

# Software Testing

Bugs



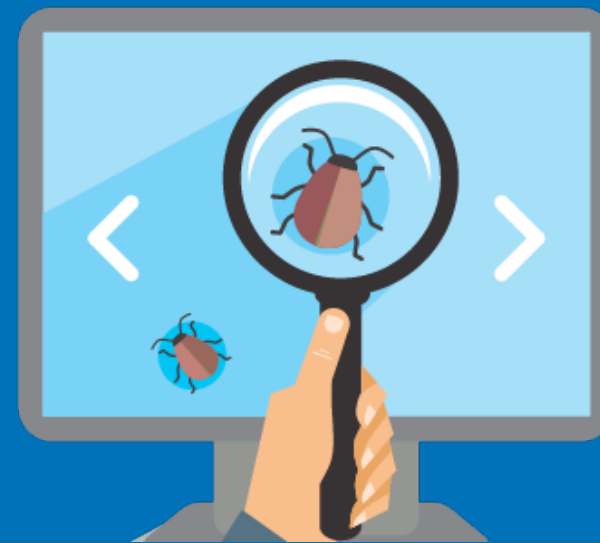
# [ Agenda ]

- What is a software bug?
- Finding and reporting bugs
- Bug tracking systems
- Bug description and attributes
- Bug lifecycle
- Reporting bugs – tips and tricks



# [ What is a software bug? ]

- **Bug/Defect** - *A flaw in a component or system that can cause the component or system to fail to perform its required function, e.g. an incorrect statement or data definition. A defect, if encountered during execution, may cause a failure of the component or system.*
- A bug is a **deviation** of an **actual result** from the **expected result**



# [ Finding and reporting bugs ]

- Purpose of testing is to identify risks and uncover problems
- Once you find a bug:
  - investigate it – where and how it occurs, how it affects the system, etc.
  - report it – with all available information and according to established procedures
  - notify stakeholders – all people that need to be aware of the problem (product owner / project manager / developer, etc.)
- Bugs are reported and managed in Bug tracking systems (BTS)



# [ Bug tracking systems ]

- Software tools that enable you to **create, store, view and modify** information about bugs
- Defect lifecycle management
- Statistics and reports
- Centralized defects database for the whole company/organization
- Various tools with bug-tracking capabilities exist – both paid and free



# [ Defect description ]

- **Summary/Name** - short information what is the problem and where it occurs
- **Steps to reproduce** - minimum actions needed to reproduce the problematic situation
- **Expected results** - how we expect the software to behave in this situation
- **Actual result** - actual behavior of the software in this situation
- **Test data** - all data related to reproduction of the defect (logs, screenshots, ids, test environment details, etc.)



# [ Defect attributes ]

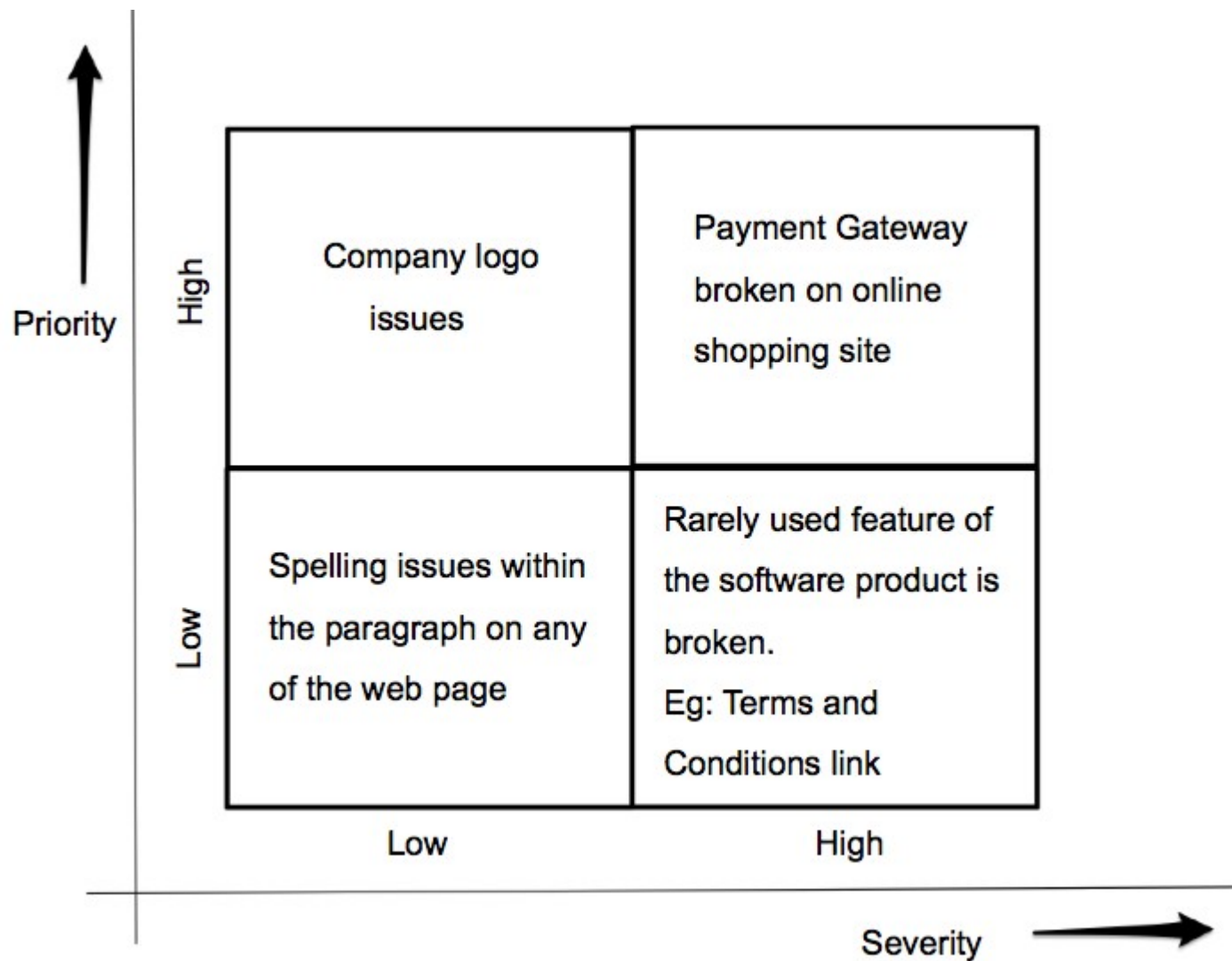
- **Severity** – defect's impact from system/technical perspective
- **Priority** – defect's impact from business perspective
- Severity (i.e. impact) is determined by the bug reporter
- Priority (i.e. importance) is determined by the PO / BA / PM
- Severity and priority may go “hand-in-hand,  
yet there may be defects with  
high priority / low severity  
and vice-versa

Impact	High
	Medium
	Low

Likelihood		
Low	Medium	High

Medium	High	Critical
Low	Medium	High
Note	Low	Medium
Severity		







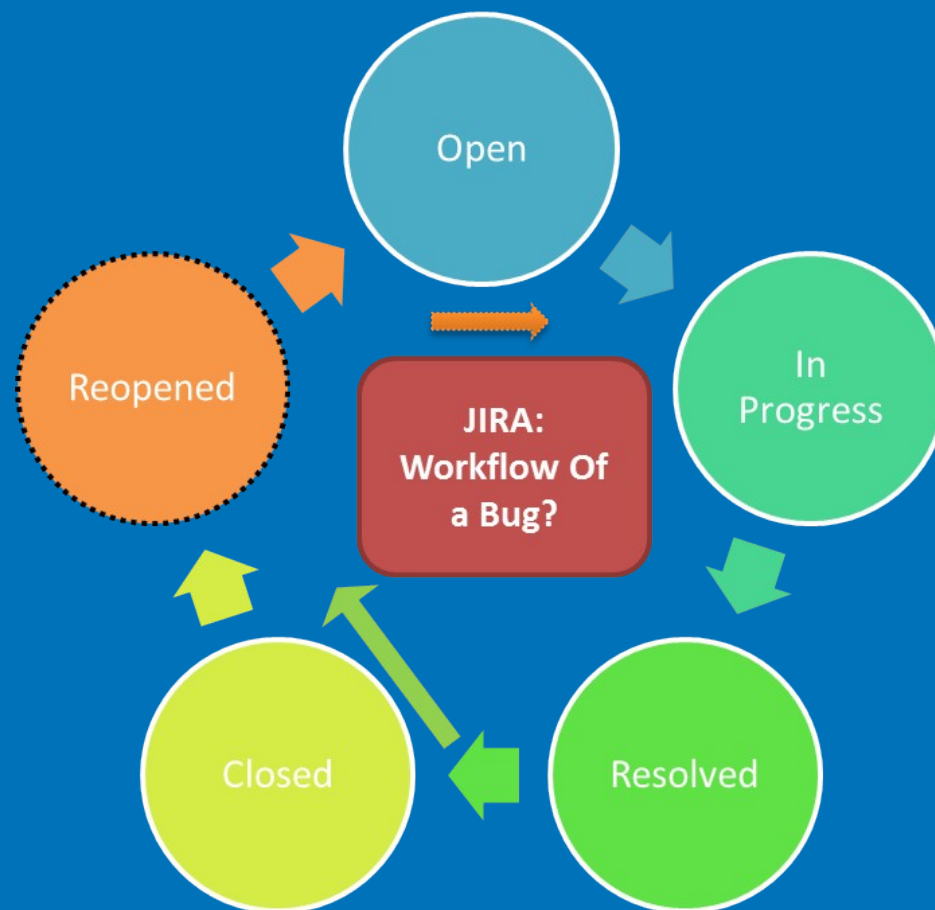
# [ Defect attributes ]

- **ID** – unique identified (automatically generated by the BTS)
- **Reporter** – person who reported the bug
- **Assignee** – person responsible for bug processing (PO / PM / Lead developer, etc.)
- **Found in build** – the build which the bug was found into
- **Affects version** – version(s) containing the defect
- **Fix version** – version the defect was / will be fixed in
- **Comments** – additional details / discussions; mandatory comment when making changes to status / priority / description
- **Status** – state of the defect (**open, in progress, resolved**, etc.)
- **Resolution** – reason for closure (**fixed, canceled, duplicate**, etc.)



# Defect life-cycle

- Once logged in the BTS, defect is prioritized (PO), fixed (developer) and re-tested (tester)
- If fix is confirmed after the validation, the defect is closed
- If problem is reproduced again, the defect is reopened
- Defect management procedure (workflow, statuses, etc.) is fully customizable and may vary from one company to another



# BUGS HAVE FEELINGS TOO

IF YOU FIND A BUG:  
REPORT IT

BUGS DON'T LIKE  
TO BE FORGOTTEN



IF YOU FIND A BUG:  
GET TO KNOW THEM

BUGS LIKE TO BE  
UNDERSTOOD



This ladybird  
has 3 spots

IF YOU FIND A BUG:  
TAKE A PHOTO

BUGS LIKE TO KEEP MEMORIES  
OF THE OCCASION



IF YOU FIND A BUG:  
GET TO KNOW THEIR MATES

BUGS ARE SOCIALITES



IF YOU FIND A BUG:  
REPORT IT QUICK

OTHERWISE BUGS SETTLE IN AND  
MAKE A HOME FOR THEM SELVES



IF YOU FIND A BUG:  
BE HONEST

BUGS DON'T LIKE  
GOSSIPS



IF YOU FIND A BUG:  
NOTE HOW YOU  
MEET THEM

BUGS ARE ROMANTICS



IF YOU FIND A BUG:  
DON'T IGNORE IT

BUGS CAN BITE IF  
NOT APPRECIATED



