

# Cucumber

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# Cucumber

- ♦ A tool which can execute functional BDD style tests written in “Gherkin”.
- ♦ Customers, Business Analysts, Domain Experts, Stakeholders, and Developers can use scenarios written in Gherkin to communicate about software long before development has started.



# Cucumber

A basic scenario written in Gherkin:

```
Feature: Hello World uses Friendly Greeting
  As a user
    I want to be greeted in a friendly fashion
    So that I feel comfortable interacting with the app

  Scenario: Application says hello
    Given I have a HelloWorld instance
    When I ask it to say hi
    Then it should say "Hello World!"
```



# Cucumber

- ♦ Feature: One feature per file, preferably written using “As a/I want” syntax.
- ♦ Scenario: Multiple per feature. Describe different use/edge cases of the feature from a users perspective. Must use “Given / When / Then” format.



# Gherkin

- ♦ Each statement must begin with “Given, And, When, Then”
- ♦ Given = assemble
- ♦ When = action
- ♦ Then = assertion



# Cucumber

- ♦ Each statement must map to a “step definition”. One or more statements not mapping will cause the scenario to be ignored and template code to be printed to the console.
- ♦ Steps are matched using regular expressions and can take in arguments by using double quotes.



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## Scenario step -> Step definition

```
Scenario: Application says personalized hello  
  Given I have a HelloWorld instance with "Jason"  
  When I ask it to say hi  
  Then it should say "Hello Jason!"
```

```
@Given("^I have a HelloWorld instance with \"([^\"]*)\"$")  
public void I_have_a_HelloWorld_instance_with(String name){  
    testObject = new HelloWorld(name);  
}
```



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Example 1





# Selenium

- ♦ Selenium Web Driver fits nicely with BDD and cucumber. In “Gherkin” you define steps and scenarios from a users perspective, and Selenium interacts with web applications from a user (or browser) perspective.



# Selenium

Scenario: Adding a person adds them to the table

And I enter "George" into "First Name"

And I enter "Washington" into "Last Name"

And I enter "67" into "Age"

When I click the Submit button

Then the following entries should be in my table:

first name	last name	age
George	Washington	67

```
@When("^I click the Submit button$")
```

```
public void I_click_submit() throws Throwable {  
    driver.findElement(By.id("submit_button")).click();  
}
```



# Cucumber

## Example 2



# Common Issues

- ♦ Complex “Given” (assemble) instructions.
- ♦ Re-definition of steps that accomplish the same tasks.
- ♦ Inconsistent language from test to test.
- ♦ (Selenium) Performing a step takes a variable amount of time.
- ♦ (Selenium) Step definitions tie too closely to specific DOM.
- ♦ Large applications can be very slow to test.



# Thanks !

- ♦ <http://cukes.info/> - Cucumber Home Page
- ♦ <http://pragprog.com/book/hwcuc/the-cucumber-book> - The Cucumber Book
- ♦ <http://pragprog.com/book/dhwcr/cucumber-recipes> - Cucumber Recipes
- ♦ <https://github.com/cucumber/cucumber-jvm> - Cucumber-jvm
- ♦ <http://docs.seleniumhq.org/> - Selenium

