Cucumber with Java – Build Automation Framework with Minimal code

What is Framework?

In any Real time project whenever Automation scripts are developed, One should come up with an Execution system called framework to run and maintain Automated tests

What is Cucumber?

Cucumber is the BDD Framework for running automated tests.   
Cucumber does not Automate your testcases!

When my tests are already automated and can run, what cucumber does?

Data driven, Parameterization, Execution controls, Hooks, Reports, Automation utilities and many more….

When you say automated tests, what type of Automation testcases does cucumber Support?

Any Test (Web, Mobile, API, Unit Testing) which is written in Java/Ruby supported by Cucumber

How cucumber is unique and Best from other Test Frameworks (Keyword, Datadriven,Hybrid) in the Market?

Because Testcases/Requirements are defined with on BDD methodology (Gherkin syntax)

No coding is required to implement Framework functionalities

Buttons are clicked

pop up message is displayed  
Errors are also gone

When errors are gone an db

**Course Syllabus -What you are going to Learn?**

Please note that this course goal is to Learn Cucumber and implement framework for Selenium tests. So basic Selenium knowledge is prerequisite skill to have before you see part 2 of the course.

**This course is divided into 2 Parts.**

In part 1 , You will get complete understanding of all Cucumber features and its framework functionalities which does not require any prerequisite. Below are the topics discussed in part 1

**Understand Gherkin Syntax  
Understand Cucumber Scenarios  
Feature files & Step Definition files  
cucumber Test Runner (Junit & TestNg)  
Cucumber regular expressions  
Cucumber tags & Background keyword  
Cucumber Scenario outline for parameterization  
Cucumber Datatables  
Cucumber hooks  
Tagged Hooks mechanism  
Cucumber plugins  
cucumber reports  
Cucumber attributes  
Cucumber Parallel execution**

* In Part 2- We will inject Selenium code and develop end to end Cucumber Selenium Framework from Scratch. Below are the topics
* **Build Maven Project with all the framework dependencies**
* **Develop End to end Selenium Web Scenarios in the feature file**
* **Implement TestNG /Junit Runner to run the framework**
* **Understand the Single responsibility principle to distribute the implementation into multiple Step definitions.**
* **Importance of Dependency injection to share the data between the Steps file**
* **Understand the Page object Pattern to drive the locators from page files**
* **Implement Factory Design pattern by writing PageObjectManager class to create objects of all PO classes**
* **How driver can be configured and distributed across the files in the framework**
* **How to run Cucumber Scenarios in Parallel Mode using Cucumber TestNG Runner**
* **Build Test utilities for reusable Selenium methods**
* **Implement Cucumber Hooks to capture Screenshots on test failures**
* **Implement Cucumber Tags to run selected tests in the framework**
* **Parameterizing the test data to run the Scenarios with multiple data sets**
* **Creating HTML & Extent reports to run Cucumber Selenium tests**
* **Running tests in parallel mode and generate Extent reports with screenshots attached for failed Scenarios**
* **Run the cucumber tests using Maven & Command line options**
* **Integrate the Framework to CI/CD Jenkins and Schedule the Jobs on regular time Interval**
* **Create Parameterized Jenkin job to dynamically send the global properties at run time of Job execution**