Defect Hunting and Reporting

February 2018

PRESENTATION

- My name is Maria Sobal
- Senior Software testing Engineer
- 7+ years in Software Testing

AGENDA

- Bug Definition
- Bug Statistics
- Bug Life Cycle
- Bug Hunting
- Troubleshooting

What is bug or defect ?

BUG DEFINITION

•Bugs in requirements

> When requirement is incorrect, unambiguous, inconsistent or incomplete
>
> When requirement contradict to business flow in case when it exists

•Functional bugs in application

> Nonconformance to requirements
>
> Something that does not correspond to valid Customer's expectations/common sense that are assumed but may be not described in product requirements.

WHY DO WE NEED TO REPORT BUGS?

1   Do not forget to fix and retest all found issues

2   Measure product quality

3   Data source for risky analysis

BUG REPORT: MANDATORY FIELDS

Mandatory bug report fields:

- Summary
- Severity
- Priority
- Description
- Steps to Reproduce
- Actual and Expected Results
- Attachment

ADDITIONAL BUG REPORT FIELDS

What additional fields may be present in bug report?

- Issue Type/ **Testing types** like regression issues/New Feature/ Configuration/ Integration/etc.

- **Product component**/ area where defect was found

- Environments/ **Testing phase** like QA, DEV, UAT, PROD

- Found/ Fix Version

- **Sprint/Release** where defect was found or should be fixed

Number of defects by priority and status to evaluate product quality and product readiness for delivery

OVERALL NUMBER OF DEFECTS BY PRIORITY AND STATUS

should be 0-1

How many blocker/critical defects are unresolved?

better when it is less

How many blockers and critical defects in comparison with other defects?

	Closed	Resolved	In Progress	Open	Test ongoing	Waiting for Feedback	Grand Total
Blocker	95	4	2	5	3	6	115
Critical	123	15	7	12	5	8	170
Major	144	20	5	34	4	10	217
Minor	11	1		50	1	1	64
Grand Total	373	40	14	101	13	25	566

How many unresolved defects in comparison with total number?

better as less as possible

|	Resolved	Regression defects	Remaining defects	Grand Total
Blocker	4	0	0	4
Critical	15	0	2	17
Major	20	5	4	29
Minor	1	3	4	8
Grand Total	40	8	10	58

Summary:

- 6 unresolved Critical and Major defects are related to user story-XX that was delivered later and testing is still incomplete. We don't recommend to delivery it for UAT
- 8 regression defects are not critical and may be fixed during next sprints
- 4 remaining minor defects are related to user story-YY, ZZ. Please, include these defects into UAT notification for customer.

Defect distribution by components/ product areas to define most stable components or most "buggy" areas that requires more testing

DEFECT STATISTICS BY COMPONENTS

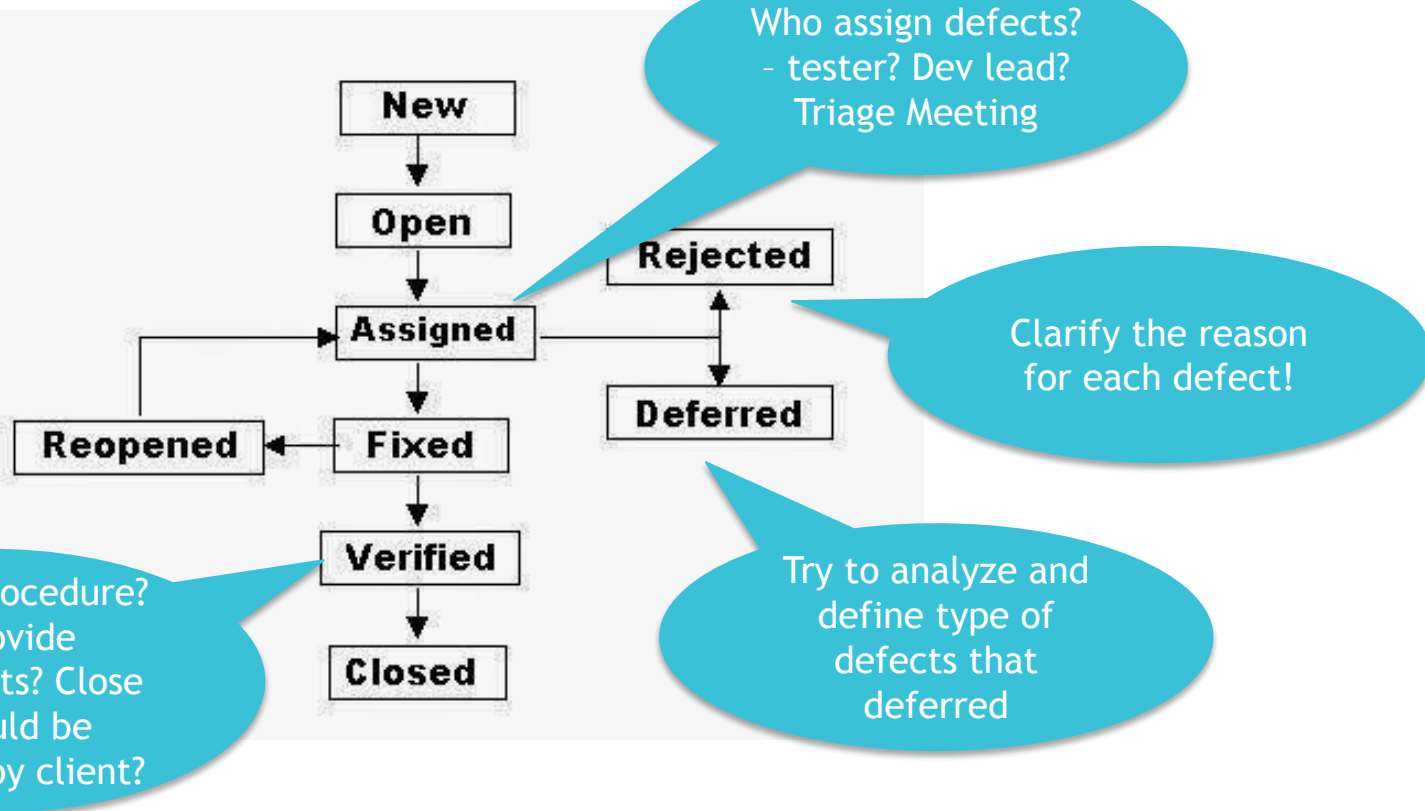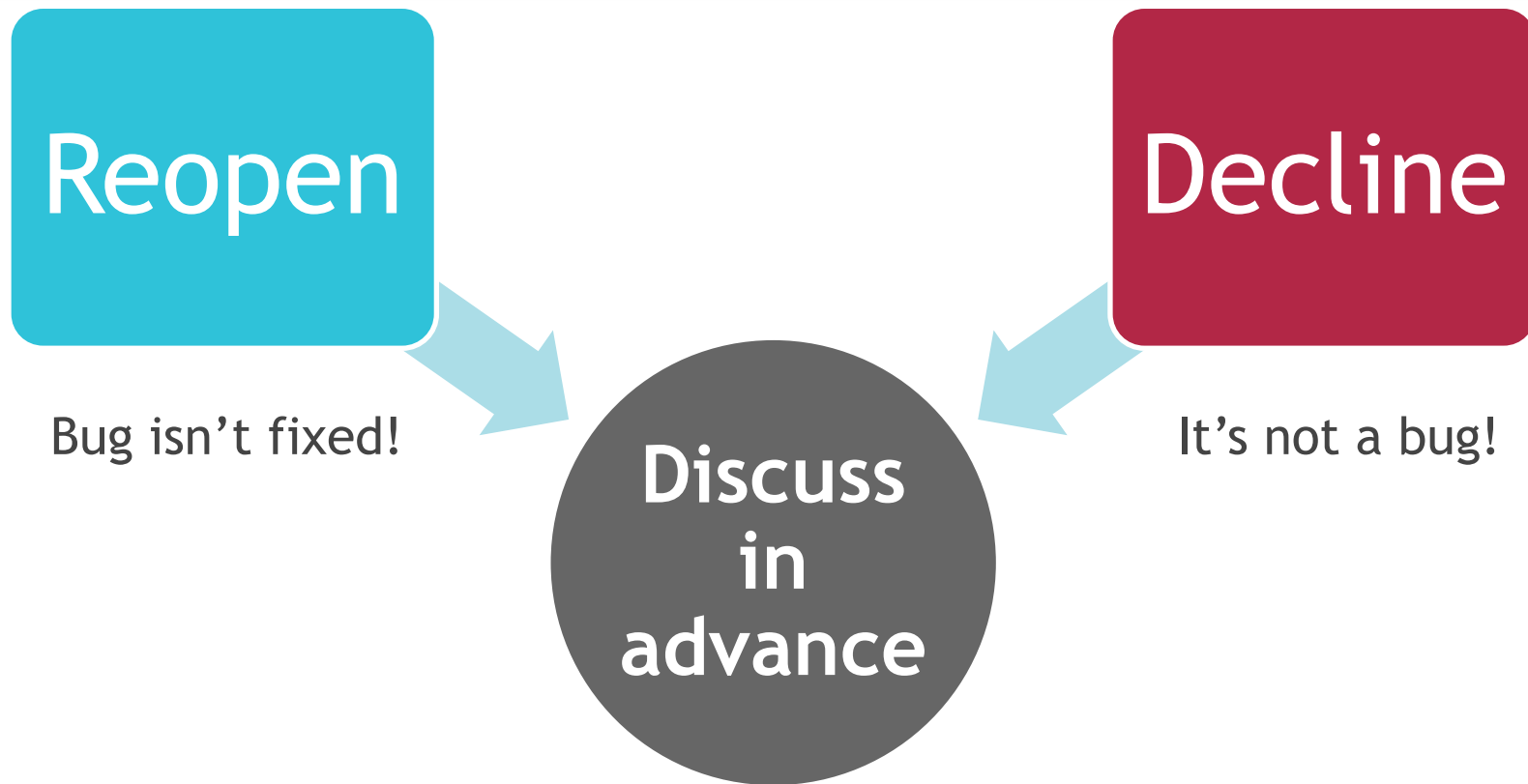What components/functional areas are more stable and what still have a lot of issues?
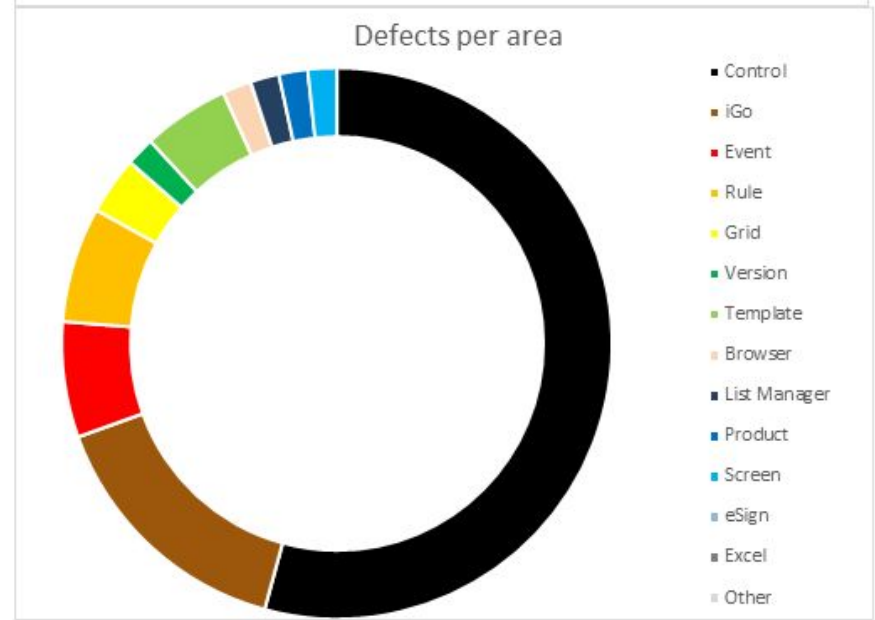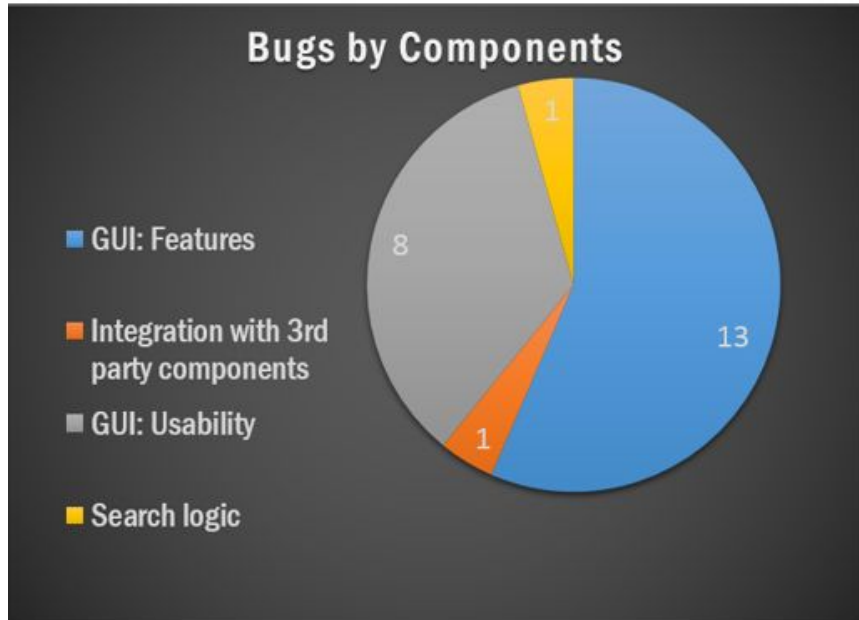
BUG LIFE CYCLE

REOPENED AND DECLINED BUGS

Reopen

Bug isn't fixed!

Decline

It's not a bug!

Discuss in advance

REOPENED AND DECLINED BUGS: VALID AND INVALID REASONS

Bug could be reopened because:

- Developer's mistake;

- Bug report includes not all details of issue reproducing, some conditions were missed;

- Bug is being verified on the environment where bug wasn't deployed;

- Clarify issue with dev and check on right environment.

Bug could be declined because:

- Tester's mistake – incorrect understanding of requirements;

- User's won't fixed it -> move to deferred state;

- Bug was fixed with other bugs/stories and now doesn't reproduce;

- Bug should be closed as Fixed;

- Bug was reproduced because of environment issues;

- Bug should be closed with resolution/comment 'Environment issue'.

NOT A BUG

Bug could be converted to another issue type:

- Reported bug contains scenario that was not described in requirements;

- Bug is converted to story;

- Reported bug contains contradicts to requirements - now customer would like to change the behaviour;

- Bug is converted to change request.

BUG HUNTING

If you can't reproduce a bug there is a **condition** that you are missing.

•Time – delayed

•First time

•Specific time

•Speed

FACTORS: IPHONE TIME EXAMPLE

iPhone 6 Ⓢ   3D Touch   Design   Cameras   Technology   iOS 9   Tech Specs   Buy

Blast from the past.

The original Macintosh introduced the world to computers, forever changing the way people experience technology, and allowing people to do things that were never possible before. With this easter egg, warp back in time with a classic Macintosh theme to relive the magic on your iPhone. Change the date on your iPhone to January 1, 1970, press and hold the power button to reboot your device, and prepare for a wild ride!

Preconditions:

Iphone 64-bit iOS 9.3.0 and less

STR:

1. Set date = 01/01/1970 01:00:00 in

UTC +1:30 and more

2. Restart handset

Actual result:

 Apple logo is displayed all the time

- Race

- Interaction

- Load

BP running out of memory after many connections

| ✏ Edit | 💬 Comment | Assign | More ▾ | | Resolve Done | In Testing | Workflow ▾ |

Details

Type:	🔵 Defect		Status:	**TASK: DONE** (View Workflow)
Priority:	✖ Major		Resolution:	Done
Affects Version/s:	None		Fix Version/s:	None
Component/s:	None			
Labels:	None			

| Work Item | Defect |

Reproduce Steps:	⌄ Create a JMeter project, that uses say 50 threads running for say a 1000 iterations, to make requests (without logging in) for the same resource, /zk/version. Leave it running, and eventually bp will crash with an out of memory error.
Test Data:	See description
Expected Result:	⌄ Businessportal should not run out of memory, but instead terminate the sessions for the handled requests timely.
Actual Result:	⌄ Businessportal runs out of memory.

Description

This is because the default session timeout is set to 2 hours.

FACTORS: WORLD AROUND

- Software Configuration

- Hardware Environment

- Invalid Data

- Browser cashe

- Web server cashe

FACTORS: OPENCART CASH EXAMPLE

Steps to Reproduce:

1. Make any changes
(for ex. Set any module or make any
 code changes) by user admin in shop modifier
2. Clear cash by user Admin in shop modifier
3. Try to order any product in shop by Admin
and customer users

Actual result:

 Product is ordered admin
'Website is under construction' message is
displayed for customer
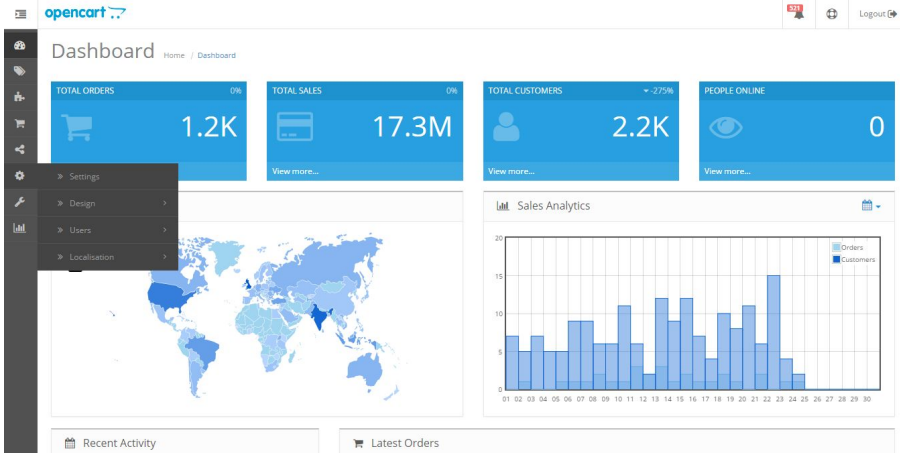
BUG HUNTING: RECOMMENDATIONS

General:

- Write down all details right away (you do not know, which detail is important right now) and take screenshot
- Write down what you tried (even if it did not help)
- Create a list of factors that may be important
- Write ALL results down
- Contact developer
- Stop once you tried all ideas and wait for the next time happens

Technical:

- Restart
- Collect and analyze logs
- What will happen to the following bugs:
    - 1-st time
    - resources taken
    - data corrupted
- Clean cashe (web server, browser)

TROUBLESHOOTING

You send API request and do not get answer. What will you check?

-If there is error response message in console
-if server is available
-if ports are available
-correctness of requested method and parameters
-If other requests come to same server
-if HTTP operation (GET, PUT, DELETE and POST) is correct

TROUBLESHOOTING

You open web page but got error message.

Based on error message make a decision about the problem source:
— 404 Not found - requested URL was not found on this server
— 403 Forbidden - client does not have permission to get URL from requested server

What will you do?
-Check if web page address is incorrect (type or copy the correct URL)
-check from another networks
-check in other browsers,
-Ask your teammate to check on his environment
-Verify your permissions
-Check your certificate

TROUBLESHOOTING

Exception executing consequence for rule "calculate duration by startDate and endDate" in com.epam.vts.rules: java.lang.NullPointerException

NEW VACATION REQUEST `NEW`

Employee: John Smith

Type: Regular vacation | Sick leave | Overtime vacation | **Leave w/o pay** | Exceptional leave

☐ No objections from my project/delivery managers

Approver: [▼]

From: Apr 01, 2017 9:00 AM To: May 31, 2017 1:00 PM

Duration: 4h

Leave w/o pay type: General leave ▼

BACK | **SAVE AS DRAFT** | **SUBMIT REQUEST**

AVAILABLE:

Regular vacation: -0.5
Overtime: 0 h

TAKEN:

Sick days: 0 (0 out of 7)
Leave without pay: 22
Exceptional leave: 0

Check the following:
1. Other dates
2. Other duration
3. Other employee
4. Other type