



# SELENIUM TESTING IN C#

Bangkok .NET Users Group

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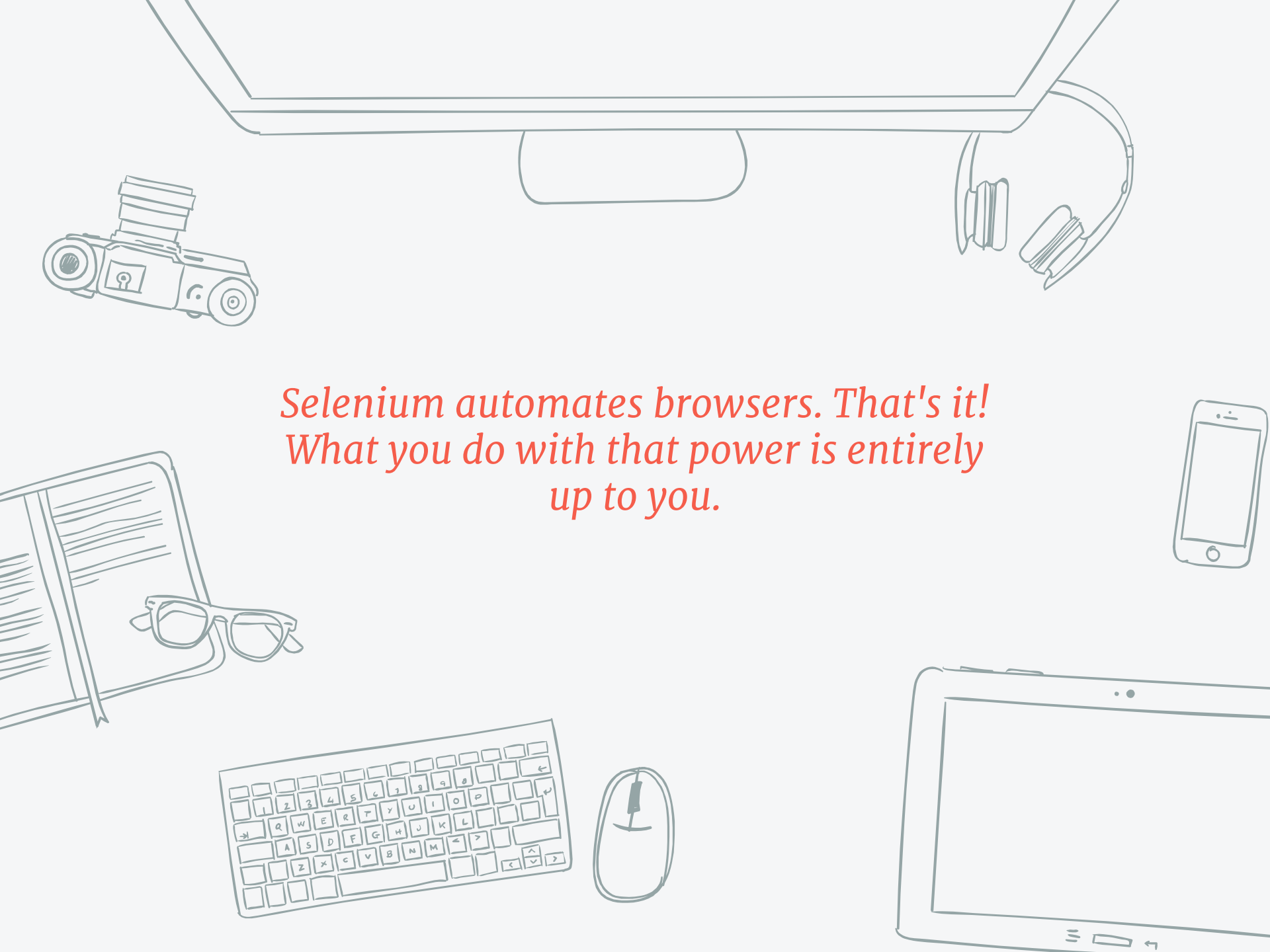


# OUR TOPICS

What is  
Selenium?

How do I  
use it?

How do I  
use it  
well?



*Selenium automates browsers. That's it!  
What you do with that power is entirely  
up to you.*



# WHY USE SELENIUM?

- Unit tests are great – they test the correctness of our modules
- `body { display:none; }`  
makes none of that matter



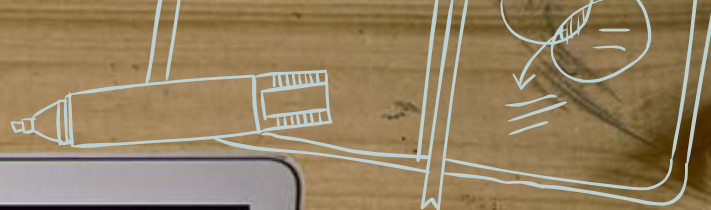
# SELENIUM: 2 PARTS

## WebDriver

- API for automating browsers using code
- Supports C# (and other languages)

## IDE

- Firefox extension for recording browser actions
- Exports C# NUnit tests





## DEMO SUMMARY

- ✓ Selenium IDE and the WebDriver API are great for fast prototyping
- ✗ But not great for maintainability :(

Can we do better?  
(yes)



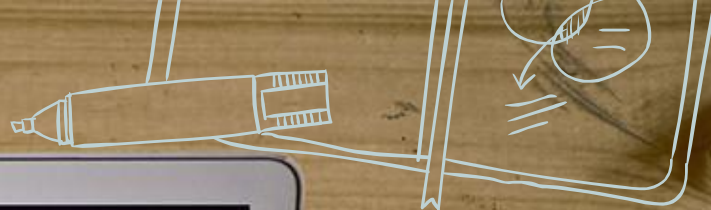
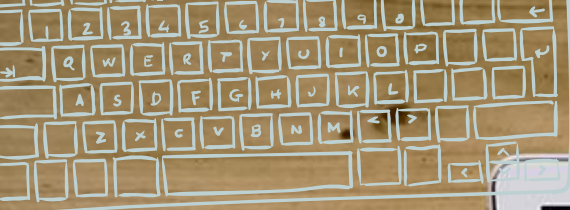


# CODE ORGANIZATION

- Page Object Model
  - ◆ Create reusable components
- OOP without inheritance
  - ◆ Compose everything.
- Bumblebee
  - ◆ C# library for the Page Object Model

1. <https://code.google.com/p/selenium/wiki/PageObjects>
2. <https://github.com/Bumblebee/Bumblebee>







# DEMO SUMMARY

- ✓ Page Objects Model is better than raw Selenium code
- ✓ We can use C# features to make it even better!



# MAKING IT EVEN BETTER

- Automatically run selenium tests:
  - ◆ Every day  
Using scheduled tasks
  - ◆ **Better** – also on every deploy!  
Using deploy scripts
  - ◆ **Even Better** – also on every commit!  
Using build/deploy scripts

Here at Jetabroad, we use the following:

1. Automated build: <https://www.jetbrains.com/teamcity/>
2. Automated deploy: <http://octopusdeploy.com/>



## SOME TIPS

- Consider using Firefox Portable to prevent breaking upgrades
- Some browsers (IE) are tricky to set up, but Selenium's docs are great:
  - ◆ <https://code.google.com/p/selenium/wiki/ChromeDriver>
  - ◆ <https://code.google.com/p/selenium/wiki/FirefoxDriver>
  - ◆ <https://code.google.com/p/selenium/wiki/InternetExplorerDriver>



# THANKS!

## Any questions?

You can find me at:

@wafuqua

Slides will be posted on [meetup.com](https://www.meetup.com)