Father / Husband Name:

First Name

Father / Husband Surame:

First Name

Gender

male

female

Date of Birth

Day ▼

January ▼

year ▼

OR

Years

[Cancel](#)

Register Patient



Browser Stuff

JSS Logo

[Lab Home](#) > Collect and Register Specimen

User Name [Log Out](#)

Patient queue

Order

Register Patient

Specimen ID ABCDEF987654

Person ID ABCDEF

Specimen labelled?

Order Created, Person registered, continue to

[Cancel](#) [Specimen Registration](#)

off-line process - specimen must be labelled.

Notes



Browser Staff

JSS Logo User Name [Log Out](#)

[Lab Home](#) > Collect and Register Specimen

Patient ID	First Name	Last Name
Test Ordered By:	Age	Gender

Patient queue **Does patient meet specimen collection criteria?** [Create Order](#)

LAB ORDER ID 98765432xx

Specimens to Collect:

Test 1	Lorem ipsum
Test 2	dolor sit amet,
Test 3	consectetur adipiscing elit

Patient Criteria

Question 1:
Lorem ipsum dolor sit amet, consectetur adipiscing?
 elit. Nam dignissim, lorem a fermentum
 lectus Lorem ipsum dolor sit amet, consectetur

Question 2:
Lorem ipsum dolor sit amet, consectetur adipiscing?
 elit. Nam dignissim, lorem a fermentum
 lectus Lorem ipsum dolor sit amet, consectetur

Question 3:
Lorem ipsum dolor sit amet, consectetur adipiscing?
 elit. Nam dignissim, lorem a fermentum
 lectus Lorem ipsum dolor sit amet, consectetur

[Cancel](#) [Next](#)

There may be more than one Lab Order if the preferred input system is one order per panel. Awaiting final decision.

Discuss:
1. The questions may have radio buttons or check boxes. No free text-entry. cannot error-check free-text entry boxes.

Once the user has entered answers to all the questions, feedback displays to let the user know which specimens to collect. See next page: 1.2.1



Lab Home > Collect and Register Specimen

User Name Log Out

Patient ID	First Name	Last Name
Test Ordered By:	Age	Gender

Patient queue

Does patient meet specimen collection criteria?

Create Order

LAB ORDER ID 98765432xx

lectus Lorem ipsum dolor sit amet, consectetur

Question 2:
Lorem ipsum dolor sit amet, consectetur adipiscing?

elit. Nam dignissim, lorem a fermentum

lectus Lorem ipsum dolor sit amet, consectetur

Question 3:
Lorem ipsum dolor sit amet, consectetur adipiscing?

elit. Nam dignissim, lorem a fermentum

lectus Lorem ipsum dolor sit amet, consectetur

Patient does not meet criteria for Test 3 due to < reason 1>.

Collect specimens for:

Test1

Test 2

Test 4

Discuss:
1. Does a pair of actions make sense here? We are on auto-save. In event of interruption or power cut - how do I get back to where I was?

Cancel


Continue

Notes

Discuss:
1. Freeze patient info and lab order? Only start page scroll at "Specimens to Collect."

Should the patient name and lab order be VISIBLE on the page at all times or is it OK to scroll to review it?

Browser Stuff



[Lab Home](#) > **Collect and Register Specimen**

User Name [Log Out](#)

Patient ID	First Name	Last Name	Age	Gender
Test Ordered By:				

Patient queue

Collection Instructions

Create Order

LAB ORDER ID 98765432xx

Test 1 Lorem ipsum

Materials:

- elit. Nam dignissim, lorem a fermentum vestibulum,
- lectus Lorem ipsum dolor sit amet, consectetur

Specimen Collected 1

Test 2 Lorem ipsum

Materials:

- elit. Nam dignissim, lorem a fermentum vestibulum,
- lectus Lorem ipsum dolor sit amet, consectetur

Specimen Collected

Test 4 Lorem ipsum

Materials:

- elit. Nam dignissim, lorem a fermentum vestibulum,
- lectus Lorem ipsum dolor sit amet, consectetur

Specimen Collected

[Cancel](#)

Register Specimen

Button disabled until all specimens collected.

Notes

- Hitting "SPECIMEN COLLECTED" makes the backend record a time-date stamp. The page would then display a Specimen ID - see next wireframe - 1.4 Collect Specimen - Lab Order Complete . The page re-fresh serves as confirmation that the system has recorded the specimen to the test and the patient ID.

Browser Stuff

JSS Logo

[Lab Home](#) > Collect and Register Specimen

User Name [Log Out](#)

Patient ID	First Name	Last Name	
Test Ordered By:		Age	Gender

Patient queue

Collection Instructions

Create Order

LAB ORDER ID 98765432xx

Test 1 Lorem ipsum COMPLETED

Specimen ID 1234567890xxxxx 1

Test 2 Lorem ipsum

Materials:

elit. Nam dignissim, lorem a fermentum vestibulum,

lectus Lorem ipsum dolor sit amet, consectetur

Specimen Collected

Test 3 Lorem ipsum

Materials:

elit. Nam dignissim, lorem a fermentum vestibulum,

lectus Lorem ipsum dolor sit amet, consectetur

Specimen Collected

[Cancel](#)
Register Specimen

Discuss:

The lab tach has to create and affix a label at this point.

Currently, is this done:

1. As a specimen is collected?
2. Once all specimens are collected from the patient?

Idea: add question "label affixed to specimen"?

Button disabled until all specimens collected.



Notes

1. Machine generated ID number.

Browser Stuff

JSS Logo

[Lab Home](#) > Collect and Register Specimen

User Name [Log Out](#)

Patient ID	First Name	Last Name	
Test Ordered By:		Age	Gender

Patient queue

Collection Instructions

Create Order

LAB ORDER ID 98765432xx

Test 1 Lorem ipsum	COMPLETED
Specimen ID 1234567890xxxxx	
Test 2 Lorem ipsum	COMPLETED
Specimen ID 1234567890xxxxx	
Test 3 Lorem ipsum	COMPLETED
Specimen ID 1234567890xxxxx	

Specimen Collection complete

[Cancel](#)
Register Specimen

Notes

1.

Discuss:
1. Is a reminder/user to confirm that all specimens have been labelled?

If yes, should it be:

i) mandatory action, e.g. tick a box


or

ii) just a static text reminder

because ticking a box becomes as habitual as reading a line of text and can be done on auto-pilot. It also may be redundant/condescending to constantly repeat? Depends on how people work....



Browser Stuff



[Lab Home](#) > Collect and Register Specimen

User Name [Log Out](#)

Patient ID	First Name	Last Name	Age	Gender
Test Ordered By:				

Patient queue

Register Specimens

Create Order

Specimen ID 1234567890xxxxx

Is the specimen usable?

Yes
 No

Create Test Specimen

Assign to Report

Next Patient

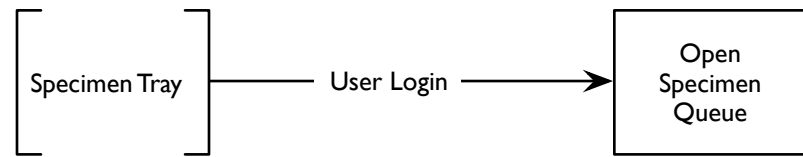
1. create test specimen - is this all off-line?

2. is another ID generated for the test specimen?

3. will the date received be auto-generated (so nothing needs to be in the interface)?

4. is assign to report automatic - so lab tech could just hit a button that says "assign to report"and it's done?

3.0 Test Specimen Preparation - Task Flow



filter queue by tests in need of preparation

Test specimen can be assigned to batch by either the PREPARER or TESTER depending on the test and/or lab workflow

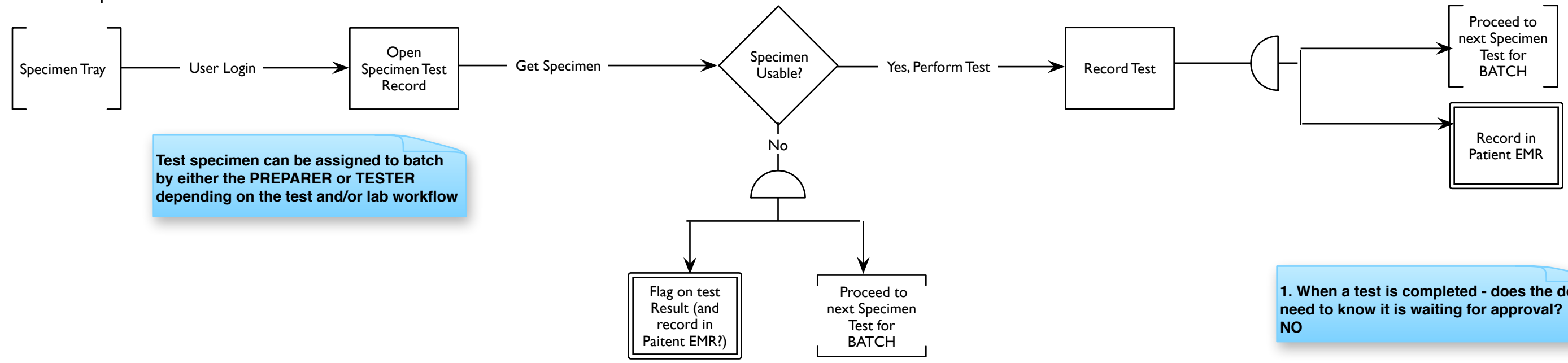
test prep is done by test type

need to log who has done the test prep

display specimens by preparations needed

we need to include who did the test specimen preparation and a time/date stamp.

4.0 Test a Specimen - Task Flow

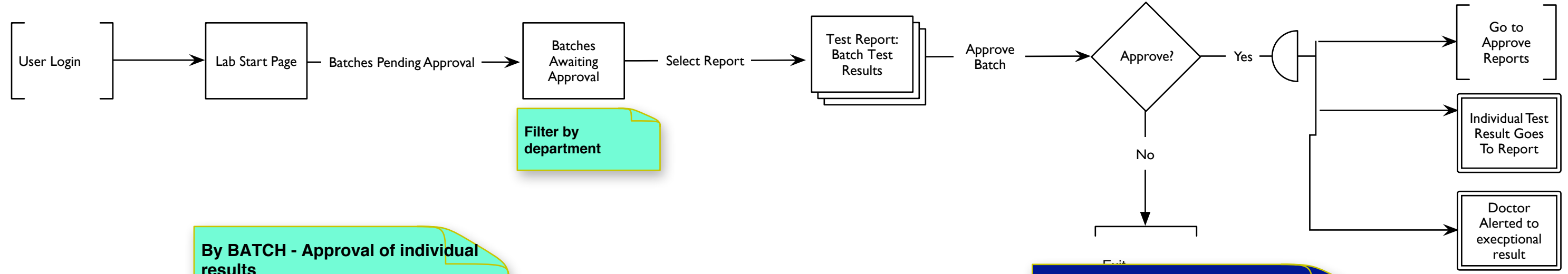


Test specimen can be assigned to batch by either the PREPARER or TESTER depending on the test and/or lab workflow

1. When a test is completed - does the doctor need to know it is waiting for approval?
NO

RECORD WHO DID THE TEST AND WHEN

5.0 Approve Batch Test Result - Task Flow



By BATCH - Approval of individual results
By REPORT - approve individual reports
COMMENT Section on REPORTS (see openMRS wiki)

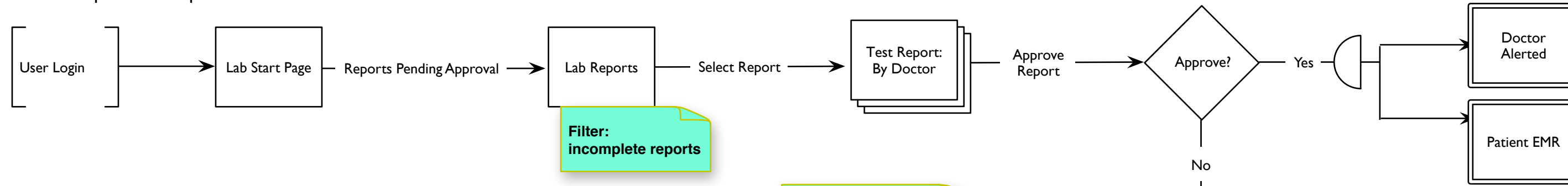
1. Lab tester records results and may add comments.
2. Test approver approves/ rejects a batch of test.
3. Lab director approves reports in its entirety for release

rejection actions:
 1. rerun test against same specimen
 2. rerun test against new specimen
 3. create new order
 4. do nothing

would unapproved batches have test approver and/or lab director comments?
YES - optional

Entry Options for Approver:
Tests to be approved (specimens Investigated together by time and batch/lab tech)
Reports to be approved
Reports that have not been distributed yet (is this an Approver's task?)

6.0 Lab Report Test Reports Result - Task Flow



Filter: incomplete reports

3. Lab director approves reports in its entirety for release

By BATCH - Approval of individual results

By REPORT - approve individual reports

COMMENT Section on REPORTS (see openMRS wiki)

Entry Options for Approver:

Tests to be approved (specimens Investigated together by time and batch/lab tech)

Reports to be approved

Reports that have not been distributed yet (is this an Approver's task?)

would unapproved report have lab director comments?

3 types of approval:

1. preliminary
2. final
3. revised

retest = can be assigned to entire report or new - is this test specific or should both options always be there?

"If a report has incomplete tests, it can only be released as preliminary." = backend rule, error check on entry?

I have not seen these screens described anywhere.

What is the entry point to the service?

Status Bar

browser SUIT



User Name [Log Out](#)

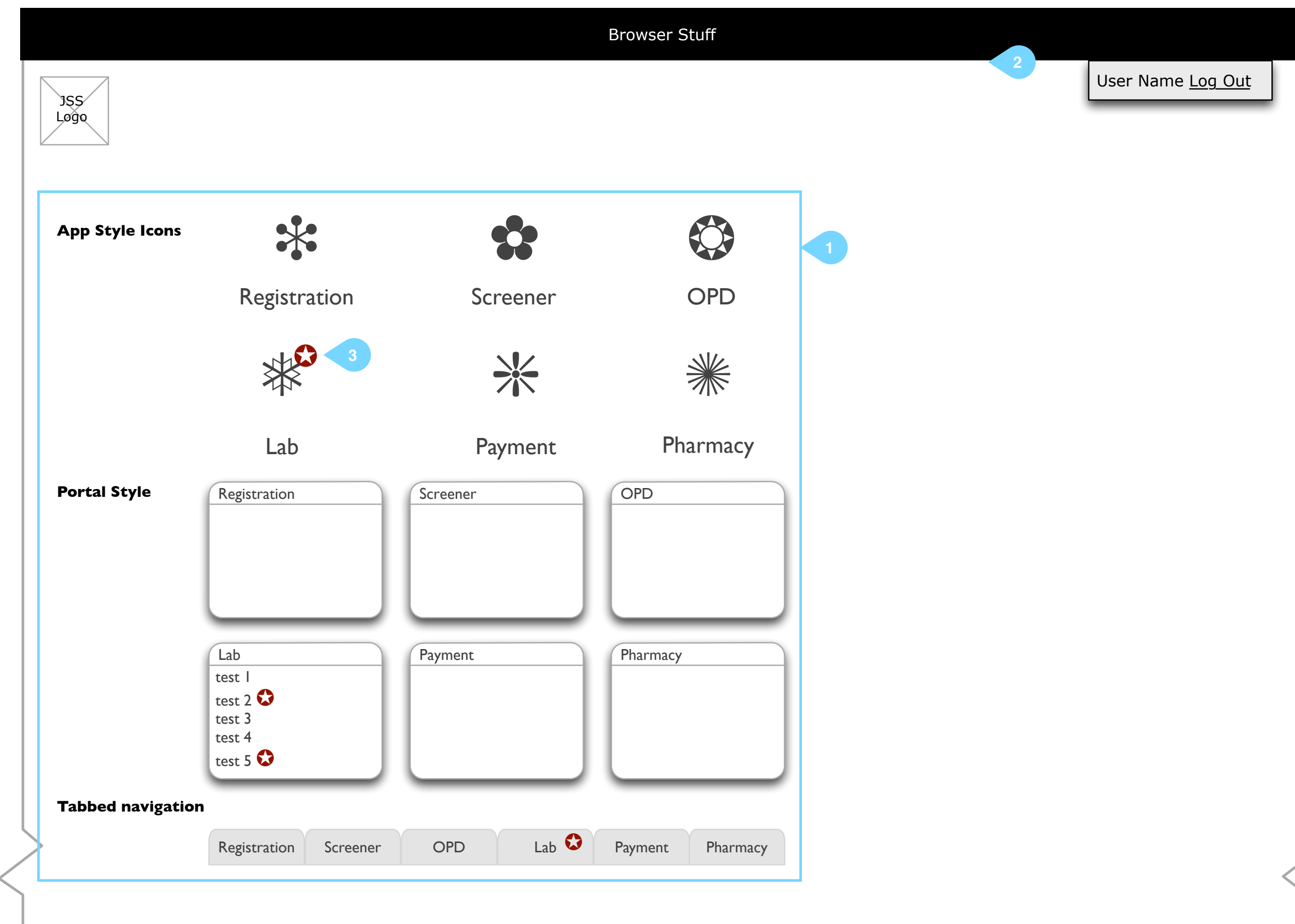
User Name

Password

[Forgot password?](#)

Notes

1. What screen displays when the user accesses the JSS Service/Application?
2. Will Users be assigned or will users be permitted to register themselves?

**Notes**

1. What screen displays when the user logs-in?

Will it be portal like ?
Icons?
Tabbed navigation?

Note: Section headers taken from the IA document.

2. Will there be any preferences the user can set? If yes, then an alternate way to present this would be:

User Name ▼

where the triangle hints to the user that there is a drop-down of choices. Choices could include Log Out, Preferences, etc. (see LinkedIn / Facebook)

3. The RED BADGE is just a placeholder to show how something can be marked as needing attention/urgent on the home page.

4. Is the implementation going to follow OpenMRS and be open about the fact that it is browser based?

< <http://demo.openmrs.org/openmrs/index.htm?jsessionid=DAED47BBF515674DAB5875C530BFE8A6> >

5. Is the browser chrome going to be masked on all delivery platforms? (tablet, conventional computer w/ physical keyboard)

1.0 Specimen Collection Questions:

1.1 Where are collected samples placed?

1.2 What happens if a patient is not in the right condition to give a Specimen? (e.g. He did not fast, he drank tea). How is this recorded? Is it recorded in the Patient's EMR?

Record reason for Specimen not taken in EMR.

1.3 If a patient is fit to give some but not all of the samples, how is this recorded? Is it recorded in the Patient's EMR?

Record reason for Specimen not taken in EMR.

2.0 Specimen Preparation Questions:

2.1 How does the Specimen Preparation Person distinguish between URGENT and NORMAL?

Urgency is part of the lab order. As far as I know, there is nothing on the specimen holder to indicate urgency, it only exists within the system.

2.2 Does the Specimen Preparation person always focus on URGENT samples first then when all URGENT Specimen clear, work on NORMAL SAMPLES ?

No. Most processing/testing occurs in batches. An urgent order usually triggers the preparation/testing of all specimens waiting for the same test.

2.3 Does the same person prepare the Specimen and test it in one connected set of actions?

From an information point of view, anything that changes the specimen type of a specimen or produces a new test specimen (for example removing a measured quantity of the specimen from the test tube and putting it in a "bullet" container) is preparation, anything that produces a test result is a test (for example, buffering pH to a known value before adding reagent). The underlying purposes of keeping this information are to maintain chain of custody and to improve quality by knowing who did what.

3.0 Specimen Approval Questions:

3.1 What happens to an UNAPPROVED RESULT?

Unapproved results remain in the system but are not generally shown on lab reports.

3.2 How are reports generated - by test type? by date and time?

See the powerpoint. A report consists of (a) a header identifying the lab; (b) identity of the orderer; (c) lab orders to which the report is responsive; (d) for each specimen, all the results, including date/time of test, flags, notes and test ranges as applicable, and identifying the responsible lab tech; (e) the electronic or manual signature of the approver

3.3 How are the medical staff alerted when a test is complete and in the Lab Report?