VETERANS 4 QUALITY®

Test Automation

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(Day 2 of 4)

Test Automation Class Overview

- Less than twelve hours to learn “Test Automation”

- Automation of Browser Client
  - Record and Playback (Day 1)
  - Record and Playback (Day 2) <= YOU ARE HERE
  - Write code (Day 3)
  - Write code (Day 4)

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Remember: Define a Test Strategy

A great way to increase your chances of automated web testing success is to focus your efforts by mapping out a testing strategy.

The best way to do that is to answer four questions:

1. How does your business make money (or generate value for the end-user)?
2. How do your users use your application?
3. What browsers are your users using?
4. What things have broken in the application before?"

-- "*Selenium Bootcamp*" by Dave Haeffner – Sauce Labs

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Record and Playback

- Did you read the step-by-step?
  - https://medium.com/katalon-studio/a-sample-web-automation-test-project-9c532237c2bd
  - What did it say in “Step 4”?
- On your own
  - What Application?
    - http://demoaut.katalon.com
    - http://store.demoqa.com/
  - What is your “use case”
  - Add it as a record and playback

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QUIZ

What questions help you create a test strategy to improve you test automation success?

A. ____ What does my boss need fixed?
B. ____ How does your business make money (or generate value for the end-user)?
C. ____ Do I have enough time to write code for automation?
D. ____ How do your users use your application?
E. ____ What things have broken in the application before?
F. ____ Can I get a developer to write a Unit Test?

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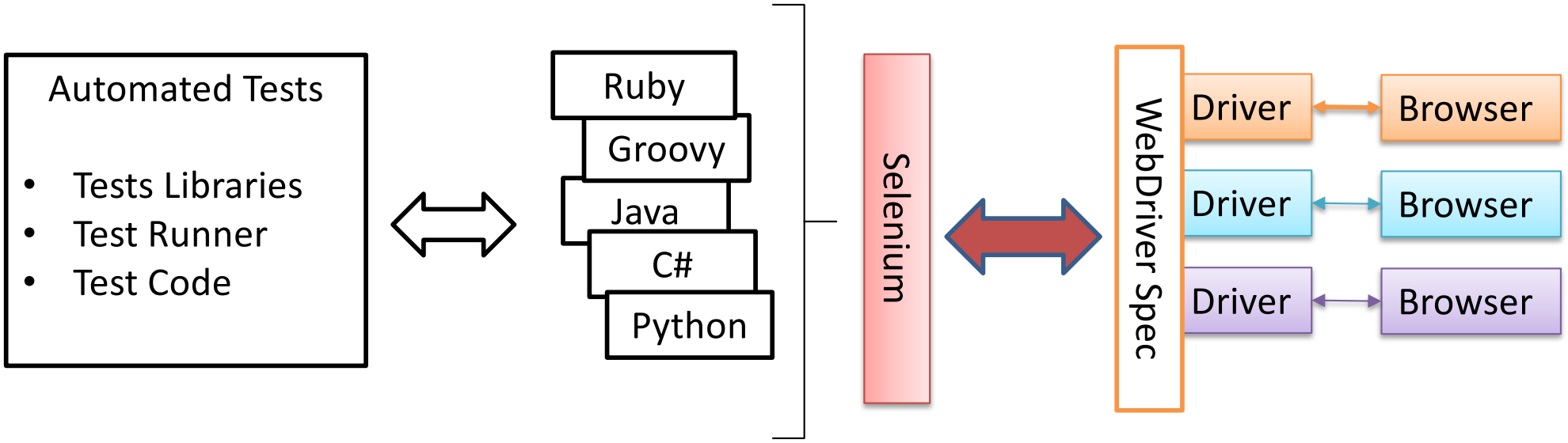
Browser Tool Stack



- Browser Vendors create automation drivers which conform to the W3C WebDriver Specification
- Selenium has bindings for lots of programming languages and talks to the browser specific driver
- Automated Tests are “test libraries,” a ”test runner,” and “test code.”

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Elements of the tool stack are:

- Client (application in a browser)
  - Product under test
  - Browser and version
- Interact with the Browser
  - WebDriver / Selenium
  - “Web Driver Wrapper” (WATIR / Capybara)
- Test Code
  - How does a test look like a use case?
  - How do you separate what changes from what doesn’t change?
  - What do you have for asserts?
- Test Harness / Test Runner
  - How to select tests to run
  - How to verify/assert success or failure
  - Test execution log
  - Jenkins Job
- Test Runs
  - Test result reporting
  - Test suite execution log
- Test Repository
  - Test Rail

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Where is the tool stack?

Item	Object	Input
1 - Open Browser		""
2 - Navigate To Url		"https://katalon-demo-cura.herokuapp.com/"
3 - Click	a_Make Appointment	
4 - Set Text	input_Username_username	"John Doe"
5 - Set Encrypted Text	input_Password_password	"mnkJqkPPKg1friGnJQNHAA=="
6 - Click	button_Login	
7 - Verify Element Text	p_Login failed Please ensure the username	"Login failed! Please ensure the username and password are valid."
8 - Click	i_CURA Healthcare_fa fa-bars	
9 - Click	a_Home	
10 - Close Browser		

```
import static com.kms.katalon.core.checkpoint.CheckpointFactory.findCheckpoint

WebUI.openBrowser('')

WebUI.navigateToUrl('https://katalon-demo-cura.herokuapp.com/')

WebUI.click(findTestObject('Object Repository/Page_CURA Healthcare Service/a_Make Appointment'))

WebUI.setText(findTestObject('Object Repository/Page_CURA Healthcare Service/input_Username_username'), 'John Doe')

WebUI.setEncryptedText(findTestObject('Object Repository/Page_CURA Healthcare Service/input_Password_password'), 'mnkJqkP

WebUI.click(findTestObject('Object Repository/Page_CURA Healthcare Service/button_Login'))

WebUI.verifyElementText(findTestObject('Object Repository/Page_CURA Healthcare Service/p_Login failed Please ensure the u
    'Login failed! Please ensure the username and password are valid.')

WebUI.click(findTestObject('Object Repository/Page_CURA Healthcare Service/i_CURA Healthcare_fa fa-bars'))

WebUI.click(findTestObject('Object Repository/Page_CURA Healthcare Service/a_Home'))

WebUI.closeBrowser()
```

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Become a developer…

- Fork a GitHub repository
  - Login to your GitHub Account
  - Find my repo: https://github.com/agodwin/v4q.git
  - Click the “Fork” Button
    - A copy of my repo in your project
  - Clone your GitHub repo
    - A local repository you can edit and “push” to GitHub
- What did you just get?
  - Look at files with GUI
  - Open terminal and look at file in CLI
  - Look at files with Text Editor

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Text Editor Check / Git Check

- Open the v4q/hello.txt file
- Add some text
- Save the file
- Commit the file (local repo)
  - git status
  - git add
  - git commit -m “Look ma, I can code”
- Push the changes (remote repo)
  - git status
  - git push
- Check GitHub for the changer’

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Ruby and Watir

- Check Ruby Version
  - ruby –version
- Check Chrome Version
- Check ‘chromedriver’
  - Is ‘chromedriver’ in the PATH for CLI?
  - chromedriver --version
  - Is ‘chromedriver’ compatible with Chrome
  - Update to new ‘chromedriver’

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Ruby and Watir

- Add new libraries (gems in Ruby)
  - gem –version
  - gem list
  - gem install watir
  - gem install rspec
  - gem list
- Open ‘watir-examples.rb’ in text editor
- Run the watir samples
  - cd <local-repo-location>/v4q
  - ruby watir-examples.rb

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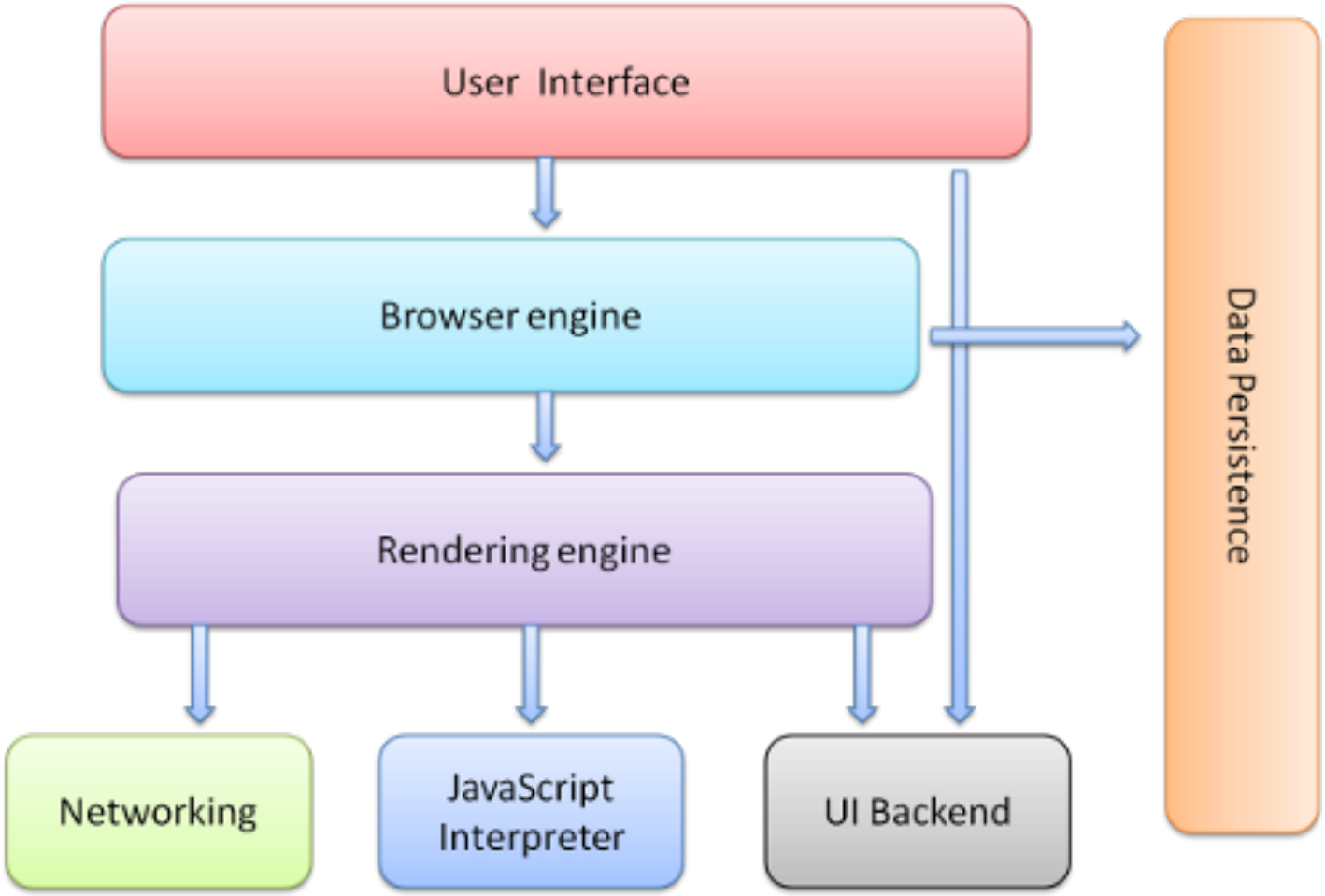
Browser Components

A picture is worth 1000 words



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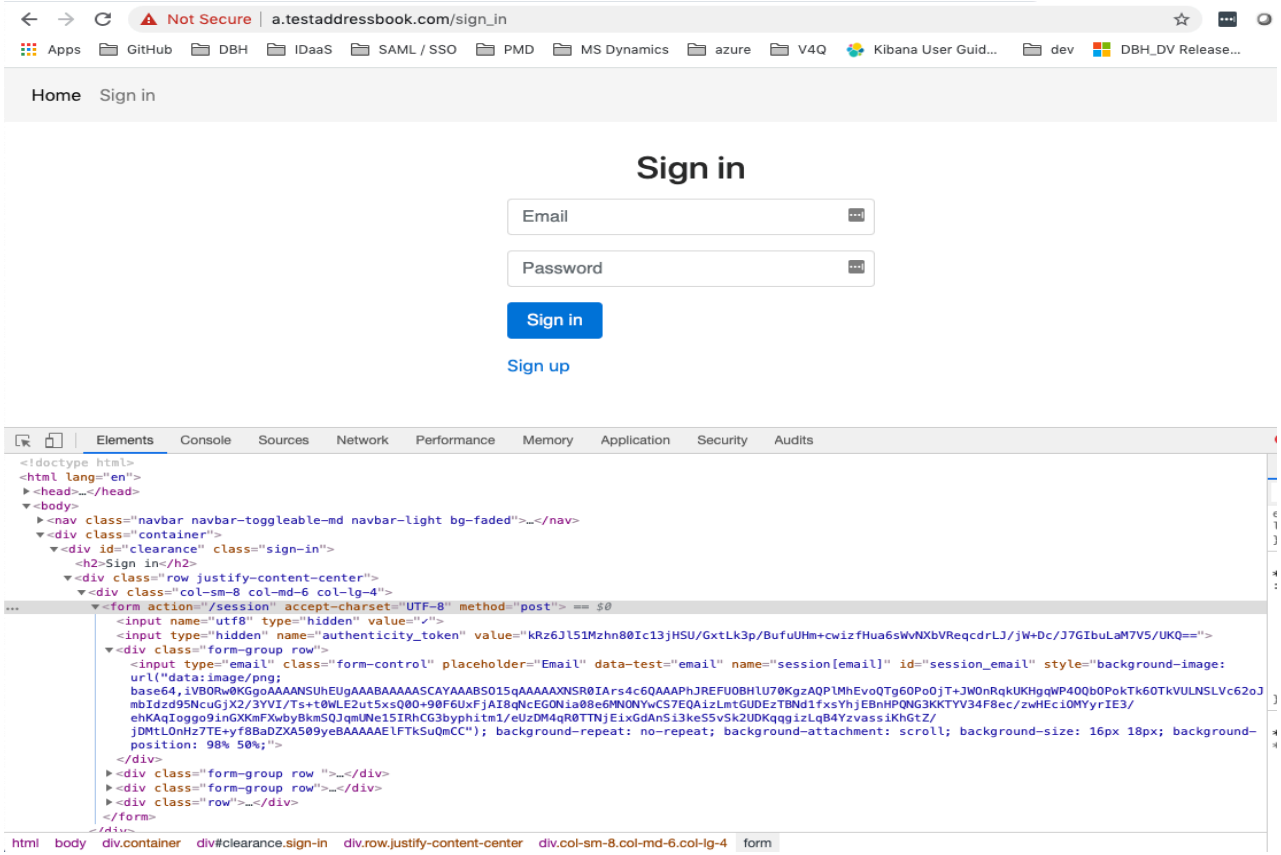
Demo Browser Developer Tools (again)

- Menu > More Tools > Developer Tools
- Dock at the Bottom



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Ruby, Watir, and IRB

- IRB – Interactive Ruby
- Learn Watir and explore HTML/DOM
- Run the watir samples (V2)
  - cd <local-repo-location>/v4q
  - Open ‘watir-examples.rb’ in text editor
- Launch IRB and Load Watir “gem”
  - irb
  - require ‘watir’

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Question?

- Continuous to Learning:
  - Repeat the IRB exercise with:
    - http://demoaut.katalon.com
    - http://store.demoqa.com/
  - Try and watch Lynda / Linked-in Learning
    - https://www.linkedin.com/learning/
    - "Ruby Testing with RSPEC"
      - Introduction and sections 1, 2, 3, 4, and 5
  - Ruby Programming Language
    - http://ruby-doc.com/docs/ProgrammingRuby/

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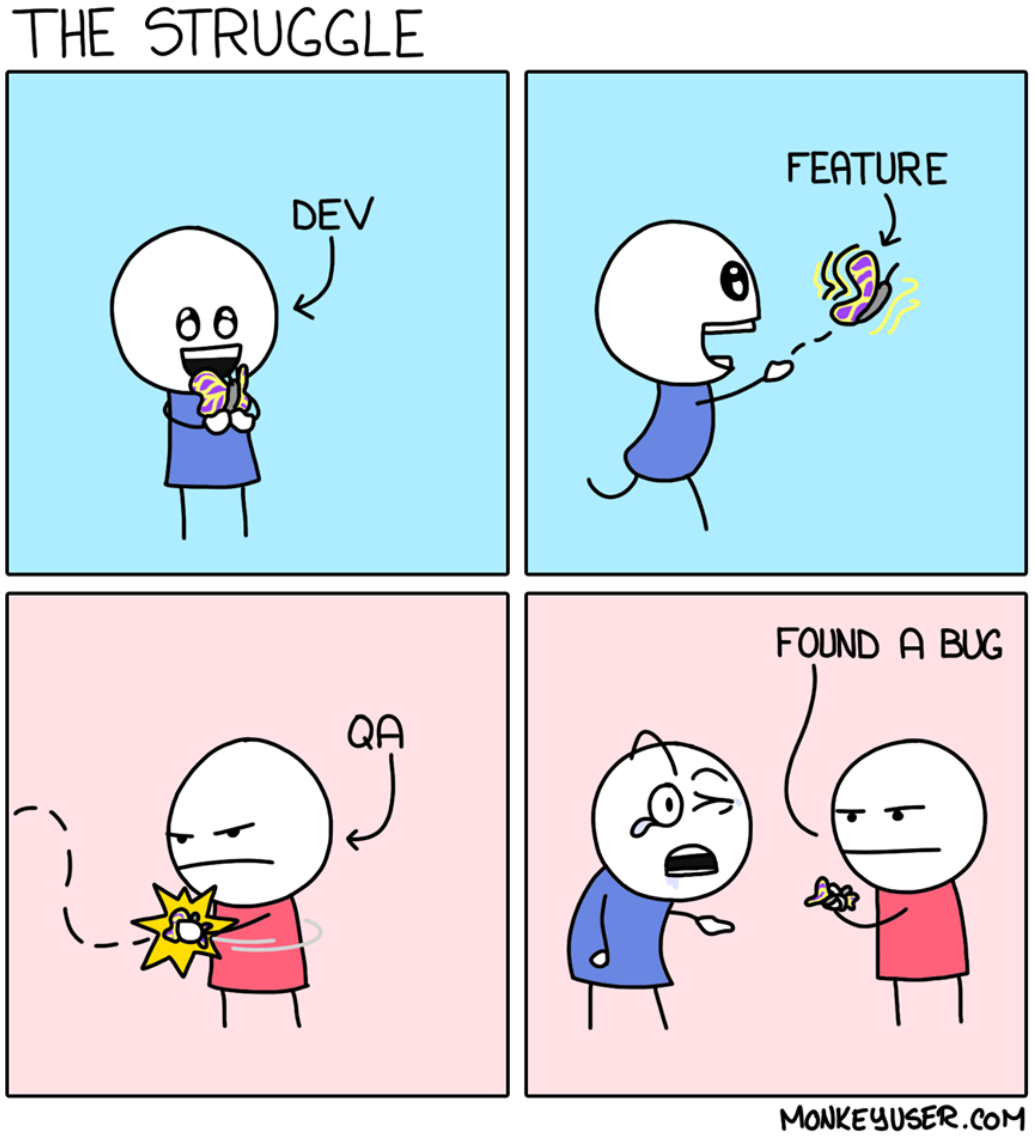

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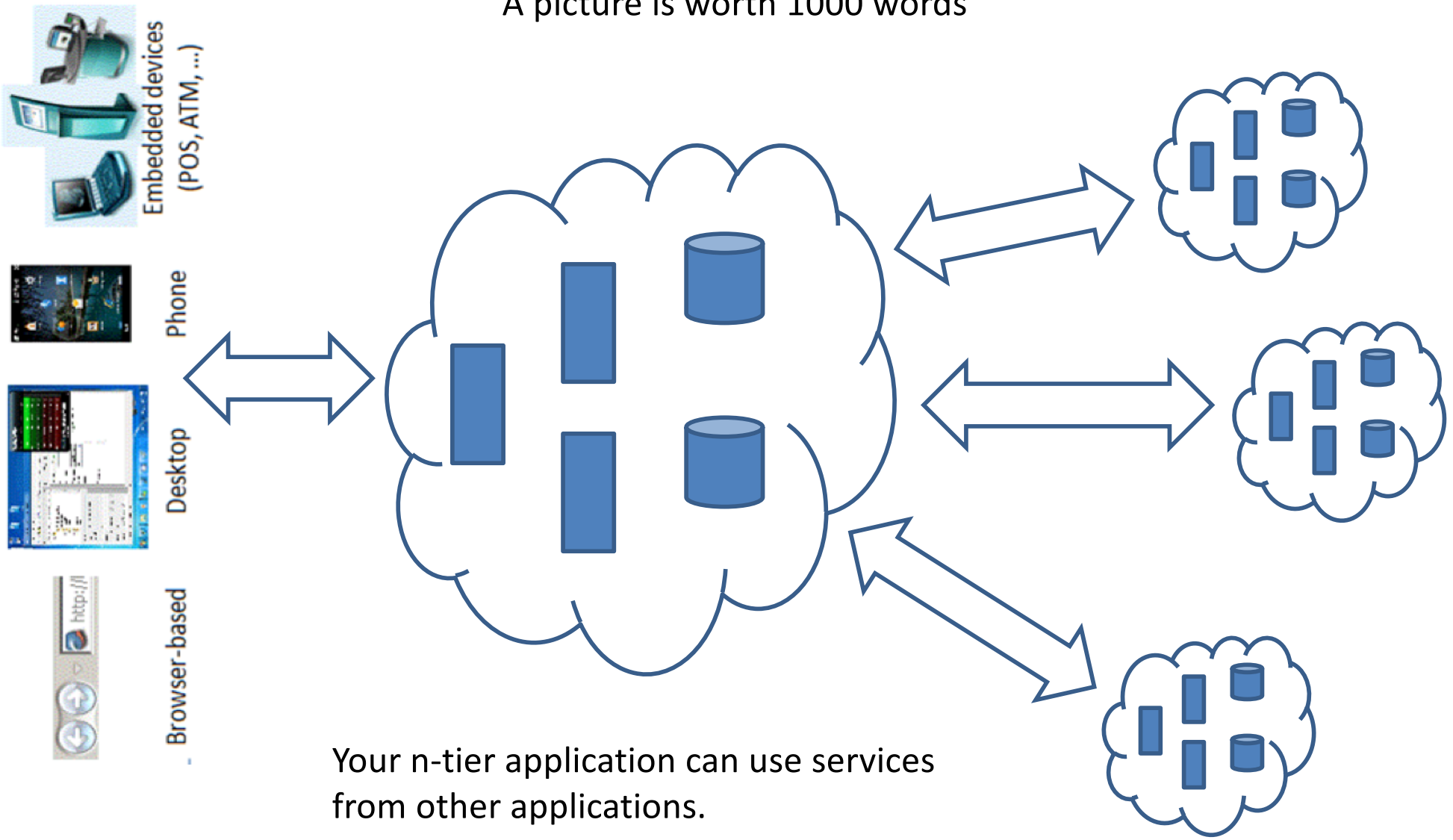
Web Services

A picture is worth 1000 words



Your n-tier application can use services from other applications.

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