



Școala  
informală  
de IT

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# Test Automation using Java Curriculum

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## **Content:**

Web App Fundamentals

Testing concepts

Intro in automation

Environment setup

OOP / programming intro

Automation framework

Selenium Webdriver

Web automation (end to end) project

Enhancements

Advanced



## Web App Fundamentals:

- HTML/HTTP basics
- DOM introduction
- Web basics: client-server, cookies, session, types of requests, web servers, and more

## Testing concepts:

- Testing types and the relationship to automation
- Test cases practices

## Intro in automation:

- What is automation? Why automate? How to automate?
- Web / native automation practices and approach
- Backend / api
- Some of the basic tools used
- Automation principles
- Advantages vs. disadvantages

## Environment setup:

- Programming language (Java)
- Integrated development environment (IntelliJ IDEA)
- Version control (Git)
- Build automation (Maven)

## OOP / programming intro:

- Basic concepts
- Coding standards, naming conventions



## Automation framework:

- Concept, structure, tools, terminology
- Use existing framework; run existing tests
- Compare the manual tests vs. automated tests
- Debug code and tests
- Update existing tests
- Create/add new test scenarios
- Read / investigate results
- Run tests on different browsers

## Selenium Webdriver:

- Web elements identification
- Write locators CSS and XPath
- Webdriver commands
- Handling browser cookies
- Taking screenshots

## Web automation (end to end) project:

- Create an automation project from scratch
- Create and use framework primitives
- Use of page object model
- Structure code, tests and results
- Advanced reporting (reporting tools, custom report)

## Enhancements:

- Direct HTTP requests
- Database usage (concepts, sql commands, CRUD operations in code)
- Data driven test execution

## Advanced:

- CI and automated builds (Jenkins)