

You want me to build what?

Helping librarians and developers
communicate effectively

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Librarian Developer Interactions



Does this
conversation
sound
familiar?

“What we’ve got here is a failure
to communicate”









Defining what is going to be built



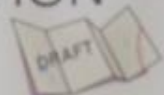
Supporters

START UP

1 START UP:
Neighbourhood areas defined. Neighbourhood forums emerge and are designated by local authorities.

Four green sticky notes and four orange sticky notes are attached to the poster.

REGISTRATION



3

User Stories

- As a <user>
 - Who is taking the action
- I want to <do something>
 - The action being taken
- So that <value statement>
 - Why the action is being taken

Example: Library Hours

- As a library patron
- I want to view my library's hours and determine when the library opens and closes
- So that I can pick up a book on hold

Acceptance Criteria

- Given X
- When do Y
- Then I get Z
- And I also get A

Example: Library Hours

- Given I am in the library mobile site
- When I navigate to the library hours
- Then I see the name of the library
- And I see a section heading Normal hours
- And I see a section with a paragraph for each day of the week with its opening and closing hours

Example: Library Hours

- Given I am at <http://mobile.mylibrary.org>
- When I click the navigation link “Hours”
- Then I should be on the page /hours
- And I see an “h1” with the value “My Library”
- And I see an “h2” with the value “Normal hours”
- And I see a div with 7 paragraphs



Example: Failed Login

Story

- As a system administrator
- I want to deny users who enter the wrong login information access to the system
- So that I can ensure user data and privacy

Acceptance criteria:

- Given I am a user logging in
- When I enter incorrect credentials
- Then I get an error message of “invalid username or password”



Example: Mobile Application

- As a patron I want to view basic library information, like hours, from a mobile device
 - As a library patron, I want to view the normal hours for the main library so that I can check out a book
 - As a library patron, I want to see all the branches so that I can view their hours
 - As a library patron, I want to see the hours for a specific library branch so I can visit and use the wi-fi

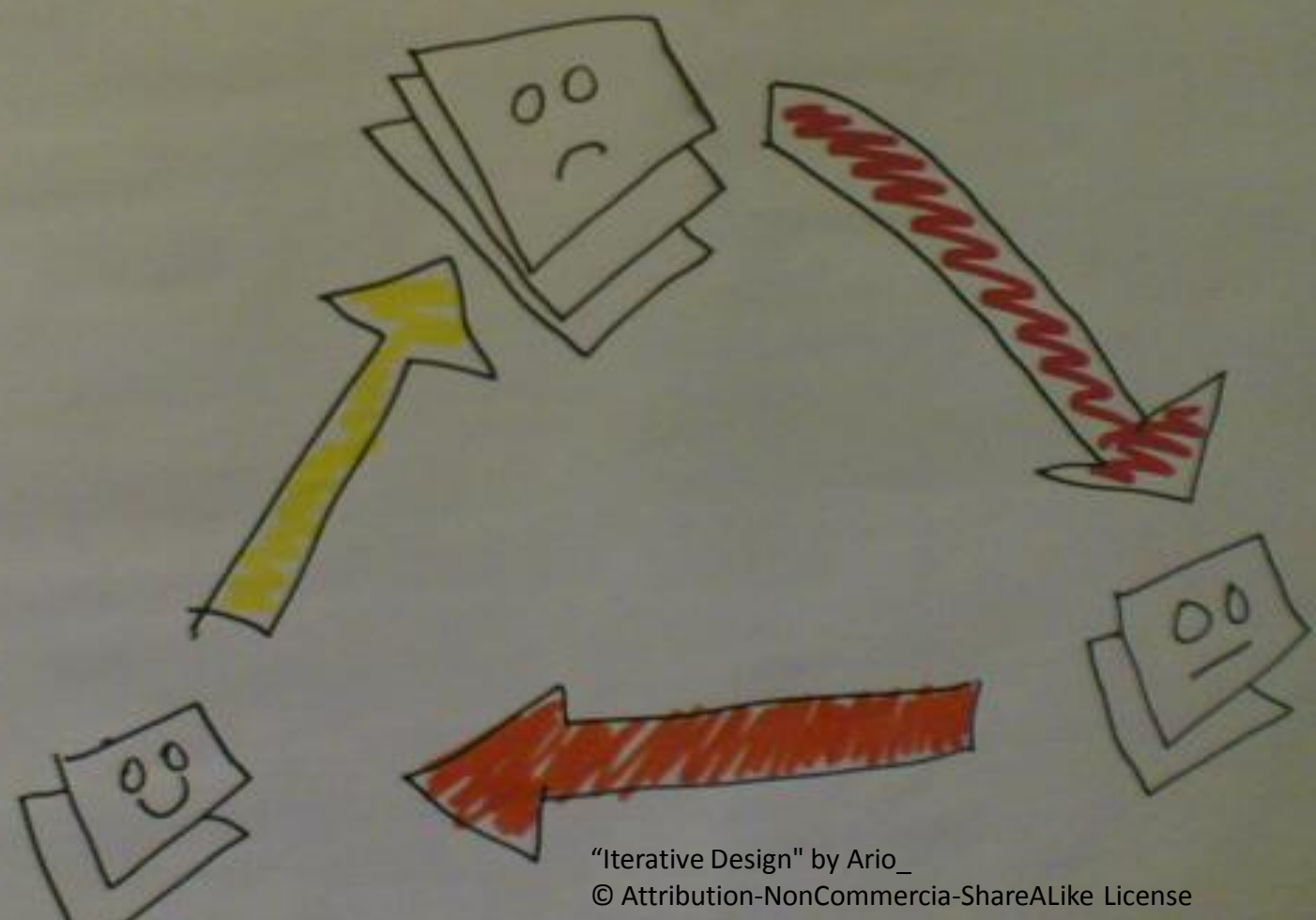
Example: Mobile Application Epics

- As a patron I want to view library hours from a mobile device
- As a patron, I want to view the library address from my mobile device
- As a patron I want to view my holds from my mobile device
- As a patron I want to receive alerts when my holds are ready to pick up

Prioritization and Estimation

- MOSCOW
 - Must
 - Should
 - Could
 - Won't
- Developers provide estimates for stories

Iterative Design





Bonus Benefits

- Use stories and acceptance criteria during discussion with stakeholders so they understand
 - What is being built
 - What isn't being built
 - The benefits of the project

**How do developers know
they built what you wanted
them to?**

```
PHPUnit 3.7.37 by Sebastian Bergmann
Configuration read from /Users/librarywebchic/git/wclibhours/phpunit.xml
.....
Time: 110 ms, Memory: 8.50Mb
There was 1 failure:
1) OrganizationTest: Failed asserting that
selectBranchHours.feature:25
Given I am on "/index.php"
Extension\Context\MinkContext::visit()
When I select "COP Sandbox - East Branch" from "id"
Extension\Context\MinkContext::selectOption()
And I press "Submit"
Extension\Context\MinkContext::pressButton()
Then I should be on "/index.php?id=http%3A%2F%2Flocalhost%2Fwclibhours%2Ftests%2Fsample-data%2Forganization_129057.rdf"
Extension\Context\MinkContext::assertPageAddress()
And I should see 1 "form" element
Extension\Context\MinkContext::assertNumElements()
And I should see that "COP Sandbox - East Branch" in "id" is selected
text::shouldBeSelected()
And I should see 1 "h2" elements
Extension\Context\MinkContext::assertNumElements()
And I should see "Normal Hours" in the "div#normalHours h2" element
Extension\Context\MinkContext::assertElementContainsText()
And I should see 7 "div#normalHours p" elements
Extension\Context\MinkContext::assertNumElements()
And I should see the following in the repeated "p" element within the context of the "div#normalHours" element:
text::assertRepeatedElementContainsText()
| text |
| Sunday: Closed |
| Monday: 09:00 17:00 |
| Tuesday: 09:00 17:00 |
| Wednesday: 12:00 20:00 |
| Thursday: 12:00 20:00 |
| Friday: 09:00 17:00 |
| Saturday: Closed |
4 scenarios (4 passed)
34 steps (34 passed)
```

/Users/librarywebchic/git/wclibhours/tests/OrganizationTest.php:102

FAILURES!

Tests: 10, Assertions: 83, Failures: 1.

Vinalhaven:wclibhours librarywebchic\$ vendor/bin/phpunit

PHPUnit 3.7.37 by Sebastian Bergmann.

Configuration read from /Users/librarywebchic/git/wclibhours/phpunit.xml

.....

Time: 93 ms, Memory: 8.50Mb

OK (10 tests, 84 assertions)

Test Driven Development

- Write a test for what you want the system to do
- See that the test fails
- Write code so the test passes
- Make sure all the existing tests pass
- Rinse and repeat

Example: Parse Library Hours

- Test that I have a non-empty array of normalHours
- Test the number of hours in my array is 7
- Test that I have hours for each day of the week
- Test that the hours are in the particular order that I have specified

Perils of Test Driven Development

- What to test and what not to test
- How much to test in a single test
- How to name the test
 - So you know what is failing
- Understanding why a test is failing

Behavior Driven Development

- Expands on the concepts of TDD
- Write tests based on user stories and acceptance criteria
 - User stories = features
 - Acceptance criteria = scenarios

Example: Display Library Hours

- Test when I go to the hours page I
- See the name of the institution
- I see a section of normal hours
- I see a section header “normal hours”
- I see a paragraph for each day of the week’s hours
- I see the opening and closing times or that the library is closed for each day of the week

Example Test: Display Library Hours

Scenario: Successfully View Open Hours

When I go to `"/index.php"`

Then I should see "OCLC WorldShare Platform Sandbox Institution" in the "h1" element

And I should see "Normal Hours" in the "div#normalHours h2" element

And I should see 7 "div#normalHours p" elements

And I should see the following in the repeated "p" element within the context of the "div#normalHours" element:

| text |

| Sunday: 12:00 17:00 |

| Monday: 08:00 20:00 |

| Tuesday: 08:00 20:00 |

| Wednesday: 08:00 20:00 |

| Thursday: 08:00 20:00 |

| Friday: 08:00 17:00 |

| Saturday: 10:00 17:00 |



Demonstration Time

Demonstration: User Story

Demonstration: Acceptance Criteria

What to learn more?

- User Stories
- What's in a Story – by Dan North
- Behavior Driven Development
- PHPUnit – TDD PHP
- Behat – BDD PHP
- Mink – Web acceptance testing
- Example project – Library Hours
 - <https://github.com/OCLC-Developer-Network/wclibhours>