Bug Life Cycle & Bug Advocacy

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What is a bug?

An undesired aspect of something that causes it to exhibit an unwanted response in a particular situation.

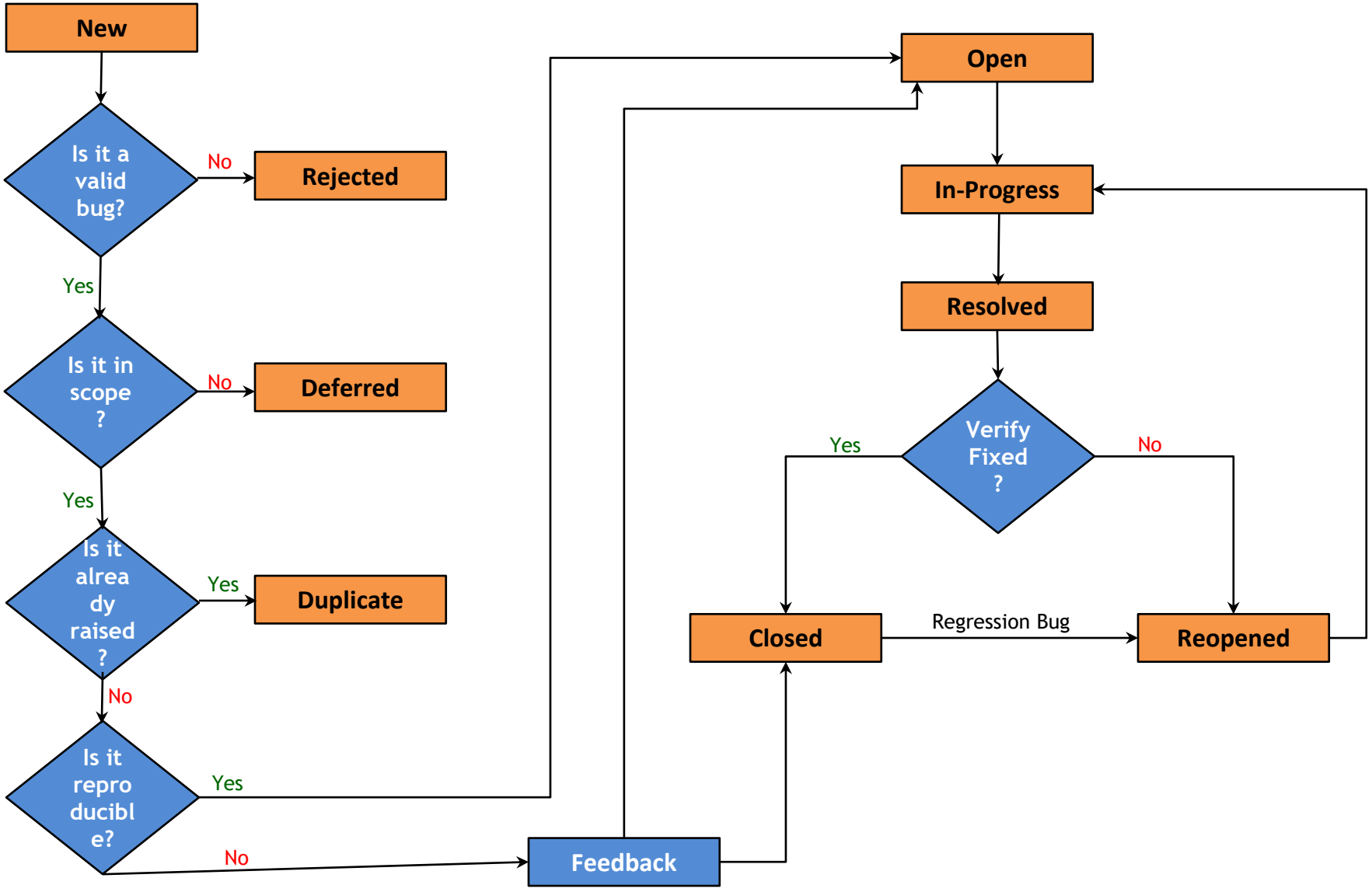
Bugs and their Impact

- Requirement review Phase
- Design Phase
- Development Phase
- Testing Phase
- On Production

Sooner the bug is detected, lesser the cost of fixing it

Bug Life Cycle

From discovery to resolution, a bug goes through a variety of stages which is called a Bug Life Cycle


New
Is it a valid bug?
No
Rejected
Yes
Is it in scope ?
No
Deferred
Yes
Is it alrea dy raised ?
Yes
Duplicate
No
Is it repro ducibl e?
Yes
No
Feedback
Open
In-Progress
Resolved
Verify Fixed ?
Yes
No
Closed
Regression Bug
Reopened

Bug Advocacy

Ways to Report a Bug..

- On a Bug Tracking System (Ex: Jira, Mantis, BugZilla)
- By demonstrating the Bug via web based demo
- By e-mail
- On a spreadsheet/Word document

Things that a Typical Bug Report contains..

- **Bug number**
- **Summary**
- **Description**
- **Steps to Reproduce**
- Priority
- **Severity**
- **Product/Component**
- Version
- Environment

- Attachments (if any)
  - ✓ Screenshots
  - ✓ Event logs
  - ✓ Crash logs
  - ✓ Video files
  - ✓ Test data
- Reporter
- Assign To
- Status
- Resolution
- Expected behavior
- Actual Behavior

Summary Line is the most important line in the bug report..

Should include the following:

- A Brief description specific enough that the reader can visualize the failure
- Ideally, should not exceed 65 characters
- A Brief indication of the limits or dependencies of the bug
- A Brief indication of the impact or consequences of the bug

Pick what is important to your report and leave the remaining to the detailed description

Description and Steps to reproduce..

- ✓ Use the description to elaborate the summary
- ✓ Make your steps to reproduce readable, even to people who are exhausted and cranky –
  - Walk though the bug one step at a time
  - Number each step
  - List the shortest set of steps that take the reader to failure
  - Don’t skip any steps that are needed to reproduce the problem

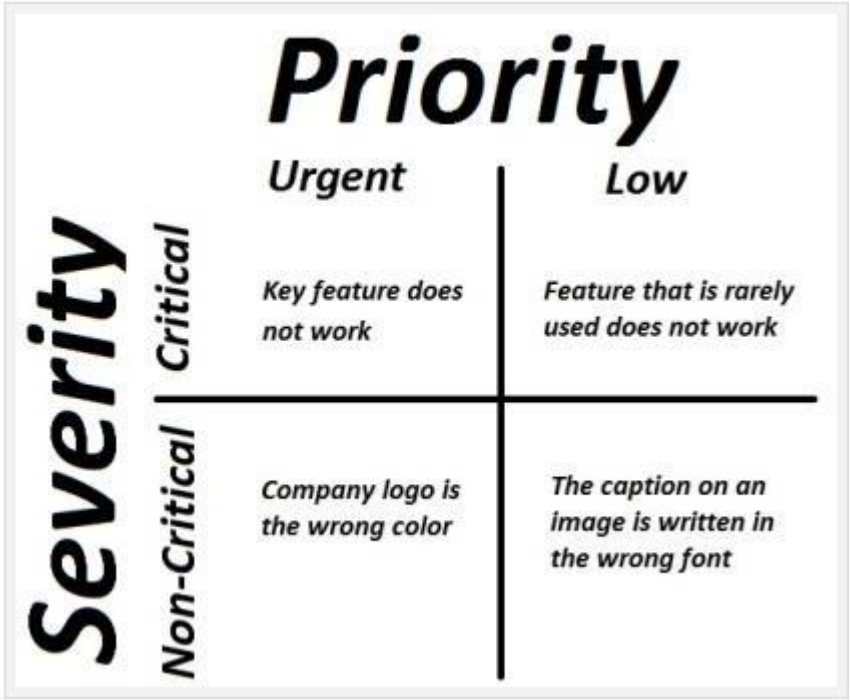
Description and Steps to reproduce (contd.)..

- Use short and simple sentences
- Use present tense
- Indicate what happened and what you expected to happen
- Include additional comments if they'll make it easier for the programmer to recognize the problem
- Don't make any jokes, they'll be misunderstood
- Include Pre-conditions, if any

Priority & Severity

Priority means how fast it has to be fixed. Ex: High, Medium, Low

Severity means how severe it is affecting the functionality. Ex: Critical, Major, Moderate, Minor, Cosmetic



Examples of Bad Bug Reports:

Example 1: Error Message

Example 2: "My browser crashed. I think I was on foo.com. My computer uses Windows. I think that this is a really bad problem and you should fix it now. By the way, your icons really suck. Nobody will use your software if you keep those ugly icons. Oh, and my grandmother's home page doesn't look right, either, it's all messed up. Good luck.“

Example 3: I just tried to save a new person record and it didn't work properly

Example 4: we unable to recive email when requested for forgot password

Before Reporting a Bug..

- Use the latest version of the application and test in Multiple environments/ machines
- Try to reproduce the bug at-least thrice
- Avoid reporting duplicate bugs
- Check the bug tracker to verify whether the bug is already reported (Open/Closed)
- Anticipate possible objections to the bug
- Make sure the application is not a prototype/private version

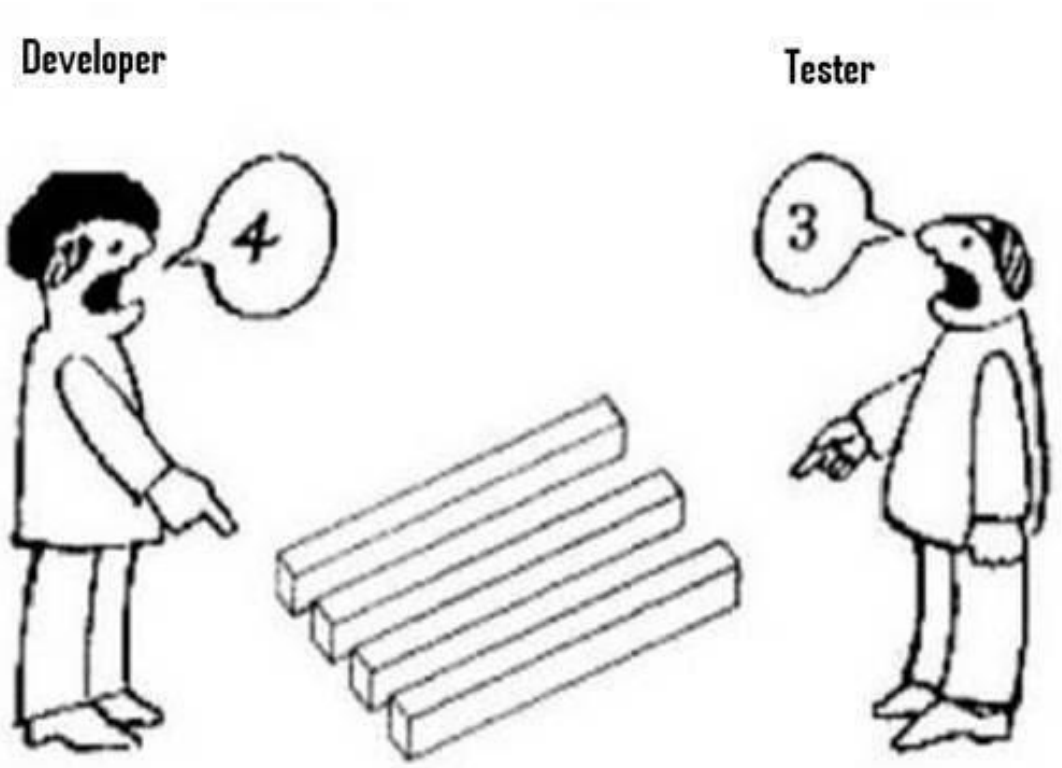
Some Guidelines for Reporting a Bug..

- Do not use ALL CAPS. .Format words in upper and lower case (mixed case)
- Never assume that an obvious bug has already been filed
- Report defects promptly
- Minor bugs are worth reporting and fixing
- Always report non-reproducible bugs
- Exercise some judgment in what you report and how to report it

Some Guidelines for Reporting a Bug (contd.)..

- Every bug deserves its own report
- Never exaggerate your bug report
- Report the problem clearly but never try to solve it
- Improve your reporting skills
- Review each other's bug reports
- Read the report once again before you hit the Submit button
- Be careful about rewording other people's bug reports

Developer unable to reproduce a bug..



I am not able to replicate this issue. It is working fine on my machine. So, Close it.

Developer

I dont care if it is working fine on your machine. We are not going to deliver your machine to client.

Tester

Developer unable to reproduce the bug(Contd.)..

- Try to reproduce and check if the bug still exists – Some times a bug fix may fix other bug
- Check your steps – Review them again/let your peer review
- Provide more information to reproduce the bug
- Provide video files
- Provide software/hardware details
- Check Time zone settings
- Attach Logs

Possible objections for Bug fixes:

- Strange and complex set of steps required to induce the failure or the programmer doesn’t understand the report.
- Unrealistic (e.g. “corner case”)
- No perceived customer impact
- A fix will introduce lot of risks in the code

After the bug is fixed…

- Make sure that the functionality is still not broken
- Test the functionality/features affected by bug fixes
- While retesting bug fixes, if you come across any incorrect behavior(when the steps to reproduce is different) then log a new bug
- Verify bug fixes promptly
- When fix fails repeatedly, try to talk directly to the programmer about the problem

Importance of Bug Advocacy..

"A bug report is a tool that you use to sell the programmer on the idea of spending his/her time and energy to fix a bug"

- ✓ You are what you write – the better your bug reports, the better is your reputation
- ✓ Your advocacy drives the repair of the bugs you report
- ✓ Your bug report is your representative

Exercise…

http://www.shino.de/parkcalc/

References…

- Lessons learned in Software testing by James Bach, Cem Kaner and Bert Pettichord
- Images from cartoontester.blogspot.com

Q & A

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