

## **AGENDA**

- Bug Definition
- Bug Reporting Rules
- Bug Reporting Tips

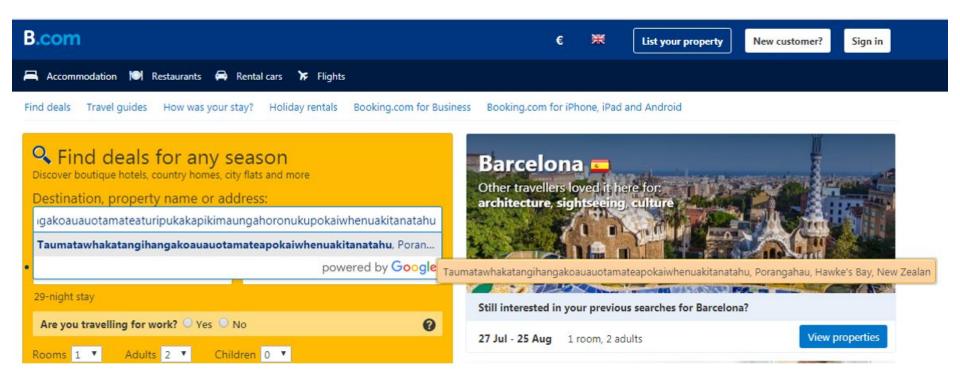
# **BUG DEFINITION**

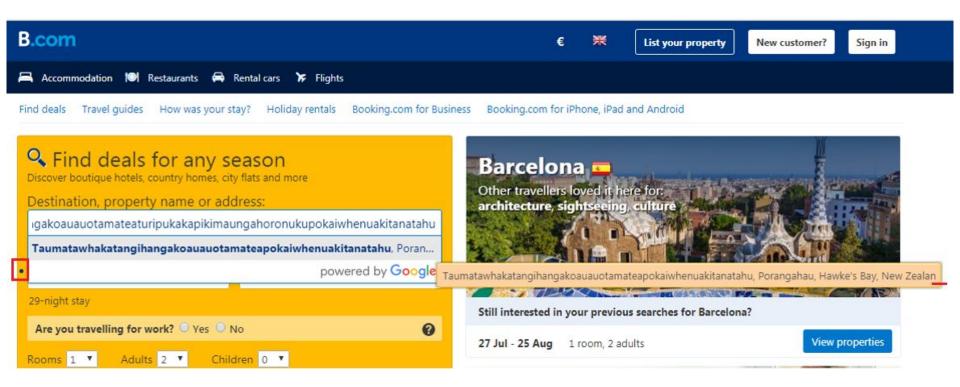
What is bug or defect?

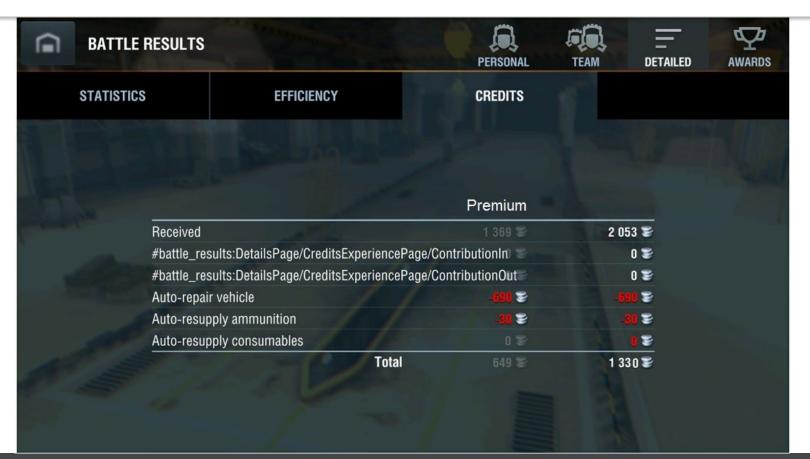
#### **BUG DEFINITION**

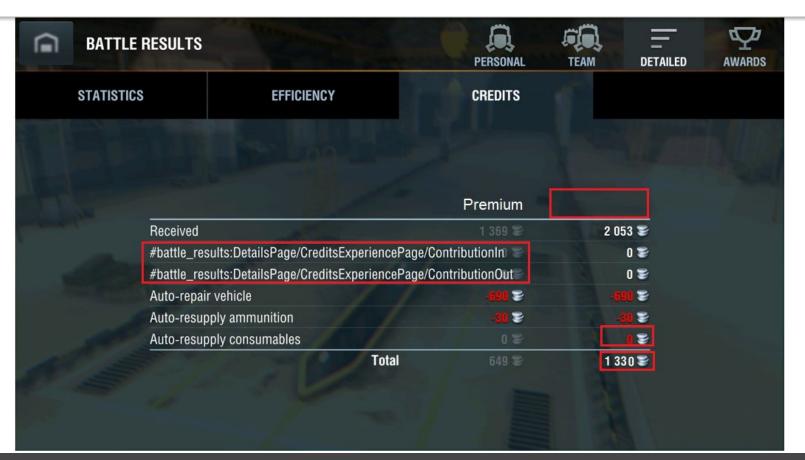
## **Bug types**

- 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.









#### **BUG REPORT**

Defect report is a technical document written to describe the symptoms of a bug to

- communicate the impact of a quality problem
- prioritize the bug for fixing
- help the programmer locate the underlying defect and fix it



## WHY DO WE NEED TO REPORT BUGS?

- 1 Do not forget to fix and retest all found issues
- 2 Measure product quality
- 3 Define risky areas/configurations/testing types/etc.

#### **BUG REPORT PROVIDES INFORMATION TO**

1 Tester

- How to reproduce?
- Why is it a bug?
- Expected result

2 Developer

- How to reproduce?
- Why is it a bug?
- What is expected result and why?

3 Customer

- How bad is the bug?
- Affected area

#### **BUG REPORT OVERVIEW**

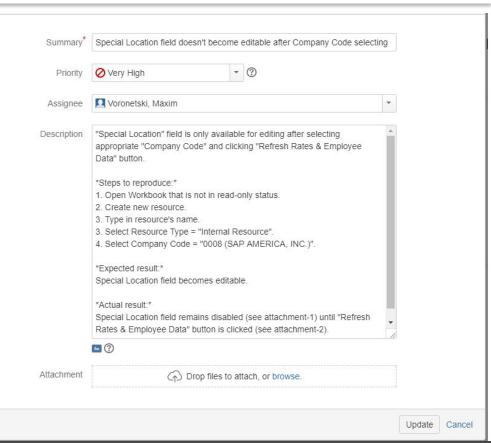
- Bug report can contains sets of mandatory and optional fields
- What fields are mandatory and what are optional and filling rules are defined on each project
- Most bug tracking system allow to configure these fields and rules



#### **BUG REPORT: MANDATORY FIELDS**

# Mandatory bug report fields:

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



## **BUG REPORT: SUMMARY**

Summary gives enough information to understand what the problem is and how you can reproduce it.

Good summary is built based on the following schema:

What - Where - When

#### **EXAMPLE OF A BAD SUMMARY:**

It's impossible to save Concept

#### **EXAMPLE OF A GOOD SUMMARY:**

It's impossible to save Concept with long description created via HTML Editor

#### **BUG REPORT: SEVERITY & PRIORITY**

Severity defines the impact that a given defect has on the system, so how bad the defect is. Priority is defined as the order in which a defect should be fixed in accordance to business value or other project/customer needs

#### **BUG REPORT: SEVERITY LEVELS**

Critical

• The failed function is unusable and there is no acceptable alternative method to achieve the required results.

Major

• The failed function is unusable but there exists an acceptable alternative method to achieve the required results.

Medium

• The defect that does not result in the termination, but causes the system to produce incorrect, incomplete or inconsistent results.

Minor

• The defect that does not result in the termination and does not damage the usability of the system and the desired results can be easily obtained by working around.

#### **BUG REPORT: PRIORITY LEVELS**

# Critical

• should be resolved immediately

High

 should be resolved as soon as possible in the normal course of development activity, before the software is released

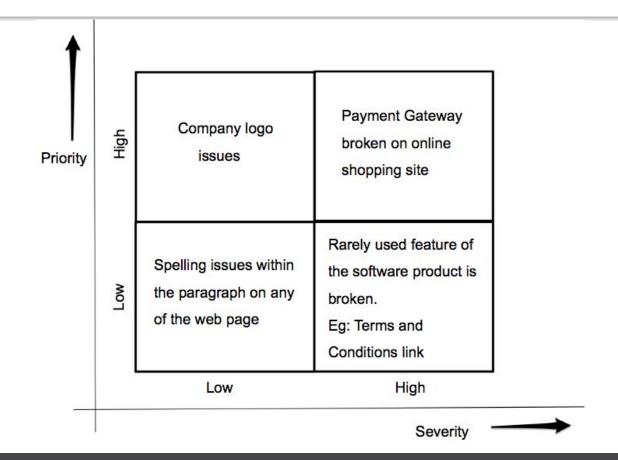
Medium

 should be repaired after serious bugs have been fixed

Low

 can be resolved in a future major system revision or not be resolved at all

#### **BUG REPORT: SEVERITY & PRIORITY EXAMPLES**



#### **BUG REPORT: DESCRIPTION**

Description gives detailed and clear interpretation of a problem, explains why it is a bug, includes the following information:

- Description of application behavior (e.g. interpretation of test failures)
- Justifications of why this is a bug
- Any relevant links
- Interpretation of the specification
- Examples from other areas

Not copy of summary!

#### **BUG REPORT: STEPS TO REPRODUCE**

#### General recommendations:

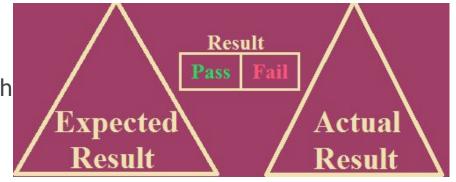
- Show the scenario how to recreate the bug on any system
- Check that steps provide clear instructions, so that others can consistently reproduce it
- Use the rule: new action = new step
- Include test data on which is reproduced
- Test your own instructions

#### **BUG REPORT: ACTUAL & EXPECTED RESULTS**

The test results, including Expected Result and Actual Result, will show what's wrong.

Actual Result describes what actually happened, what currently happens when th bug is present.

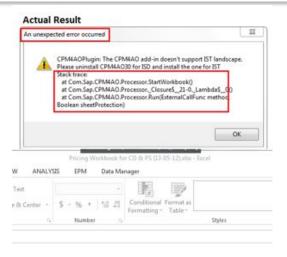
**Expected Result** describes what should happen if the bug was fixed.



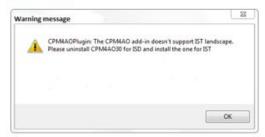
#### **BUG REPORT: ATTACHEMENT**

#### Attachment can be like:

- Pictures (screenshots)
- Files (any kind of logs)
- DB query (to get test data);
- Documents
- Video (just in case of hard reproducible bug)



#### **Expected result**



#### **OPTIONAL BUG REPORT FIELDS**

# List of the most common and useful optional fields:

- •Issue Type:
  - Regression issues/New Feature/Configuration/Integration/etc.
- •Component:
  - Functional components/areas in application, e.g. payments, user login
- •Environments:
  - QA, DEV, UAT, PROD
- Found Version
- •Fix Version
- Labels
- •

#### **BUG REPORT: A GOOD DEFFECT EXAMPLE**

Special Location field doesn't become editable after selecting Company Code Summary

Major Severity

High Priority

"Special Location" field is only available for editing after selecting Steps to reproduce appropriate "Company Code" and clicking "Refresh Rates & Employee Data"

button

1. Open Workbook that is not in read-only status

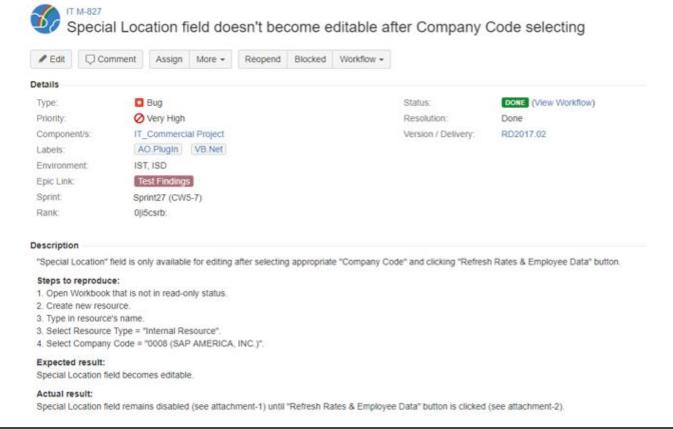
- 2. Create new resource
- 3. Type in resource's name
- 4. Select one of Resource Type, for example "Internal Resource"
- 5. Select appropriate Company Code, "0008" for our example

Special Location field becomes editable

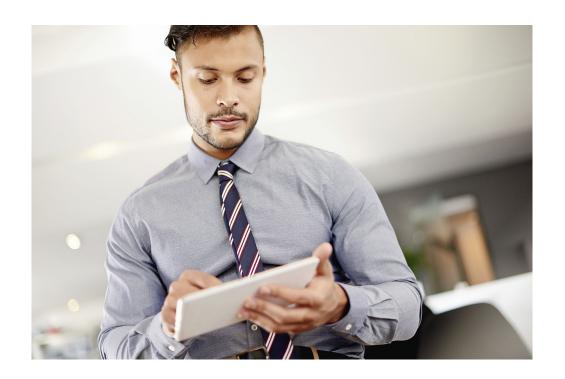
Special Location field remains disable (see attachment-1) until "Refresh **Actual Results** Rates & Employee Data" button is clicked (see attachment-2)

**Expected Results** 

#### **BUG REPORT: A GOOD DEFFECT EXAMPLE**



# **BUG REPORT: HINTS AND TIPS**



# Bad bug report is a bug report that duplicates already existing bugs

T	P	Key	Summary
*	0	QP-3108	[Quality\Checksheet] Error on opening "Failure Mode" picker
*	1	QP-1602	Checksheets: 'Failure Mode Picker List' picker opening causing the exception
*	×	CR-1827	Checksheets - Failure Mode Picker Error

Bad bug report is a bug report that contains just opinions or complaints

# Examples:

- It doesn't work!
- My computer crashed!
- •

Bad bug report is a bug report that doesn't clearly specify the problem

# Heat map view highlighting is not correct

#### Description

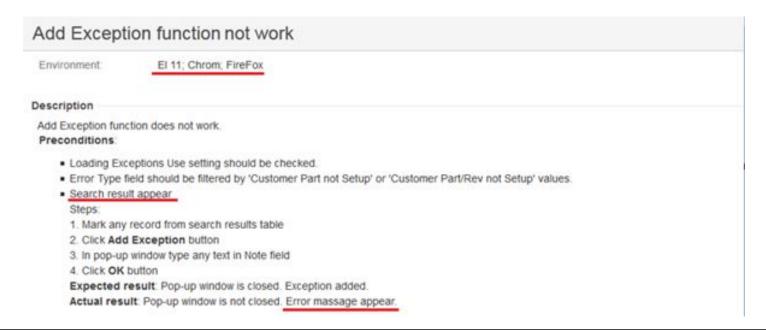
- 1. log in
- 2. switch to Heat Map
- 3. hover over a customer (or different customers)

Actual result: higlighting is not correct

Expected result: higlighting must be correct

no any information about problem source anywhere

Bad bug report is a bug report that contains grammar or spelling mistakes, or written using not appropriate language

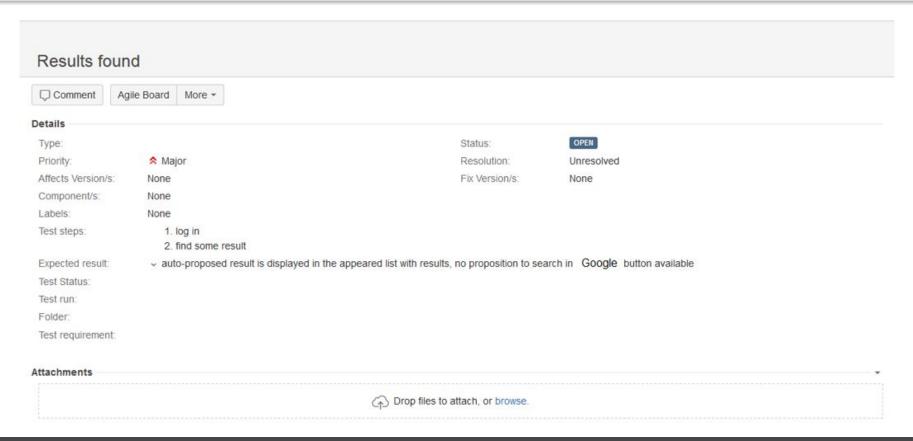


Bad bug report is a bug report that contains several issues

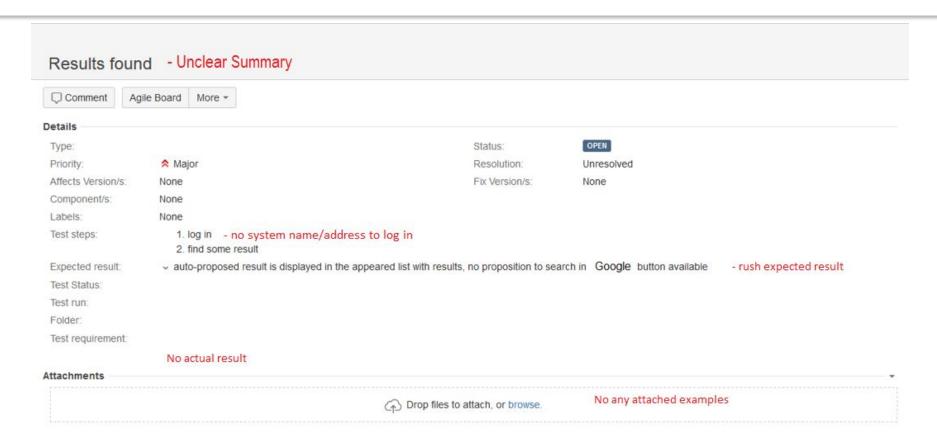
Exception! Many UI issues on 1 page - can be reported in one bug report



#### **BUG REPORT: PRACTICE**



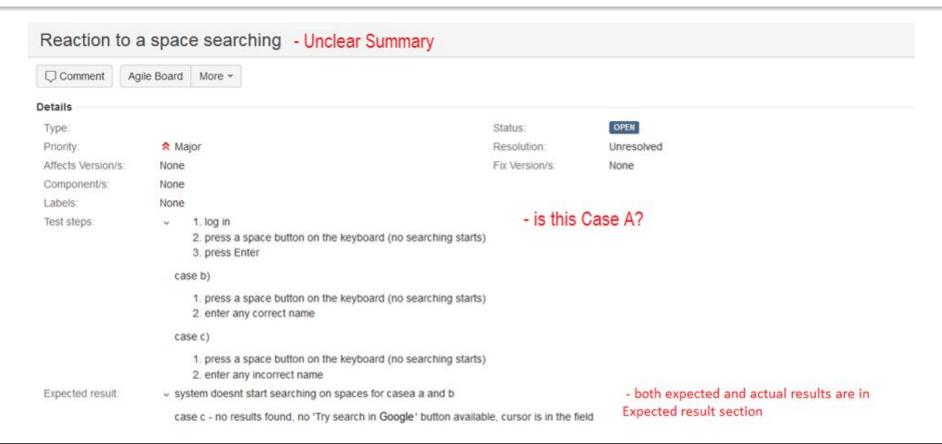
#### **BUG REPORT: A BAD DEFECT EXAMPLE**



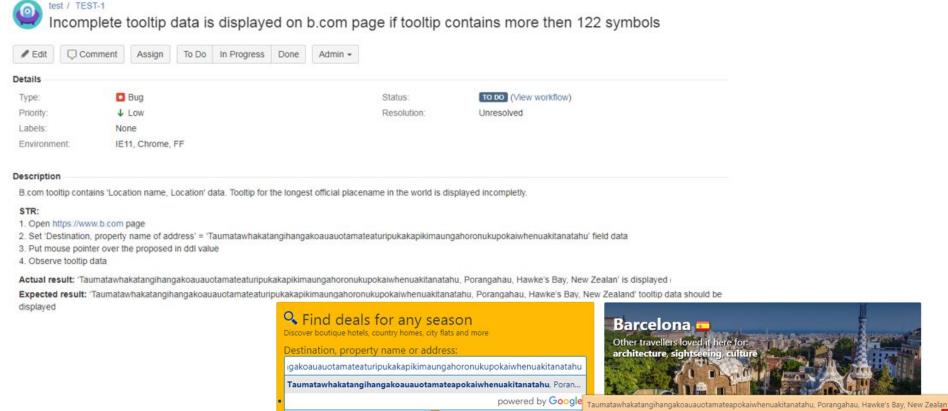
#### **BUG REPORT: PRACTICE**

#### Reaction to a space searching Agile Board More + Comment . Details OPEN Type: Status: Major Priority: Resolution: Unresolved Affects Version/s: Fix Version/s: None None Component/s: None Labels: None Test steps: 1. log in 2. press a space button on the keyboard (no searching starts) 3. press Enter case b) 1. press a space button on the keyboard (no searching starts) 2. enter any correct name case c) 1. press a space button on the keyboard (no searching starts) 2. enter any incorrect name system doesnt start searching on spaces for casea a and b Expected result: case c - no results found, no 'Try search in Google' button available, cursor is in the field

#### **BUG REPORT: A BAD DEFECT EXAMPLE**



#### **BUG REPORT: A GOOD DEFECT EXAMPLE**



#### **BUG REPORT: A GOOD DEFECT EXAMPLE**



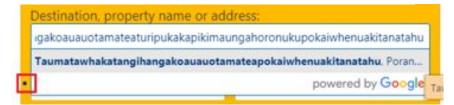
test / TEST-2

Bullet marked 'powered by Google' value is displayed if 'Destination' field data is from Google Places API Web Service

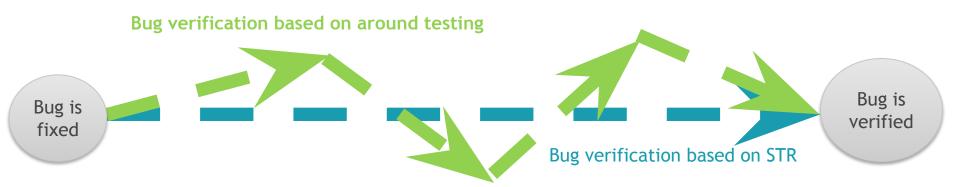


Actual result: Bullet mark is displayed for 'powered by Google' value (please see 'Bullet.png' for more details)

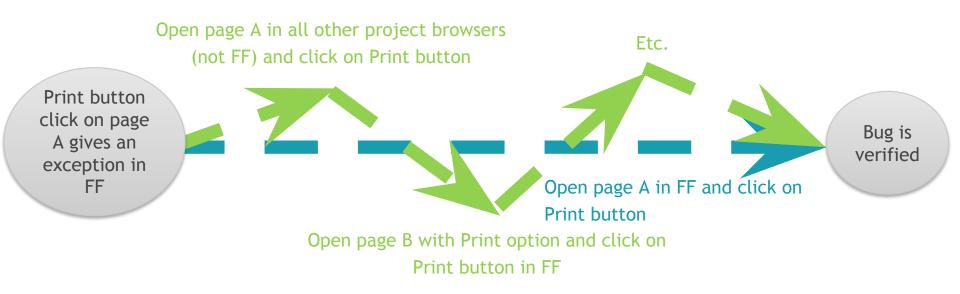
Expected result: no any marks/signs are displayed



# **BUG VERIFICATION**



#### **BUG VERIFICATION EXAMPLE**



#### **BUG VERIFICATION: GENERAL RECOMMENDATIONS**

The following steps could assist you with bug verification:

- Verify that you test appropriate build with bug fix
- Insure that the bug is not reproduced on each environments that specified in bug report
- Set a comment about data that was used for bug verification
- Make screenshot that shows that bug is fixed
- Set bug to appropriate status

