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## Learnings from Course (UDEMY - OC - Cucumber BDD)

- a. Waterfall model
- b. Agile Software Development
- c. TDD and BDD
- d. BDD practices
  - i. Discovery Workshop
  - ii. Example Mapping
  - iii. Formulation
  - iv. Automation
- e. BDD Terminologies
  - i. Ubiquitous language
  - ii. Scenarios and Examples
  - iii. Acceptance Criteria
  - iv. Executable Specifications
  - v. Living Documentation
- f. Gherkin syntax
  - i. Feature
  - ii. Rule
  - iii. Scenario
  - iv. Given, When, Then, And, But
  - v. Scenario Outline
  - vi. Background
- g. Gherkin Anti-Pattern
- h. Configure -> Convert to Cucumber Project
  - i. Navigate from Steps written in Feature files to Step Definitions in Java file
- i. Runners:
  - i. TestNG: Supports Scenarios in parallel
    - 1. <https://github.com/cucumber/cucumber-jvm/tree/main/testng>
  - ii. JUnit: Supports Features in parallel
  - iii. Maven Command Line: Supports Scenarios in parallel
    - 1. <https://cucumber.io/docs/cucumber/api/>
- j. Cucumber Options:
  - i. Plugin - pretty, html:target/cucumber.html
  - ii. Snippets - CAMELCASE
  - iii. Dry Run
  - iv. Monochrome
  - v. Tags
  - vi. Glue and Feature Paths
- k. Regular and Cucumber Expressions:
  - i. <https://cucumber.io/docs/cucumber/cucumber-expressions/>
  - ii. <https://github.com/cucumber/cucumber-expressions#readme>

- iii. <https://github.com/cucumber/cucumber-expressions/blob/main/java/heuristics.adoc>
- iv. **Parameters types supported in Cucumber expressions**
  - 1. Pre-Defined Parameter Type
  - 2. Custom Parameter Type**
- v. Optional Text
  - 1. 2 product(s)
- vi. Alternative Text
  - 1. product/cart
- l. DataTable:**
  - i. Single Row with No Header
  - ii. Multiple Rows with No Header
  - iii. Rows with No Header DataTable Type
  - iv. Single Row with Header
  - v. Multiple Rows with Header
  - vi. Row with Header DataTableType
  - vii. Single Column with No Header
  - viii. Single Column with Header
  - ix. Single Column with No Header DataTable Type
  - x. Single Column with Header DataTable Type
- m. Hooks:**
  - i. @BeforeAll, @Before, @After, @AfterAll
  - ii. Ordered
  - iii. Tagged
  - iv. BeforeStep and AfterStep
- n. Tags:**
  - i. Tags Inheritance and Execution
  - ii. Tag Expressions
- o. Anti-Patters in Automation framework**
- p. Automation framework must be**
  - i. Maintainable
  - ii. Readable
  - iii. Scalable
- q. Dependency Injection**
  - i. Pico-Container (No ThreadLocal this time for parallel execution)
- r. Reporting**
  - i. Local
  - ii. Cloud
- s. Maven commands for Execution:**
  - i. mvn clean test**
    - 1. This will execute with default env (Stg) and browser (Edge)
  - ii. mvn clean test -Denv=INT -Dbrowser=firefox**
    - 1. This will execute with on Int and Firefox browser

iii. `mvn clean test -Denv=INT -Dbrowser=firefox  
-Dcucumber.filter.tags@smoke`

1. This will execute with on Int and Firefox browser and scenarios tagged as smoke

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=====1\_Introduction=====

## BDD Myths

- Using Cucumber means you are doing BDD
- Discovery workshops are not needed to do BDD
- The business should write the Gherkin
- Converting manual tests to scenarios means you're doing BDD
- You can automate scenarios after the code is implemented

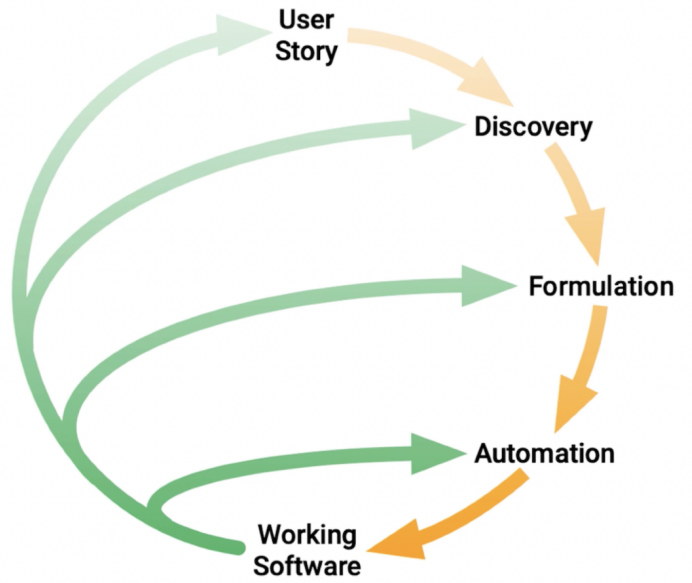
1.

## THE BRIEF HISTORY OF BDD

THE WATERFALL MODEL  
AGILE SOFTWARE DEVELOPMENT  
WHERE AGILE FALLS SHORT  
TDD  
THE BIRTH OF BDD  
WHAT IS BDD  
AGILE WITH BDD & TDD

2.

# BDD Practices



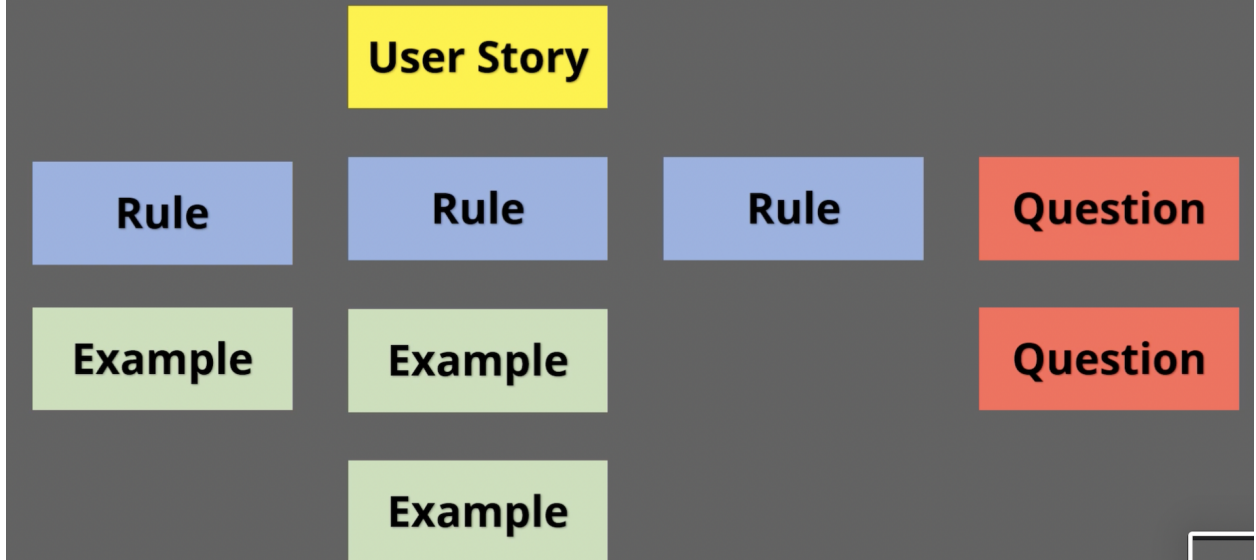
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## BDD TERMINOLOGIES

- UBIQUITOUS LANGUAGE
- SCENARIOS & EXAMPLES
- ACCEPTANCE CRITERIA
- EXECUTABLE SPECIFICATIONS
- LIVING DOCUMENTATION

4.

## Example Mapping



5.

**GHERKIN  
SYNTAX**

**FEATURE  
RULE  
SCENARIO  
GIVEN, WHEN THEN, AND, BUT  
SCENARIO OUTLINE  
BACKGROUND**

6.

7. **GHERKIN  
ANTI-PATTERNS**

MISUSED STEPS  
NON-DECLARATIVE  
UI FOCUSED  
IMPLEMENTATION DETAILS  
INCIDENTAL DETAILS  
LENGTHY  
DOING TOO MANY THINGS  
CONJUNCTION STEPS  
LACKING GOOD NAMES  
LACKING NARRATIVE SECTION, RULES

8. **RUNNERS**



9. **KEY CUCUMBER  
FEATURES**

CUCUMBER OPTIONS  
CUCUMBER EXPRESSIONS  
HOOKS  
TAGS  
DATA TABLES  
CUSTOM TYPES

# DATA TABLES

```
#SINGLE ROW WITH NO HEADER  
| john | john123 |  
  
#MULTIPLE ROWS WITH NO HEADER  
| john | john123 |  
| bill | bill123 |  
  
#SINGLE ROW WITH HEADER  
| username | password |  
| john | john123 |  
  
#MULTIPLE ROWS WITH HEADER  
| username | password |  
| john | john123 |  
| bill | bill123 |  
  
#SINGLE COLUMN WITH NO HEADER  
| john |  
| john123 |  
  
#SINGLE COLUMN WITH HEADER  
| username | john |  
| password | john123 |
```

10.

# SELENIUM WEBDRIVER INTEGRATION

ABOUT WEBDRIVER  
SETUP  
AUTOMATE FIRST SCENARIO  
AUTOMATE SECOND SCENARIO

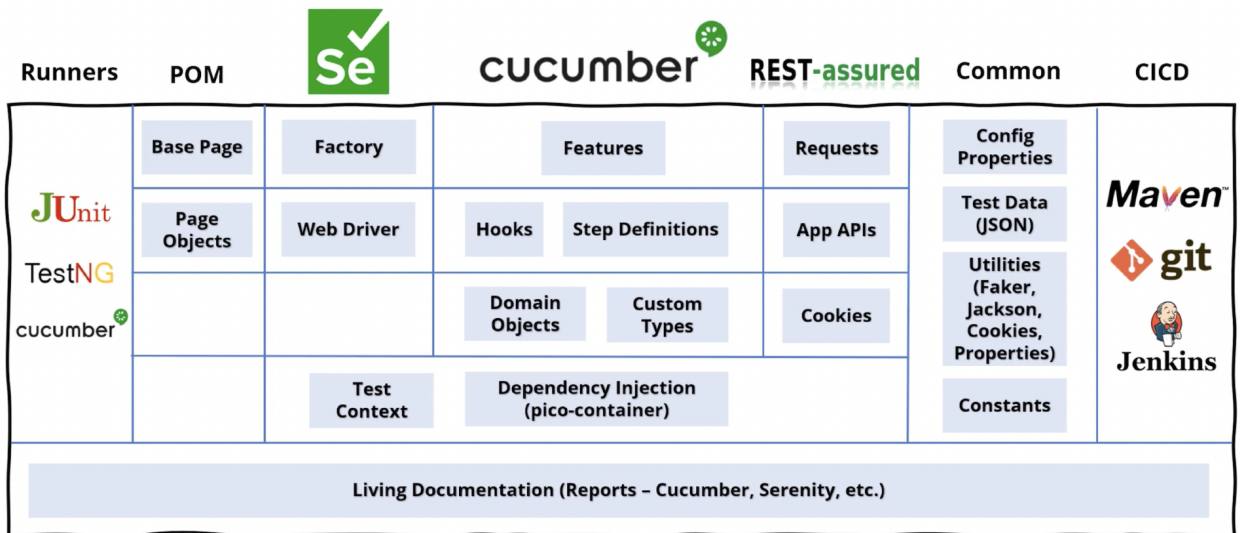
11.

# ANTI-PATTERNS

- FEATURE COUPLED STEP DEFINITIONS
- LACK OF DOMAIN OBJECTS
- STATIC KEYWORD
- DEPENDENT SCENARIOS
- USING UI FOR CREATING APP STATE
- NOT FOLLOWING DRY
- LACK OF WAITS
- HARDCODING
- LACK OF MULTIPLE BROWSER SUPPORT
- LACK OF MULTIPLE ENV SUPPORT
- MANUAL DRIVER MANAGEMENT

12.

## Framework Architecture



13.



- ✓ **Confident enough to apply BDD techniques**
- ✓ **Single handedly build a framework from scratch**
- ✓ **Stand out from others and likely to get a job**

14.

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