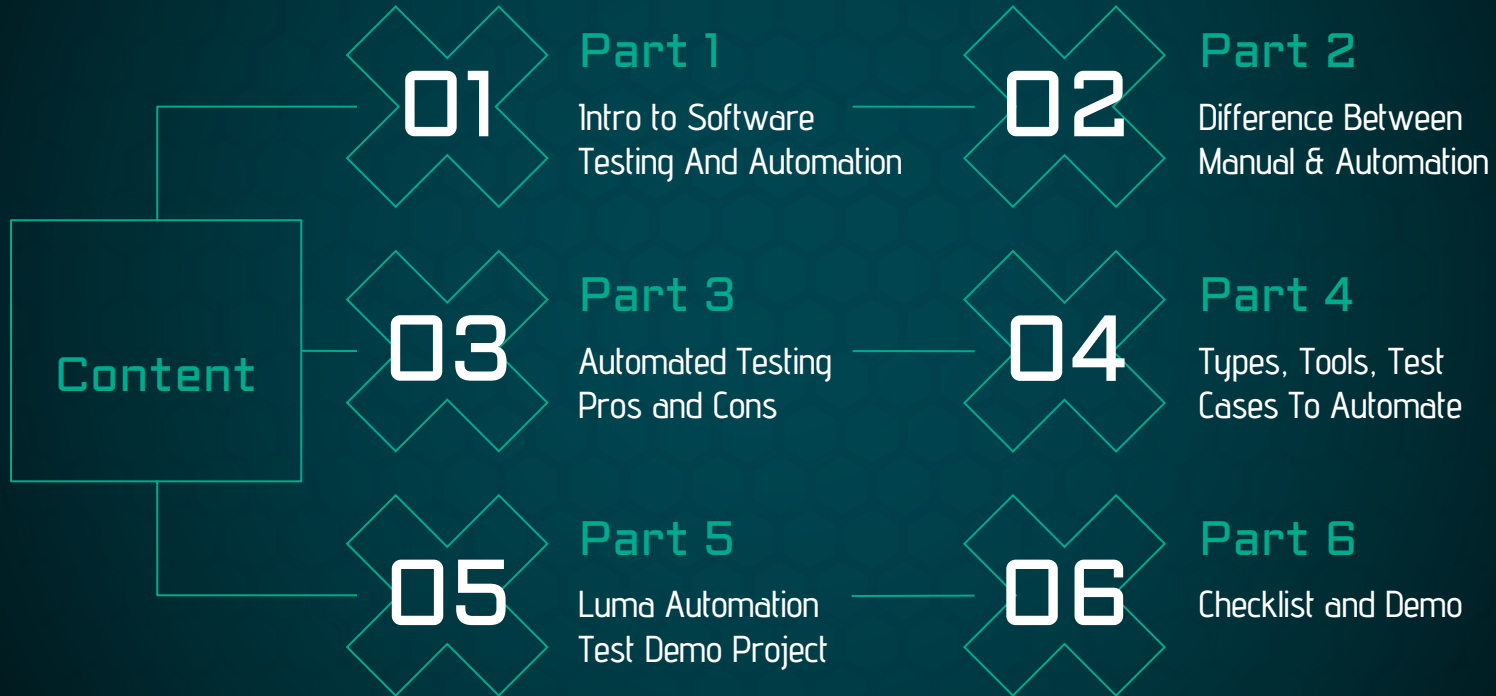


# AUTOMATION TESTING Project

Luma E-Commerce

ITI Graduation Project , Software Testing  
By. Tahani Habib – Yasmine Ahmed

# SOFTWARE TESTING COMPANY



# ABOUT SOFTWARE TESTING

- Software Testing is a method to check whether the actual software product matches expected requirements and to ensure that software product is Defect free.
- It involves execution of software/system components using manual or automated tools to evaluate one or more properties of interest.

M → A



# ABOUT AUTOMATION TESTING

- Automation Testing is a software testing technique that performs using special automated testing software tools to execute a test case suite. On the contrary.
- Manual Testing is performed by a human sitting in front of a computer carefully executing the test steps.
- The automation testing software can also enter test data into the System Under Test, compare expected and actual results and generate detailed test reports.
- Software Test Automation demands considerable investments of money and resources.



# Manual vs Automation



Manual



Automated

Automation	Manual
more reliable	less reliable
Initial investment is higher, ROI is higher in the long run	Initial investment is less than automation, ROI is lower in the long run
practical option when we do regressions testing.	practical option where the test cases are not run repeatedly and only needs to run once or twice.
Exploratory testing is not possible	Exploratory testing is possible
Performance Testing like Load Testing, Stress Testing etc. is a practical option in automation testing.	Performance Testing is not a practical option in manual testing
Execution is done through software tools, so it is faster	Execution of test cases is time consuming and needs more human resources

Automation	Manual
It can be done in parallel and reduce test execution time.	Its not an easy task to execute test cases in parallel in manual testing. We need more human resources to do this and becomes more expensive.
Programming knowledge is a must in automation testing	Programming knowledge is not required to do manual testing.
Build verification testing (BVT) is highly recommended	Build verification testing (BVT) is not recommended
Human intervention is not much, so it is not effective to do User Interface testing.	It involves human intervention, so it is highly effective to do User Interface testing.



# Why Test Automation?

Effectiveness

Test coverage

Execution speed

Automation

does not require Human  
intervention)

run automated test  
unattended (overnight)

test for multilingual sites

# Automated Testing Pros and Cons

## PROS

- Automation is faster in execution
- cheaper
- reliable
- more powerful and versatile
- Wider test coverage of application features
- It is mostly used for regression testing
- Ensure Consistency & Improves accuracy
- It is reusable
- does not require human intervention. Test scripts can be run unattended
- More cycle of execution can be achieved through automation
- It helps to increase the test coverage
- Early time to market

## CONS

- It is recommended only for stable products
- Automation testing is expensive initially
- Most of the automation tools are expensive
- It has some limitations such as handling captcha, getting visual aspects of UI such as fonts, color, sizes etc.,
- Huge maintenance in case of repeated changes in the requirements

# Automated Testing Process

01

**Step 1**

Test tool selection

02

**Step 2**

Define the scope  
of Automation

03

**Step 3**

Planning, Design,  
and Development

04

**Step 4**

Test Execution

05

**Step 5**

Maintenance  
Approach

# Automation Testing

Types	Tools
<ul style="list-style-type: none"><li>● Smoke Testing</li><li>● Unit Testing</li><li>● Integration Testing</li><li>● Functional Testing</li><li>● Keyword Testing</li><li>● Regression Testing</li><li>● Data Driven Testing</li><li>● Black Box Testing</li></ul>	<ul style="list-style-type: none"><li>● Avo Assure</li><li>● TestRigor</li><li>● TestComplete</li><li>● Selenium</li><li>● HP UFT (aka QTP)</li><li>● Watir</li><li>● Telerik Test Studio</li><li>● Silk Test</li><li>● Cucumber</li><li>● WorkSoft Certify</li><li>● Kobiton</li><li>● ACCELQ</li></ul>

# Content for This Automation Project

## Objective:

The primary objective of this automation testing is to ensure that the website "<https://demo-m2.bird.eu/>" functions as expected under various conditions. This includes testing the website's functionality, usability, performance, and security. The goal is to identify any issues or bugs that could affect the user experience or the website's performance.



# Content for This Automation Project

## Scope:

The scope of this automation testing will cover the following areas:

- Functional Testing: Verifying that all features and functionalities of the website work as intended. This includes testing the navigation, search functionality, user registration, login, and any other interactive elements.
- Usability Testing: Ensuring that the website is easy to use and navigate. This involves testing the user interface, content, and workflow to ensure they are intuitive and user-friendly.

# Content for This Automation Project

## Test Strategy:

= Automated Testing: Automated tests will be developed for the identified functionalities. This includes unit tests for individual components, integration tests for combined functionalities, and end-to-end tests for complete user flows.

= Continuous Integration: Automated tests will be integrated into a continuous integration pipeline to ensure that tests are run automatically whenever changes are made to the website's codebase.

# Tools

Tools The following tools will be used for automation testing:

- = Selenium WebDriver: For automating web applications for testing purposes. It supports multiple programming languages like Java, C#, Python, etc.
- = JUnit/TestNG: For unit testing and integration testing. These frameworks provide annotations to identify test methods and assertions to verify outcomes.
- = Maven/Gradle: For building and managing the project, including dependencies and running tests.



# Demo

for senario:

- = create an account
- = login
- = home page and select item
- = access to cart page
- = change qyt of items
- = access for Profile option
- = perform checkout Process
- = display order history
- = sign out