# DataArt

Introduction of Quality Assurance

## Testing in a nutshell



#### Competencies:

- Guarantee quality of a product
- Finding defects (bugs)
- Preventing bugs
- Work with docs

## Couple of words about documentation



- 1. Test cases;
- 2. Test plan;
- 3. Check list;
- 4. Test suite;
- 5. Bug reports.

#### Test plan



Test plan – main document for application testing. It describes testing strategy and testing approaches. It contains following:

- •Title, author, version control, history of changes
- Table of contents
- •Introduction. Short description of application and requirements
- •Functionality that will be and that will not be tested
- Types of testing
- Testing documents
- •Hardware, software and tools
- •Entry and exit criteria
- •Suspension criteria and resumption requirements
- •Responsible people
- Schedule and risks
- Approvals
- Appendixes

#### Some facts about test cases



- Test cases can be based on requirements (specifications, communication with customer, mails) or existent functionality
- Used for requirements coverage, providing more quality for less time
- The source for reporting and QA
- Usually automated test scripts base on test cases
- Allows to organize team work

#### New test case. What to start with?



- 1. Learn requirements and pick out all possible cases including negative cases
- 2. Check the genuineness of the test case
- 3. Test case should describe an atomic independent functionality
- 4. Don't use passive voice; Test cases should not contain tough language and be ambiguous
- 5. Avoid using redundant steps
- 6. Review your test cases

#### New test case. Let's focus on attributes



- 1. Unique ID.
- 2. Author
- 3. Revision history
- 4. Priority (critical, major, minor, trivial)
- 5. Description
- 6. Preconditions, steps and expected result
- 7. Post conditions
- 8. Comments, related requirements and bugs

#### New test case. Let's focus on attributes



Γitle *							
test1							×
Section *		Template *		Type *		Priority *	
Create a deal	~	Test Case (Text)	~	Functional	~	Must	~
Estimate		References	?	Automation ID			
reconditions							
reconditions							
reconditions							
reconditions							
reconditions			=				
	Reference other test ca	ases with [C#] (e.g. [C17]).	=				
The preconditions of this test case.	Reference other test ca	ases with [C#] (e.g. [C17]).	=				
he preconditions of this test case.	Reference other test ca	ases with [C#] (e.g. [C17]).	=				
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The preconditions of this test case.		ases with [C#] (e.g. [C17]).					

## Test suite. Briefly



Test suite – batch of test cases, which check certain functionality. For example:

- 1. User registration
- 2. Sending messages
- 3. Removing account

# Test suite. Example



					Build	1.0.	2.0.
					Test type	AT	AT
					Test date	10.03.2015-12.03.2015	25.03.2015-27.03.2019
					Tester		
					Project Environment	some test by	some test by
					Operating System	Win 7 x 64	Win 7 x 64
					Browser	IE9	IE9
100 TO 10	111		Project Information			Test Cases Statistics	Test Cases Statistics
Project name	Some project name					Status	Status
Project URL	some.url.com					Passed	Passed
Component	Major functionality					Partially tested	Partially tested
unctionality	Authorization, Registration	n, Profile				Trivial	Trivial
						Minor	Minor
						Major	Major
						Critical	Critical
						Blocker	Blocker
						Blocked	Blocked
						Not available	Not available
						Not implemented	Not implemented
						Not tested	Not tested
						Total cases	Total cases
Testcase ID	Module	Test type	Testcase header	Steps description	Expected Result	Status	Status
luthorization							
1	Authorization	AT	Checking "Forgot password?" link	1. Go to "XX" page. 2. Press "XX" button. 3. Click "Forget password?" link.	Opens form for inputting E-mail address.	Passed	Passed
2	Authorization	AT	Checking logging	1. Go to "XX" page. 2. Enter E-mail "XXXX@XXXXX". 3. Enter password: "XXXXXXX". 4. Press button "log in".	Opens main page. User logged in. Displayed link to profile and user name.	Major	Major
3	Authorization	AT	Logging out	Press on user's menu (top right).     Click on the link "log out".	User logged out. Displayed main page, user not logged in.	Major	Major
4	Authorization	AT	Sending message	1. Go to "XX" page. 2. Enter E-mail "XXXX@XXX.XXX". 3. Enter password: "XXXXXXXX". 4. Press button "log in". 5. Go to user's profile (click on user's name). 6. Press button "Send message". 7. Write text "XXXXX" in summary. 8. Write text "YYYYY" in body. 9. Enter E-mail: "ZZZZZ". 10. Press the button "Send".	Message send. Notification "Message send!" appears.	Critical	Critical

#### Check-list. Main purposes



Check-list – list of attributes, applications, characteristics and checks themselves, need for testing.

Mainly used for internal needs. Also:

- 1. Allows tester not to forget to check something;
- Expand test coverage;
- 3. Reduce testing costs;
- 4. Test control.

#### Check-list as it is



	Файл Правка Вид Вставка Формат Да	нные Инструменты Дополнения Справка Все изменения на Диске сохранены		Коммента
	⊕ ເ ~ ₹ \$ % .0 .00 123 - Arial	- 10 - B I - A - A - B - E - 1 - D - G - E - Py	*	
fx				
	A	В	С	D
1	User Story	Actions	Status	Comments
2	GES3301 - Public site is accessible at bootypirates.com	Possible to go to our site from bootypirates.com	Pass	*
3		2. The site is secured using HTTPS (ex: on Chrome I see 'https' in green)	Pass	*
į.		3. Correct favicon is displayed on the browser tag (location can be different in different browsers)	Pass	
		4. SSL certificate is shown property. You can verify it hover the mouser over the lock icon in address line	Pass	-
6		<ul> <li>5. Appropriate page title is shown in the browser.</li> <li>Note for testing:</li> <li>1. You can verify it hover the mouser over the browser tag.</li> <li>2. Go to any page and check that title is shown properly in console.</li> </ul>	Pass	
		6. The new add funds page has the 'Booty Pirates' logo (which was initially removed)	Pass	( <del>*</del>
5		7. Facebook icon on the site points to the BootyPirates Facebook page	Pass	· +
9		8. Twitter icon on the site points to the BootyPirates Twitter URL	Pass	*
10		9. Norton Logo is not shown anywhere on the site:  - Registration panel  - Enter Payment Details Panel  - Add Funds Panel  - Default Footer across all games  - Footer across all Map Pages  - Footer across all CMS Pages  Don't forget to verify on mobile application.	Fail	#54546
11				
2	GES3303 - Hide Facebook and Twitter share links throughout the application	Facebook and Twitter share links aren't shown on the following pages:  1. My Account -> Refferals -> Option 1.  2. Treasure Hunt -> Hybrid Game -> Info bubble for winning square	Pass	
3	7.77			
4	GES3304 - Users coming to geolotto.com directly are redirected to the GeoLotto home page on bootypirates.com	Coming to https://geolotto.com/ will be redirected to https://bootypirates.com/geolotto/home	Pass	*
5		2. Coming to any other page via geolotto.com domain will be redirected to the same page on bootypirates.com domain	Pass	-
6		3. Coming to mobile application via geolotto.com/m will be redirected go mobile site on bootypirates.com domain	Pass	Y

#### One more thing. Bugs.

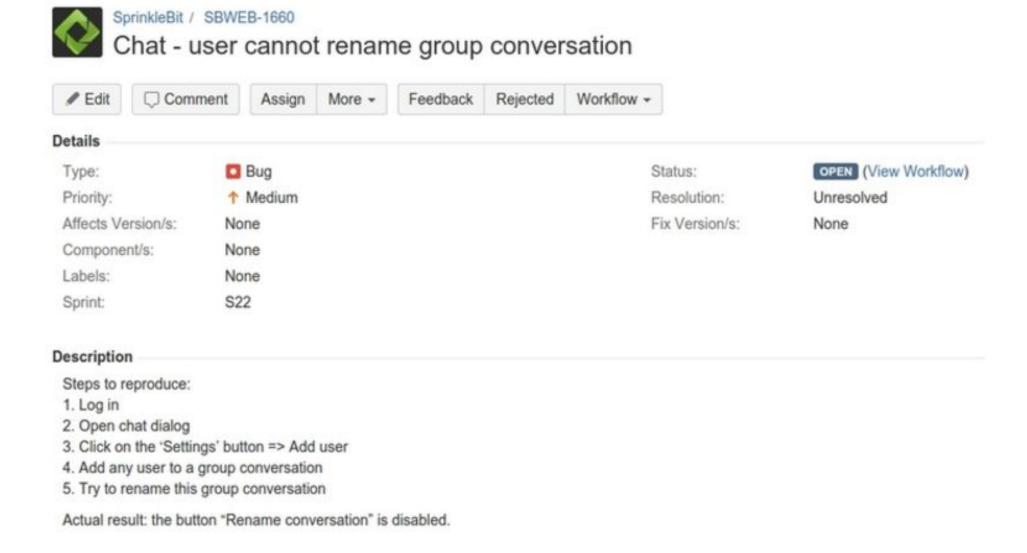


Bug is nothing else but program flaw, in other words – defect in software. It can be found while testing software application or product, and usually means difference between expected and actual behavior.

As a rule, such defects show up as a result of error in logic or in coding and result into the failure on unpredicted behavior.

## Bug's example





#### Bug reports



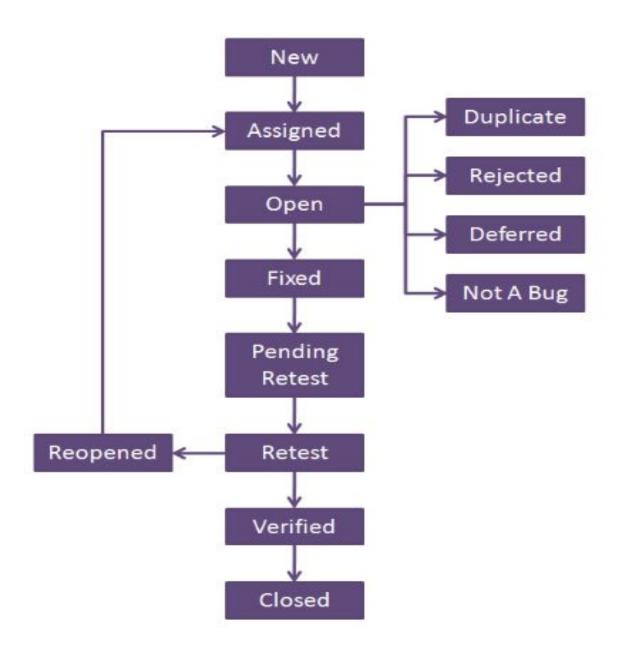
Each bug should be conveyed to the developer. Thus, bug should be reported in a appropriate way. That's why we need documents called Bug Reports.

They should contain following:

- 1. Defect ID bug's unique number;
- Defect description the summary of the issue;
- 3. Product version determines version of a product in which defect is found;
- 4. Steps to reproduce includes steps for recreating. Also should contain description for expected and actual results, basing on evidences like screenshots or video recording;
- 5. Date raised date of bug reporting;
- 6. Status New, Assigned, Open, Retest, Verification, Closed, Failed;
- 7. Fixed by This field includes the details of the developer who fixed the defect;
- 8. Severity means an impact of the bug on a system (Critical, Major, Minor);
- 9. Priority determines the sequence, in which bug will be fixed (Low, Medium, High).

# Bug's lifecycle





## Bug's lifecycle



- 1. Finding defect. Status New
- 2. Dev team with Project Manager decides whether defect is valid. If not status Rejected
- 3. If the defect is not rejected then the next step is to check whether it is in scope. Suppose we have another function- email functionality for the same application, and you find a problem with that. But it is not a part of the current release then such defects are assigned as a **postponed or deferred** status.
- 4. Then manager verifies, if such was earlier. If yes status 'Duplicate'
- 5. If bug is new, bug is assigned to the developer, who starts fixing it. Status 'In Progress'
- 6. After fixing of bug it's status is set to 'Fixed'
- 7. After this tester starts verifying whether bug is fixed indeed. If such, bug is 'Closed'. Otherwise, it's 'Re-opened' and re-assigned to a developer

