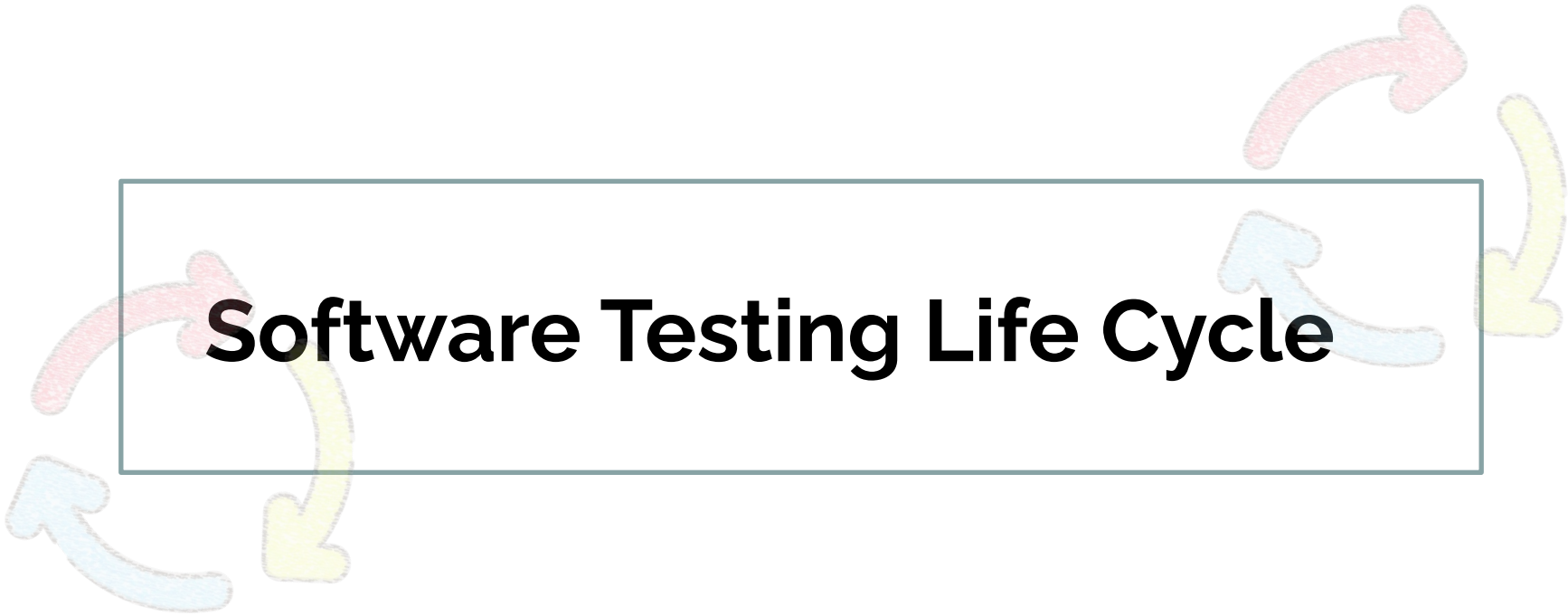

Software Testing Life Cycle

Today's Agenda

- **Remote Ice Breaker**
- **STLC Model**
- **STLC vs SDLC**
- **Test process**
  - Test Analysis
  - Test Planning
  - Test Design
  - Test Implementation
  - Test Execution
  - Test Completion
- **Remote Activity**

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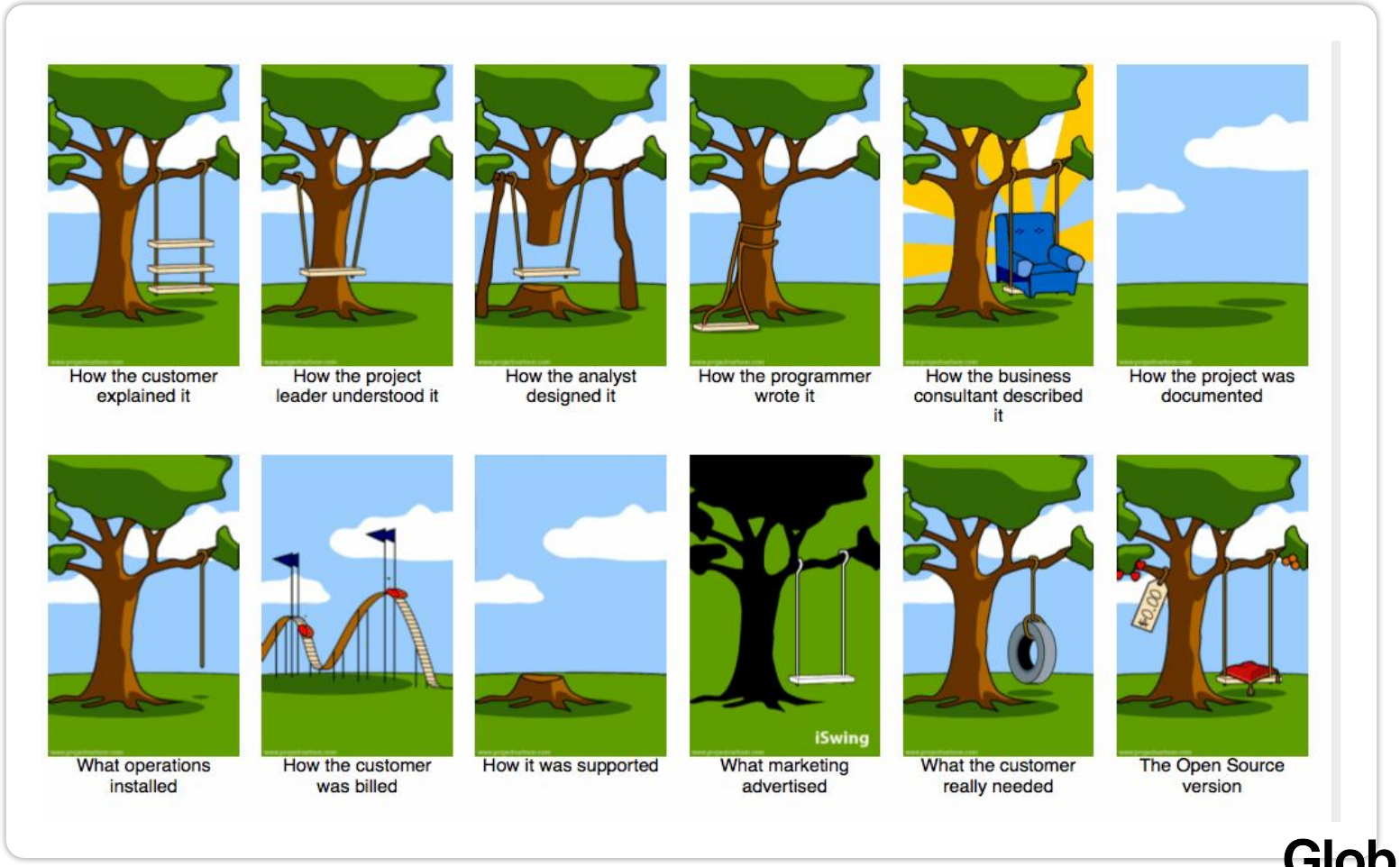
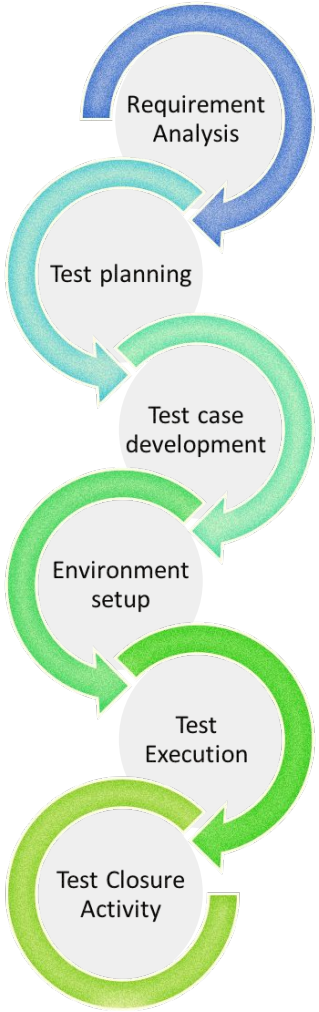
Remote Ice Breaker

What do you think about this?



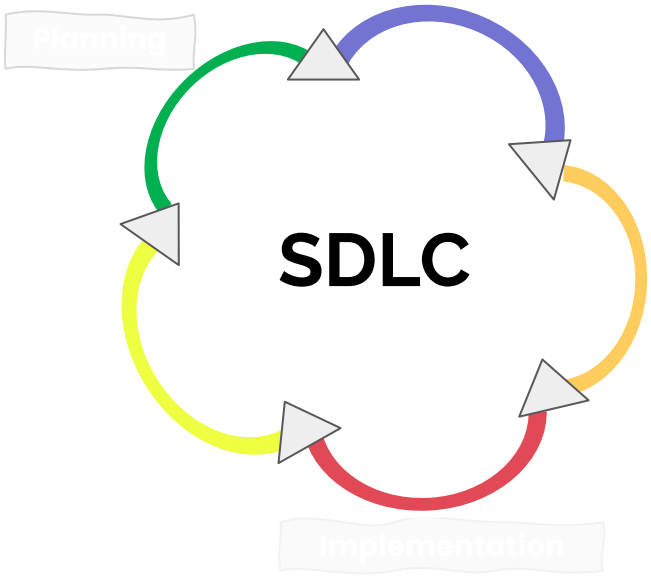


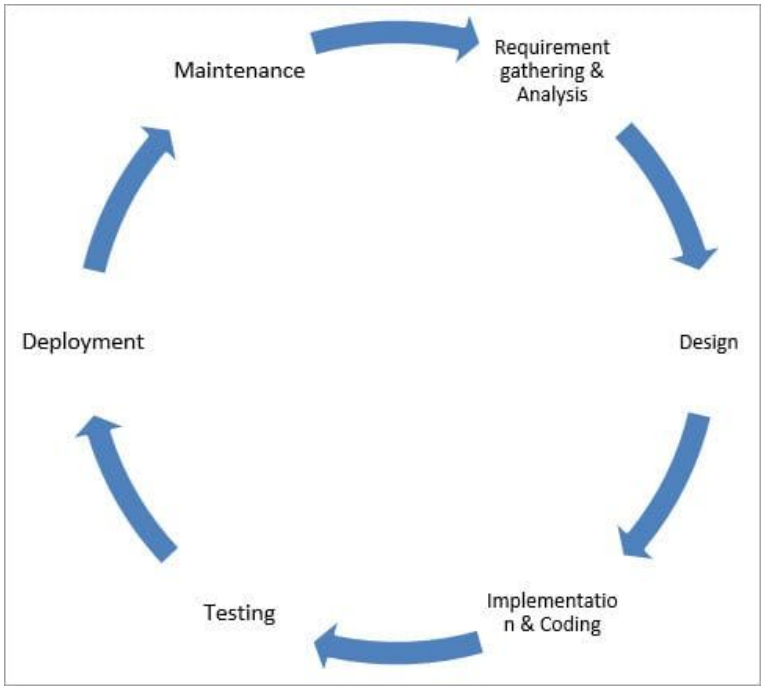
STLC Model

SoftwareTestingLifeCycle

STLC vs SDLC

STLC cross SDLC





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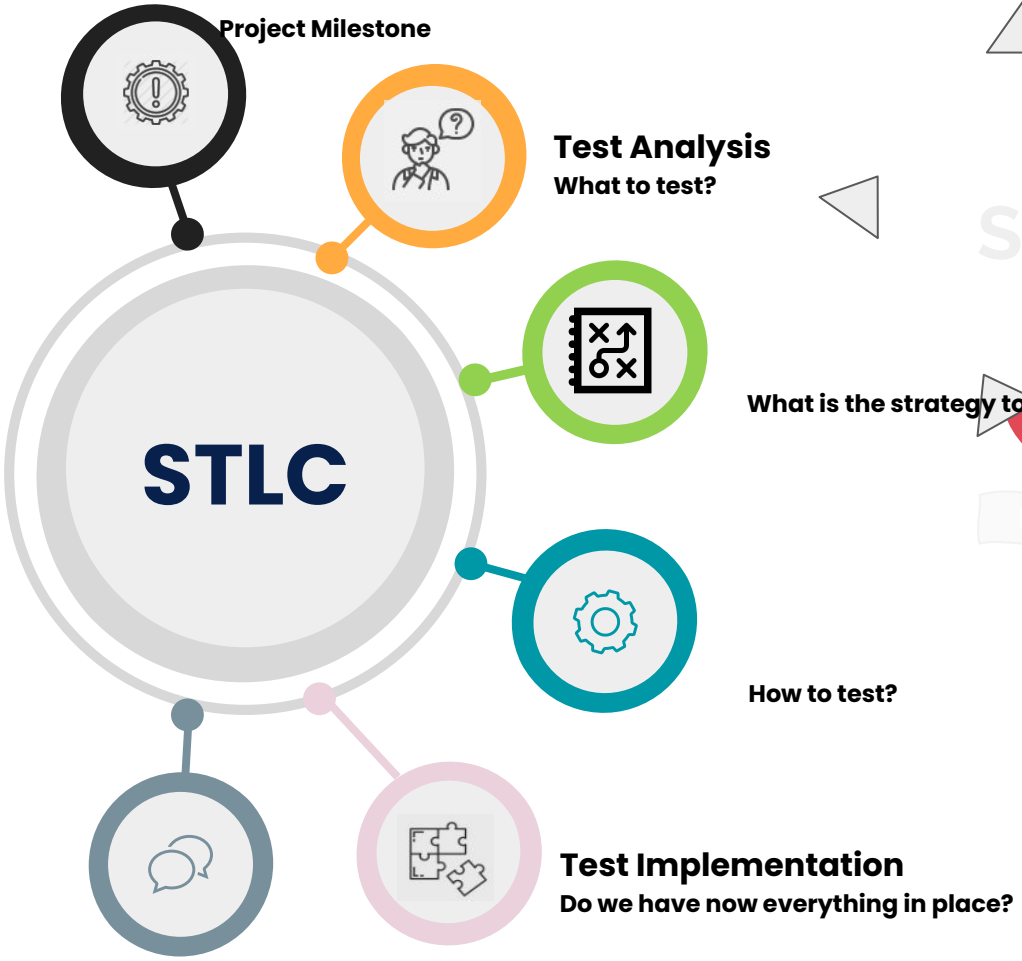
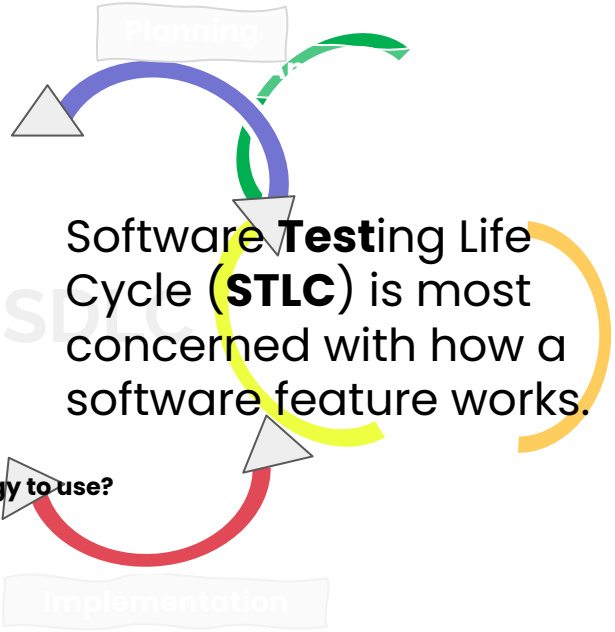
STLC cross SDLC





Software **Test**ing Life Cycle (**STLC**) is most concerned with how a software feature works.

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STLC vs SDLC

Software Development Life Cycle

SDLC

Frame of reference which defines general approach to software development about process and activities to be carried out from software product definition until the end of use as well as deliverables that are going to be created and delivered to customer (ISO 12207).

≠

Software Testing Life Cycle

STLC

Defined as a sequence of activities conducted to perform Software Testing. Contrary to popular belief, Software Testing is not just a single activity. It consists of a series of activities carried out methodologically to help certify your software product.

Test Process

Test Process

1. Test Analysis
2. Test Planning
3. Test Design
4. Test Implementation
5. Test Execution
6. Test Completion

Test Analysis

Test Analysis

Step 1

It determines "what to test". Analyzing the test basis appropriate to the test level being considered.

Step 2

Evaluating the test basis and test items to identify defects of various types.

Step 3

Identifying features and sets of features to be tested.

Step 4

Defining and prioritizing test conditions.

Capturing bi-directional traceability.

OUTPUTS

- Test Conditions
- Test Items identified with their features
- Defects in the test basis.

Test Analysis

During this phase, test team studies the requirements from a testing point of view to ***identify the testable requirements***.

The QA team may ***interact with*** various ***stakeholders*** (Client, Business Analyst, Technical Leads, System Architects, etc) to understand the requirements in detail.

Requirements could be either **Functional** (defining what the software must do) or **Non Functiona**l (defining system performance availability)

Test Analysis

Requirements:

- Create a **Responsive Web Site** and a **Mobile App** to allow users to buy and sell products or articles, where people can find thousands of brands and products at incredible prices.
- **Register your phone number / email** to start your session.
- Users can have a **My Shopping** and **Favorites** section

Test Analysis

Analyzing requirement by requirement … (test basis)

Create a Responsive Web Site **(feature 1)** and a Mobile App **(feature 2)** o allow users to buy and sell products or articles. **(feature 3)** Register your phone number **(feature 1-2),** / email to start your session **(feature 1-2).**

Users can have a My Shopping **(feature 4)** and Favorites section **(feature 5)**

Test Process

Test Planning

Test Planning

Test Planning

Involves activities that **define the objectives of testing** and the **approach** for meeting test objectives within constraints imposed by the context.

- **Test Plans**

Test monitoring and control

Test **monitoring compares** the actual progress against the test plan (with monitoring metrics).

Test control **takes action** to meet the objectives of the test plan.

They both supported by evaluation of **exit criteria**

- **Test Progress Reports**
- **Test Summary Reports**
- **Task Completion**
- **Resource Allocation and usage**
- **Effort**

Test Process

1 How

Guidelines that explains test design and determines **how** testing needs to be done.

2 What

Must include objectives and scope

3 Type of testing

What type of testing to follow. (Automation, performance, functional)

4 Exit Criteria

Are used as reference in order to know when should be finish testing.

5 Who

Describes how to test, when to test, who will test and what to test.

6 When

Define a schedule or roadmap

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Test Planning

Typically, in this stage, a ***Senior QA manager*** will determine ***effort and cost*** estimates for the project and would prepare and finalize the ***Test Plan***. In this phase, ***Test Strategy is also determined***.

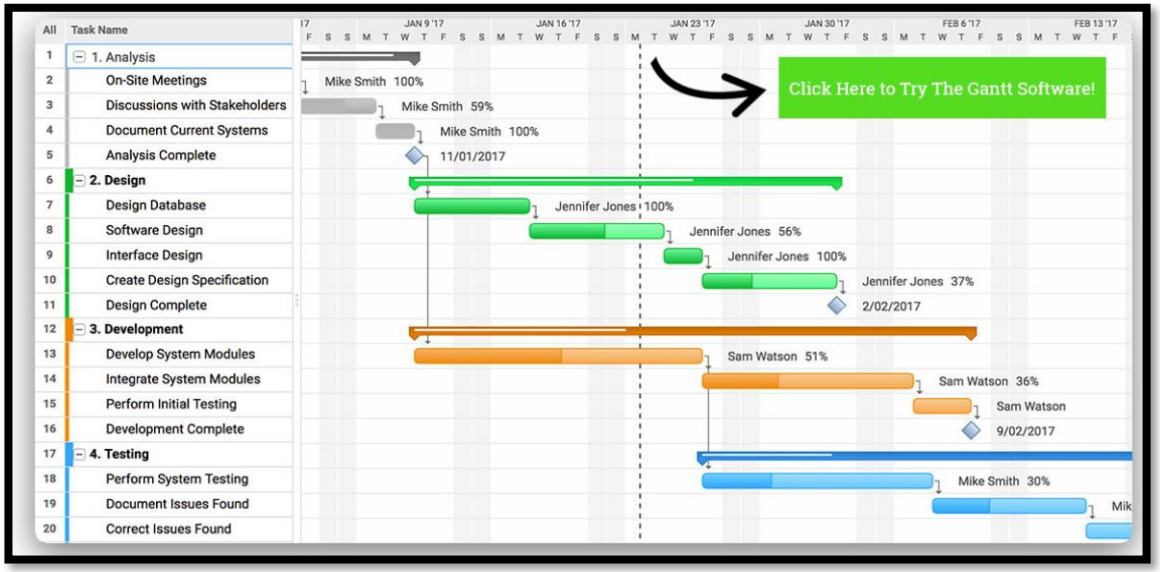
Tasks

- Preparation of test plan/strategy document for various types of testing
- Test tool selection
- Test effort estimation
- Resource planning and determining roles and responsibilities.
- Training requirement

Additional Work Products

- Effort estimation document.

Test Planning



Planning testing effort

(in coordination with team)

Feature 1: Create a Responsive Web (page design as per breakpoints / top priority) - delivered in two months.

Feature 3: to allow users to buy and sell products and articles.

- basic process will be launched on the web after 2 months.
- Every week up to complete the basic process, pieces of this feature are available to test.

Test Design

Test Design

- **Test Activities, Tasks and Work Products**

Test Design

It answers **"How to test"**
Designing and prioritizing Test Cases.
Identifying necessary **test data**.

Designing test environment.
Identifying any required infrastructure.

Capturing bi-directional traceability.

Testing techniques are used.

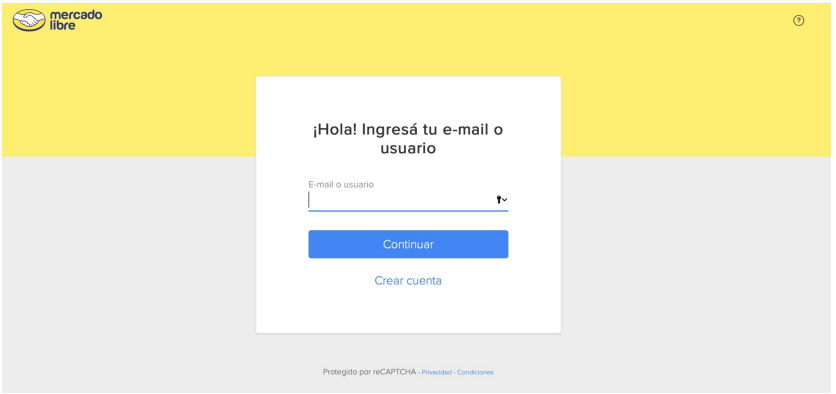
- **Test Conditions refined**
- **Test Cases and Set of Test Cases**
- **Test Data Identified**
- **Test Environment Design**
- **Infrastructure identified**
  -

Test Design

SCENARIO: Login MercadoLibre

Test Case #1:

-Verify users can login into the application using email and password

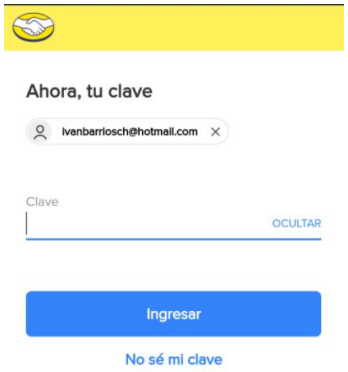


Preconditions:

Valid email and password

Steps:

1. **Go to https://mercadolibre.com/**
2. **Select the country**
3. **Enter a valid email address or user**
4. **Enter the correspondent password**
5. **Click on “Login” button.**
6. **Expected Result: User login in session**

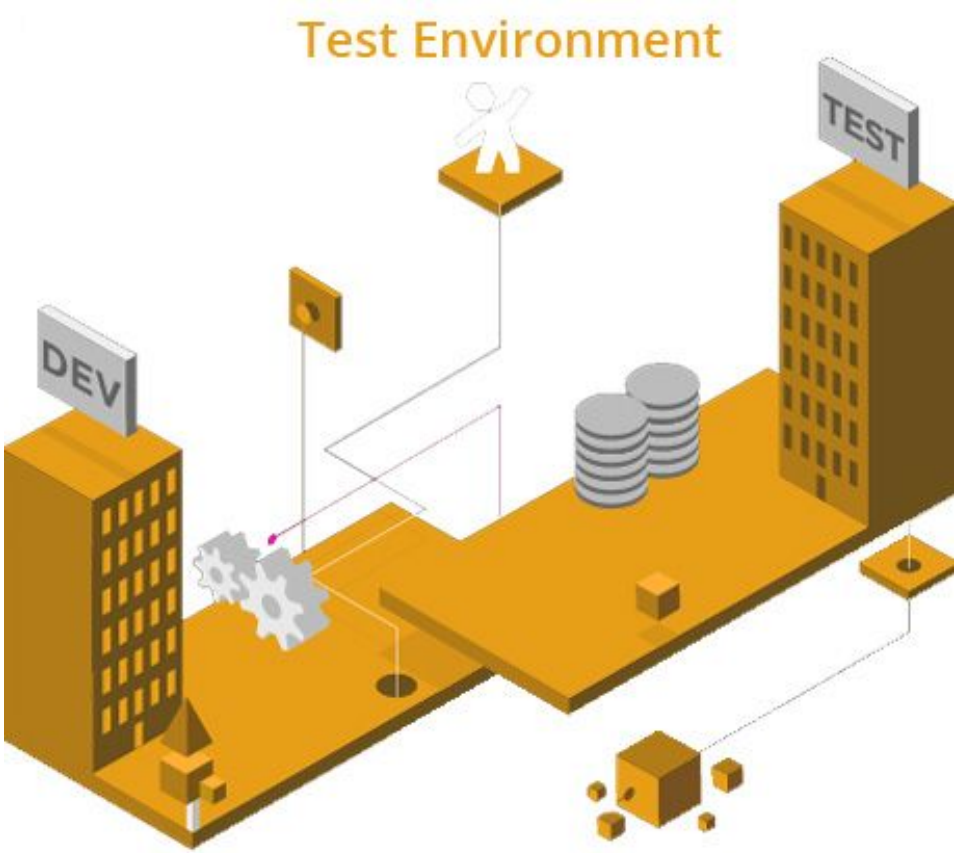


Test Implementation

Test Implementation

- Architecture
- Environment configuration
- Test Procedures
- Test Execution Schedule

  Test Data created



Implementation - Example

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Test Process

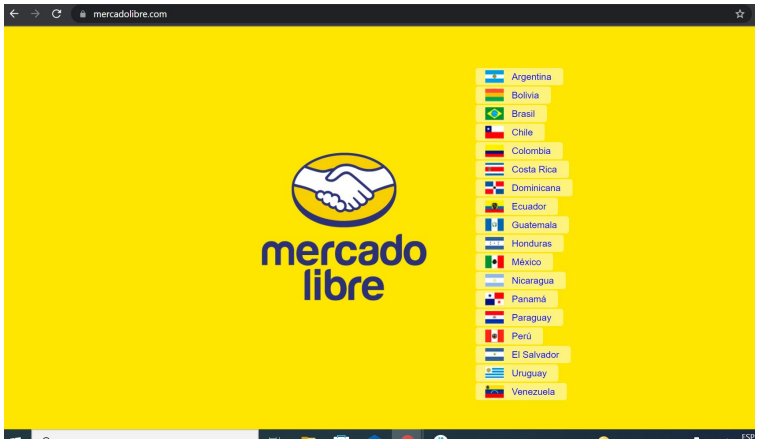
Test Execution

Test Execution

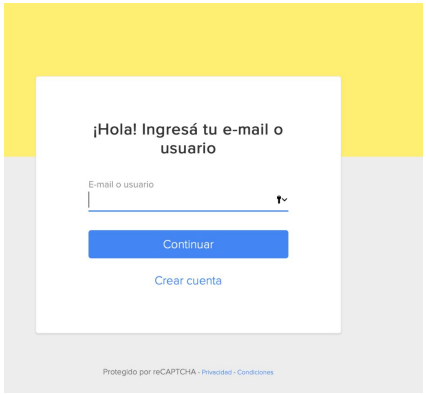
- Test Cases Status
- Test Cases Documentation
- Defect Reports
- Testware Documentation

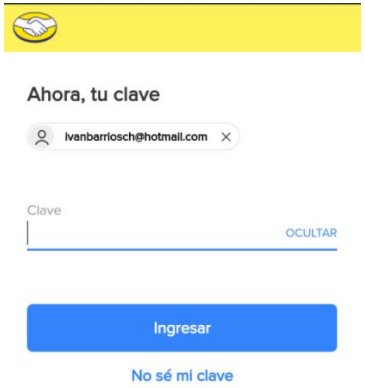
Execution - Example

1- Go to https://mercadolibre.com



2- Enter a valid email address and password





3- User login in session

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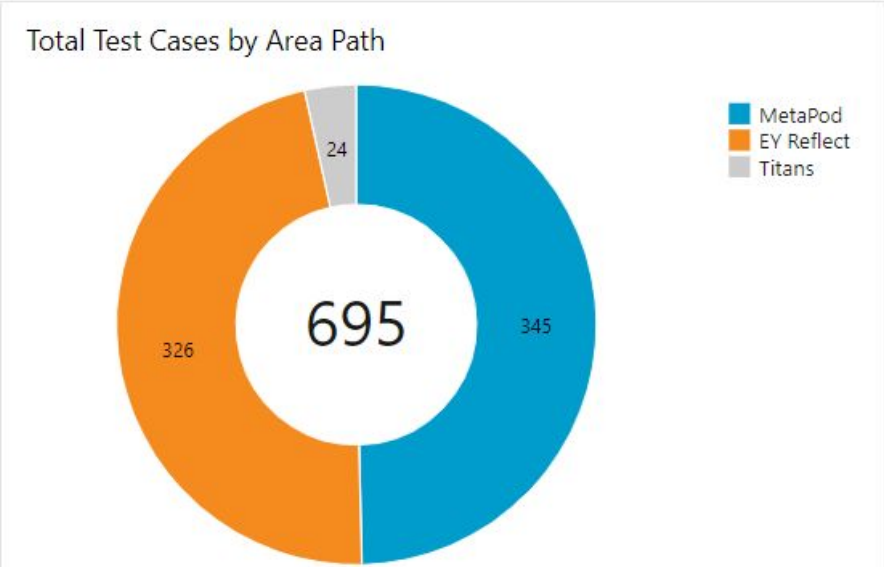
Test Completion

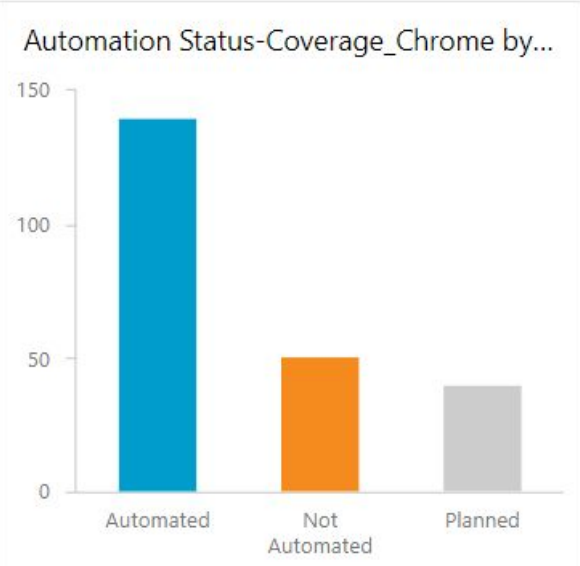
Test Completion

- Test Summary Reports
- Actions items
- Change requests or product backlog
- Finalized testware

Completion - Example

Total Test Cases	Chrome Total Te...	Chrome - Autom...	Chrome-Planned...	Chrome-Not Aut...
695	231	192	45	66
Work items	Work items	Work items	Work items	Work items





Total Bugs Repor...
253
Work items

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Remote Activity

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Activity

- Go to folder **Sesion Software Testing Life Cycle**
- Check your group folder in the Excel file **SDLC-Activity.xslx**
- Open your group folder
- Go to Google room, discuss and work with your team.
- You have **20 minutes** to do the first shot of your activity.

TEST ANALYSIS

1. What to test?
   Identify features

TEST PLANNING

1. Define the objectives of testing.
2. Planning testing effort for each feature identified.

Thank You!

Globant