



Test Cases and Bugs Lifecycle

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Test Cases Overview

A **test case** is a document that contains a set of test data, preconditions, expected results, postconditions, and is developed for a particular test scenario to verify compliance against a specific requirement



Test Case Parameters:

- Test Scenario
- Test Description
- Test Steps
- Preconditions
- Test Data
- Expected Result
- Priority
- Environment Information

Example Test Case

TEST NAME	DESCRIPTION	Precondition	Test Data	Priority	Expected Result	Tester	Comment
User Login	Description: User can log into portal with correct email Steps: 1- Open the website and direct to login page 2- Enter correct username and click login button	User should be created before test	softwaretesting masterclass	High	User can successfully login to portal	Paul	

Example of a Test Case for a Mobile App: Consider a mobile banking app with a login screen. A test case for the "Login" functionality might look like this:

Test Case ID	TC001
Description	Verify login functionality with valid credentials
Precondition	User must have a registered account
Test Data	Username: user123, Password: pass123
Steps to Execute	<ol style="list-style-type: none">1. Open the mobile app2. Navigate to the login screen3. Enter the username: user1234. Enter the password: pass1235. Click on the "Login" button
Expected Result	The user is successfully logged in and directed to the home screen.
Actual Result	(Filled during testing)
Pass/Fail	(Filled during testing)

What is a test scenario?

- A **test scenario** is a high-level concept that describes what needs to be tested. It's a broader outline of the functionality or feature under test without going into detailed steps. Test scenarios are generally used to cover multiple conditions that a feature must meet and can lead to multiple test cases.
- **Key Characteristics of a Test Scenario:**
 - High-level, focused on "what to test"
 - Describes functionality without specific steps
 - Can map to multiple test cases

Example of a Test Scenario for a Mobile App: For the same mobile banking app, a test scenario for the "Login" functionality might be:

Test Scenario ID	TS001
Description	Verify the login functionality of the mobile banking app

From this test scenario, we can derive multiple test cases, such as:

- **Test Case 1:** Verify login with valid credentials.
- **Test Case 2:** Verify login with invalid credentials.
- **Test Case 3:** Verify login with blank fields.
- **Test Case 4:** Verify login with the "Forgot Password" option.

Checklists: Less documentation

Checklist Description
User can log in to application
User can log out from the application
User can access to "Money Transfer" screen
User can transfer money to foreign accounts

- Less formal
- Less documentation
- Only recommended at certain conditions.

Test cases vs Checklists

When is it better to choose writing "Test Cases"?

- You work in a larger team, making it hard to track other people.
- You work with inexperienced colleagues.
- Places where direct communication does not exist.

When is it better to use "Checklists"?

- You work in a small team.
- The entire team has a good knowledge of the product.
- You work in a collaborative environment.
- Comprehensive products are not available.

Software Bugs

A bug is an issue related to software. If something on a website or application is not working as it should, it's referred to as a bug.

. There are several types of bugs that can occur in a software project

Visual bugs, Functional bugs, and Performance issues

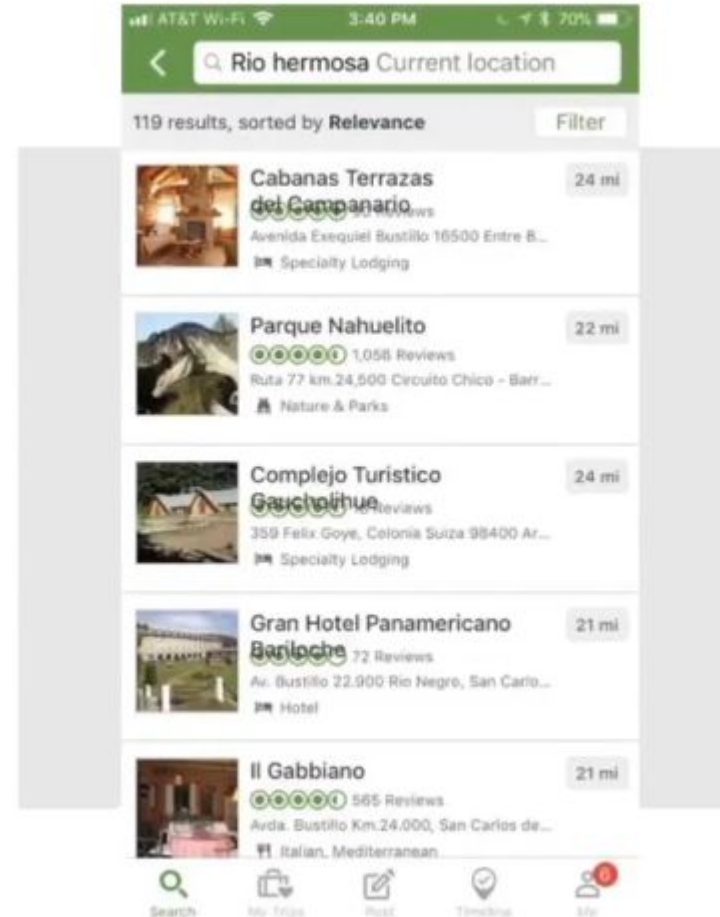


Visual Bugs

Issues related to the appearance of the software, such as truncated images, misaligned pages, or incorrect button borders

They affect the user experience and should be addressed promptly.

Can be low severity, but high priority!



Functional & Performance Bugs

Functional bugs:

- Related to the software's functionality
- It can be a major problem
- Should be fixed as soon as possible

Performance Issues:

- Critical aspect of software
- Mostly performed by software engineers / performance engineers.
- Test Engineers should detect major performance problems.

Can be high severity and high priority

Bug Reporting

How to write a bug report ?

- The most commonly used reporting portal is Atlassian's "Jira"
- A bug report should be self-explanatory and as simple as possible
- It's essential to provide clear and concise information



Associated test case

Description
of the
problem

Steps to
reproduce

Screenshots
or error
messages

Example

Marker / MAR-131
[Pricing] - Update the price to \$29 ← **Title / Summary**

Edit Comment Assign To Do In Progress Workflow Admin

Details

Type: Bug Status: **TO DO** (View workflow)
Priority: High ↑ Resolution: Unresolved
Labels: None
Environment: — Browser Chrome 54.0.2840.71 Screen Size 1920 x 1200 Viewport Size 1607 x 920 Zoom L...

People

Assignee: gary
Assign to me
Reporter: Christophe Han
Votes: 0
Watchers: 1 Stop watching th

Dates

Created: 1 minute ago
Updated: 1 minute ago

Agile

View on Board

HipChat discussions

Do you want to discuss this issue? Connect
Connect Dismiss

Description

Summary:
The price mentioned on the pricing page is not correct

Steps to Reproduce:
Go to the pricing page

Expected Results
The price for the basic plan should be \$29

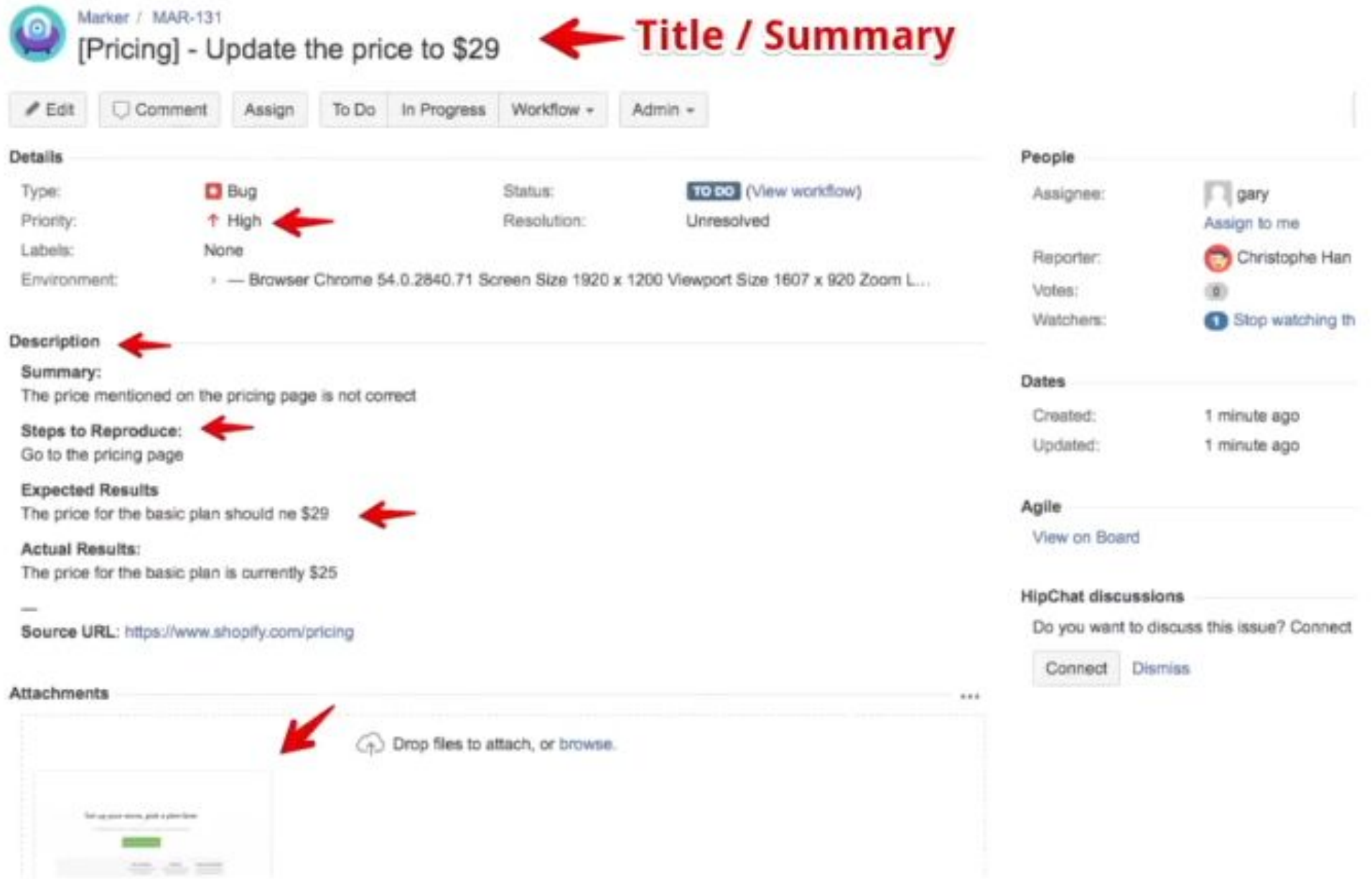
Actual Results:
The price for the basic plan is currently \$25

—

Source URL: <https://www.shopify.com/pricing>

Attachments

Drop files to attach, or browse.



Example 2

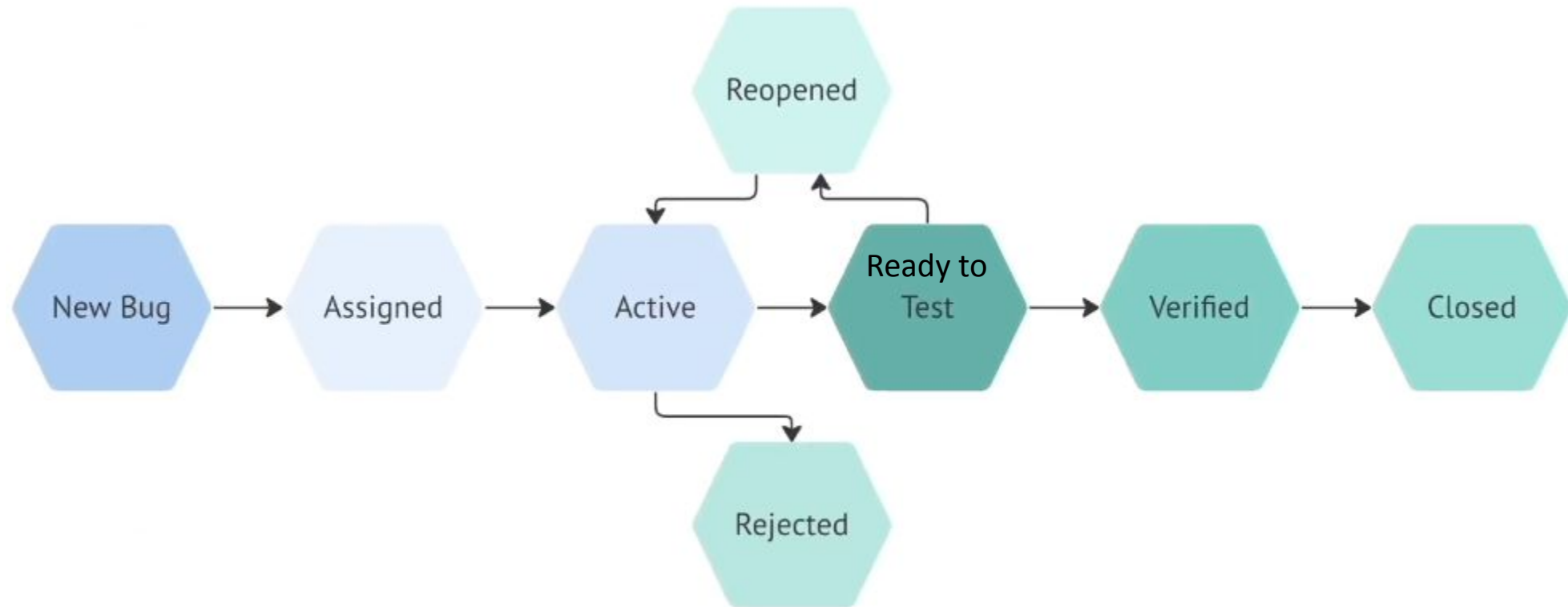
The screenshot shows an Excel spreadsheet titled "TestCase-Checklist-Bug-Template". The spreadsheet contains a table with the following data:

	A	B	C	D	E	F	G	H	I
1	Bug Title	Bug Priority	Description	Attachments					
	Images on web-application-testing page has alignment issues	Medium	<p>Summary: web application testing page has alignment issues</p> <p>Steps to Reproduce</p> <ol style="list-style-type: none">1- Direct to softwaretestingmasterclass.com/web-application-testing2- Observe the image borders <p>Expected Results: All the images aligns perfectly</p> <p>Actual Results: Images on web-application-testing page has alignment issues</p>						
2	404 error code appears when user try to reach testtypes page	Critical	<p>Summary: 404 error appears when I open the testtypes page</p> <p>Steps to Reproduce</p> <ol style="list-style-type: none">1- Direct to https://softwaretestingmasterclass.com/testtypes2- Observe the error <p>Expected Results: User can reach /testtypes page</p> <p>Actual Results: 404 error code appears when user try to reach testtypes page</p>						
3									
4									
5									
6									
7									

Bug Lifecycle

The bug life cycle is a process that a defect goes through during its lifetime. It starts when a bug is found and ends when it is closed after ensuring it won't be reproduced anymore.

Bug Lifecycle States



Example in Jira

Bug Reporting

The screenshot displays a Jira Team Scrum Board for 'Sprint 3'. The board is organized into four columns: 'To Do', 'In Progress', 'In Review', and 'Done'. Each column contains several bug reports (issues) with their IDs, titles, and assigners. The 'In Review' column has a yellow background, and the 'Done' column has a green background. The top navigation bar includes 'JIRA', 'Dashboards', 'Projects', 'Issues', 'Agile', 'More', 'Create Issue', and a 'Quick Search' field. The board title is 'Team Scrum Board', and the current sprint is 'Sprint 3'. Quick filters include 'Product', 'UI', 'Server', 'Only My Issues', and 'Recently Updated'. The board also shows 'Plan', 'Work', 'Report', and 'Board' tabs.

Column	Issue ID	Issue Title	Assigner
To Do	TIS-28	Research options to travel to Pluto	[Assigner]
	TIS-8	Requesting available flights is now taking > 5 seconds	[Assigner]
In Progress	TIS-27	Add Phobos and Deimos Tours as a Preferred Travel Partner	[Assigner]
	TIS-10	Bad JSON data coming back from hotel API	[Assigner]
	TIS-25	Engage Jupiter Express for outer solar system travel	[Assigner]
In Review	TIS-58	Add feedback button to the plugin sample code	[Assigner]
	TIS-45	Email non registered users to sign up with Teams In Space	[Assigner]
Done	TIS-9	After 100,000 requests the SeeSpaceEZ server dies	[Assigner]
	TIS-16	Establish relationship with local office supplies company	[Assigner]
	TIS-7	500 Error when requesting a reservation	[Assigner]
	TIS-11	Register with the Mars Ministry of Labor	[Assigner]