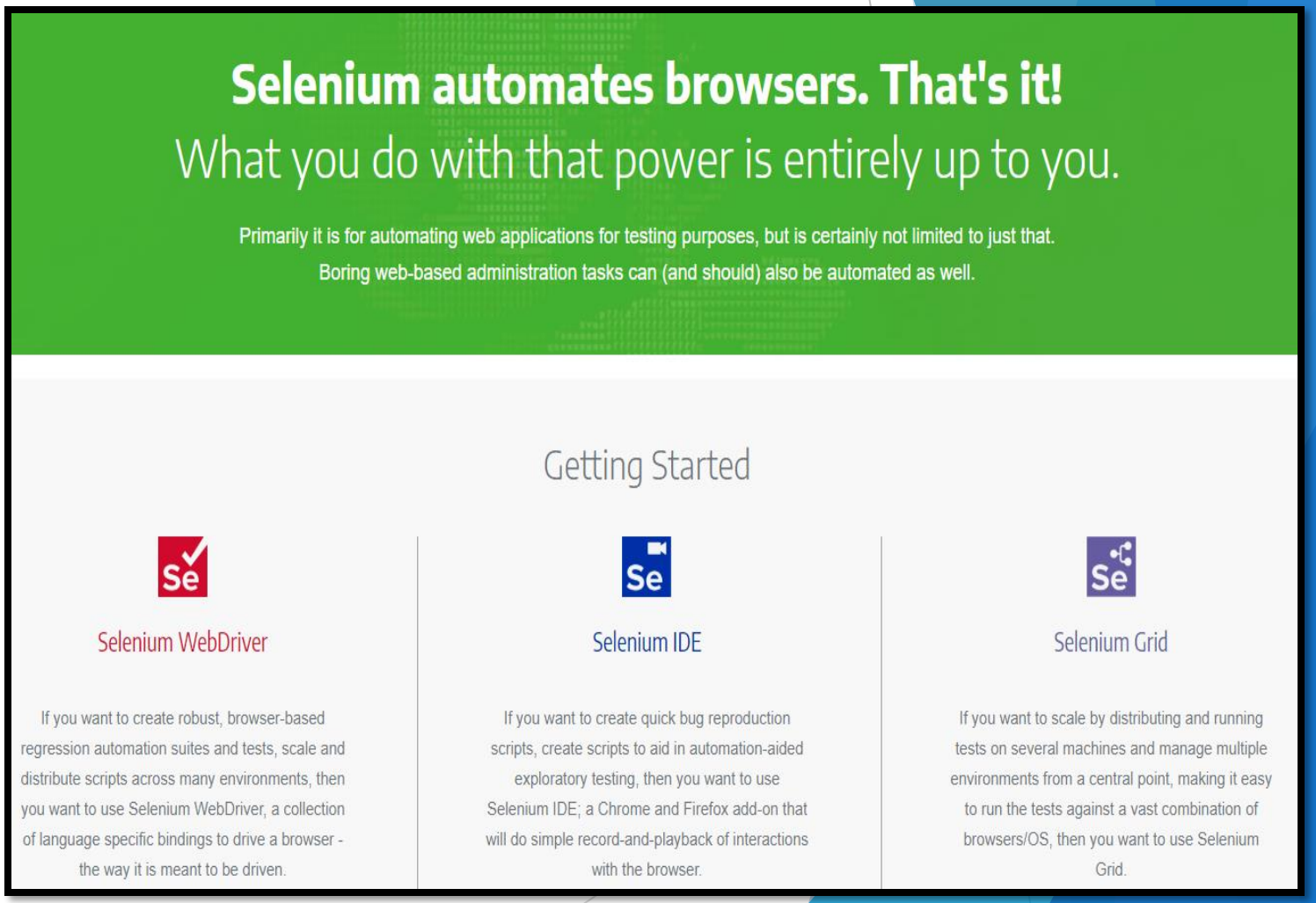
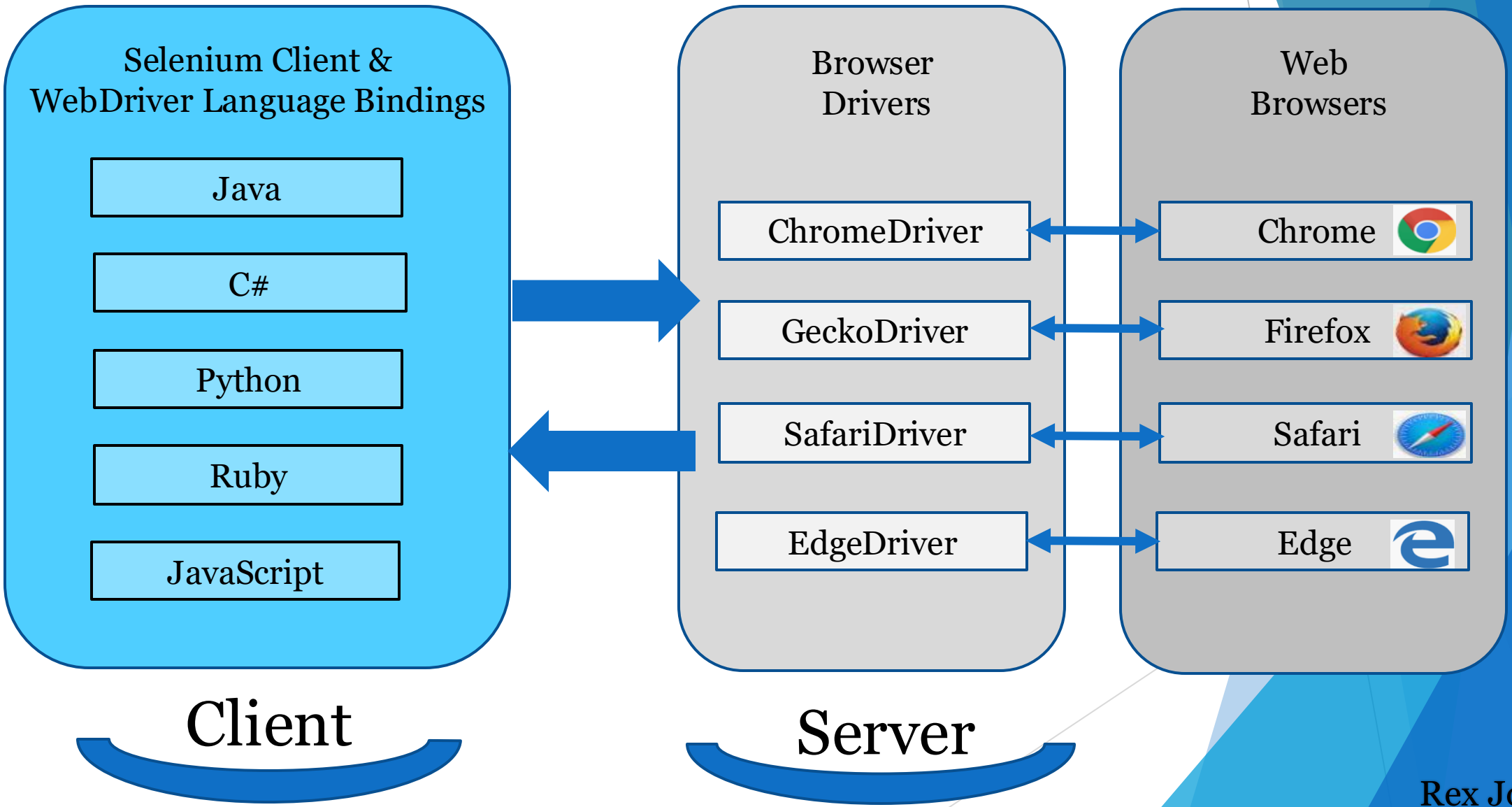
Selenium With Java Using Page Object Model

Selenium Components

- Selenium WebDriver
- Selenium IDE
- Selenium Grid



Selenium Architecture (Direct)



Selenium With Java Using Page Object Model

- Programming Language = **Java**
- Test Framework = **TestNG**
- Design Pattern = **Page Object Model**

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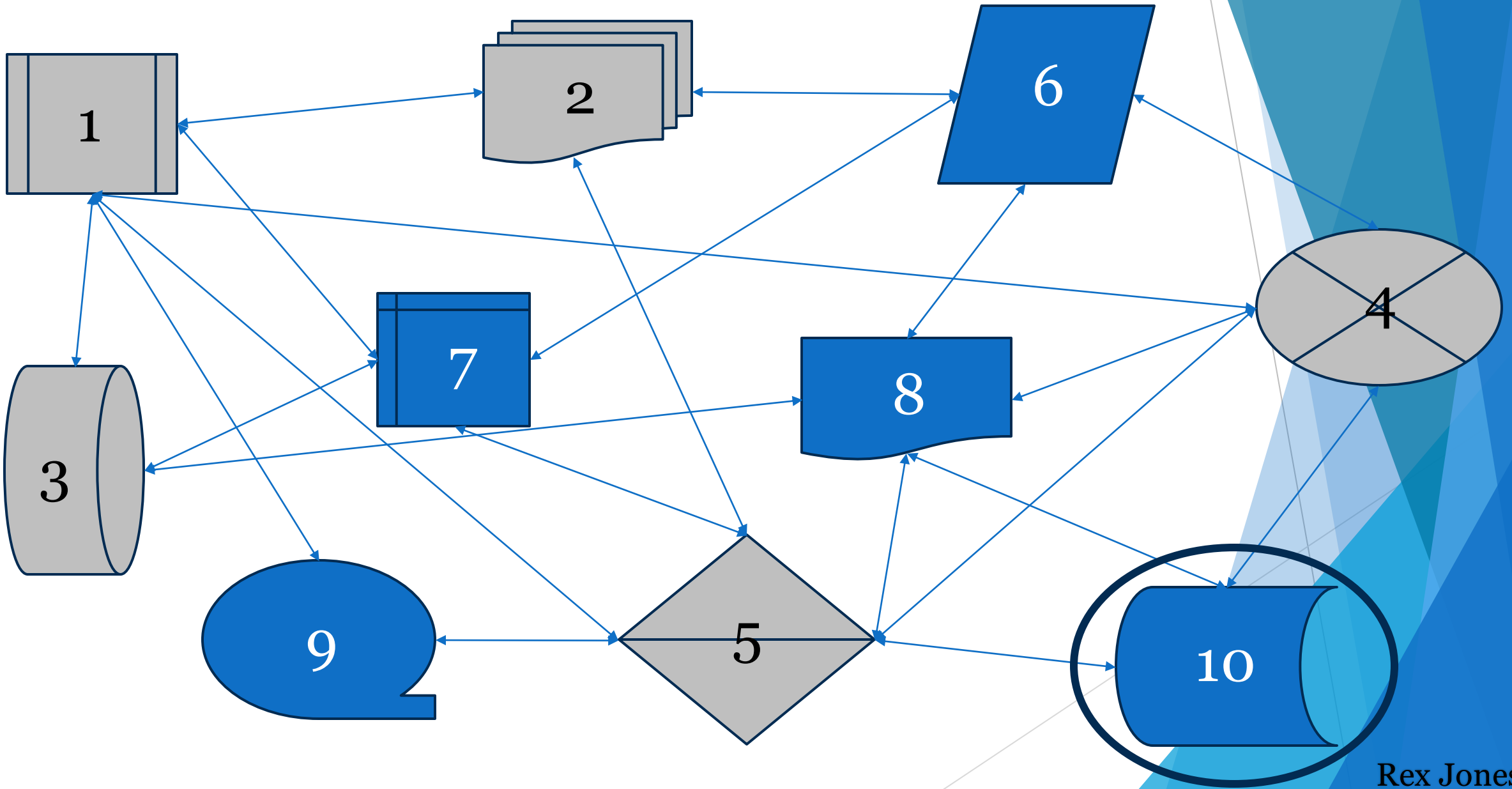
Selenium Automation Benefits

- Open Source
- Implement With CI/CD
- Support Multiple Browsers & OS
- Helps With Regression Testing

Application Features



4 Tutorial Parts

1) Set Up Project & Create 1st Selenium Test
2) Create Page Object Model
3) Working With WebElements
4) Selenium Interfaces & Methods For Unique Situations

4 Tutorial Parts

1) **Set Up Project & Create 1st Selenium Test**
2) Create Page Object Model
3) Working With WebElements
4) Selenium Interfaces & Methods For Unique Situations

Part 1

Selenium With Java Using Page Object Model

- Set Up Project
- First Selenium Test

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Set Up Project

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First Selenium Test

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4 Tutorial Parts

- ✓ Set Up Project & Create 1st Selenium Test
- **2) Create Page Object Model**
- 3) Working With WebElements
- 4) Selenium Interfaces & Methods For Unique Situations

Part 2

Selenium With Java Using Page Object Model

- Introduce Page Object Model
- Create Page Object Model
- Create Test Using Page Object Model

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Introduce Page Object Model

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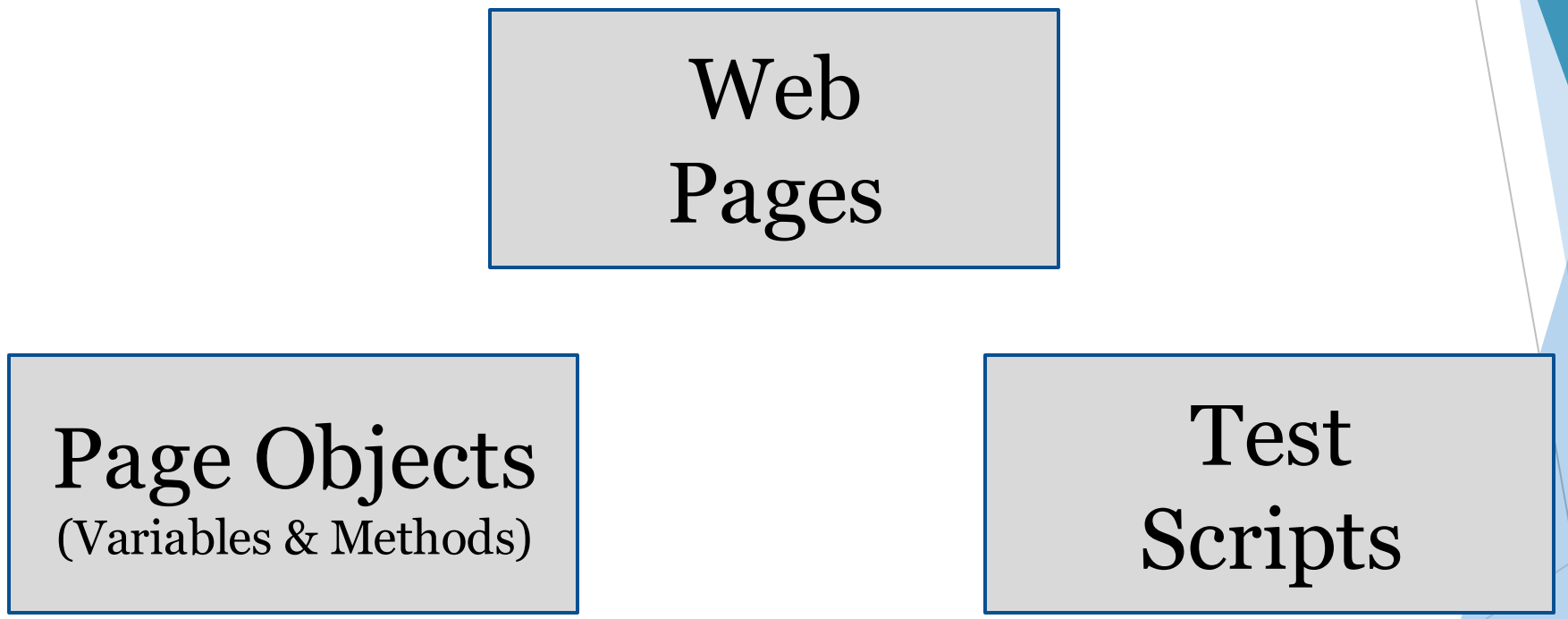
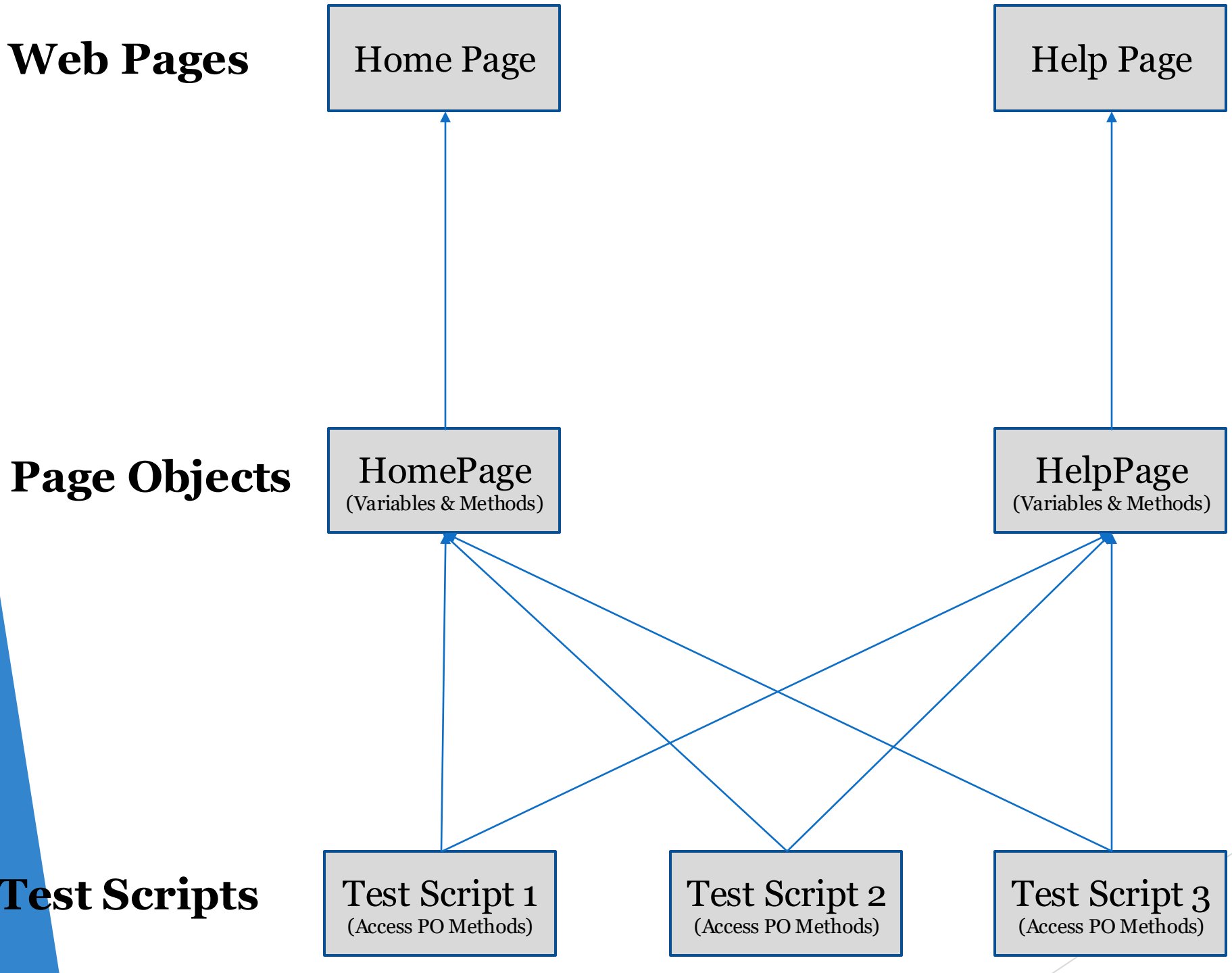
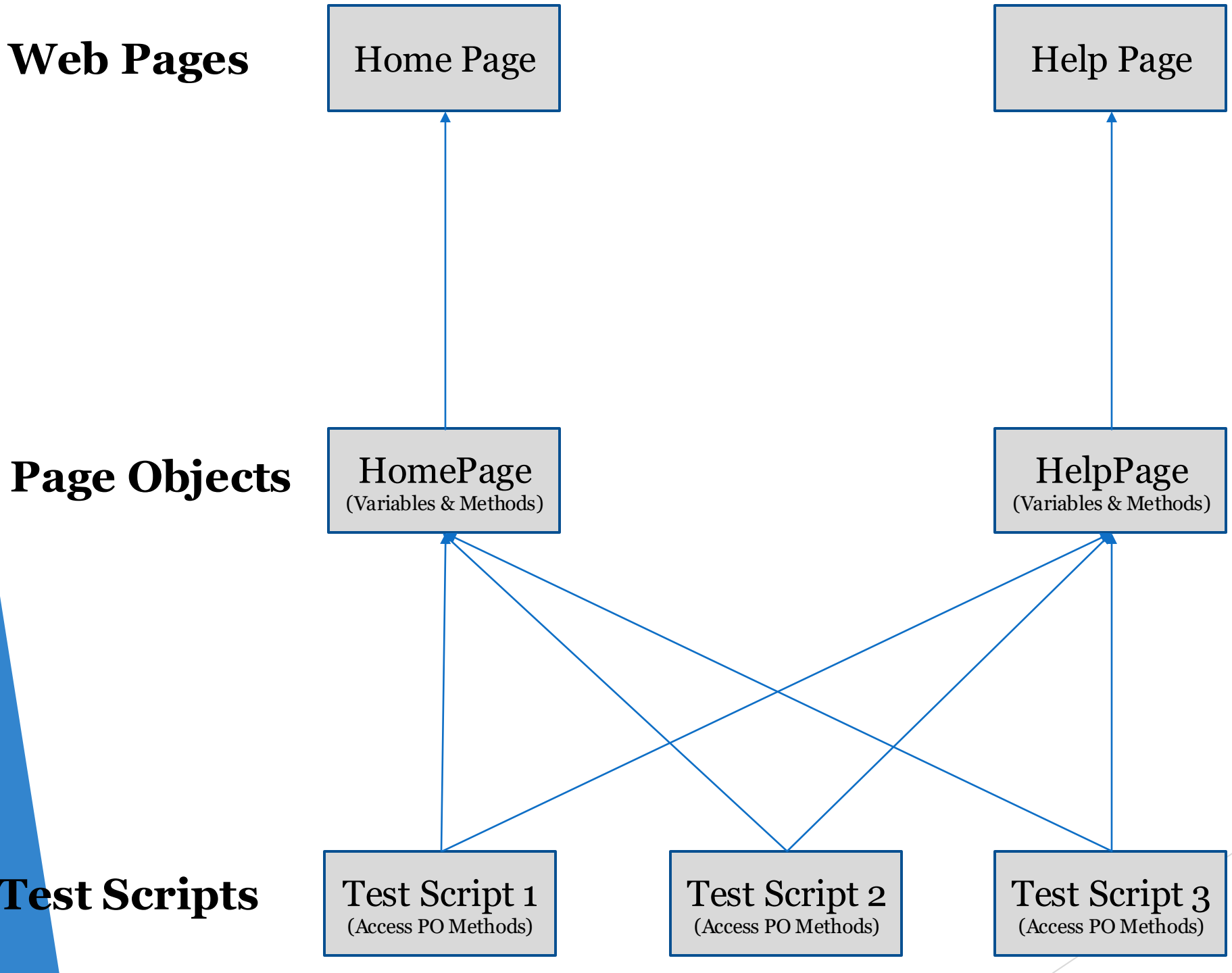
Page Object Model Design Pattern



Benefits of Page Object Model

- **Code Reusability** - reuse code in multiple locations in our program
- **Code Readability** - code is easy to follow
- **Code Maintainability** - take less time to make a change to our code


Web Pages
Home Page
Help Page
Page Objects
HomePage
(Variables & Methods)
HelpPage
(Variables & Methods)
Test Scripts
Test Script 1
(Access PO Methods)
Test Script 2
(Access PO Methods)
Test Script 3
(Access PO Methods)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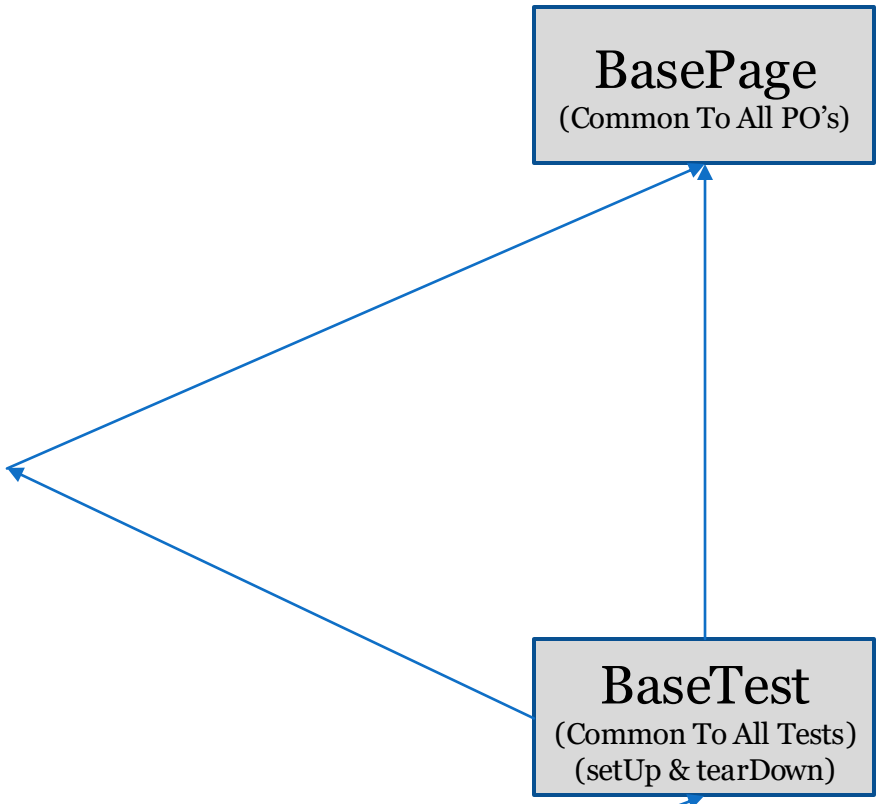
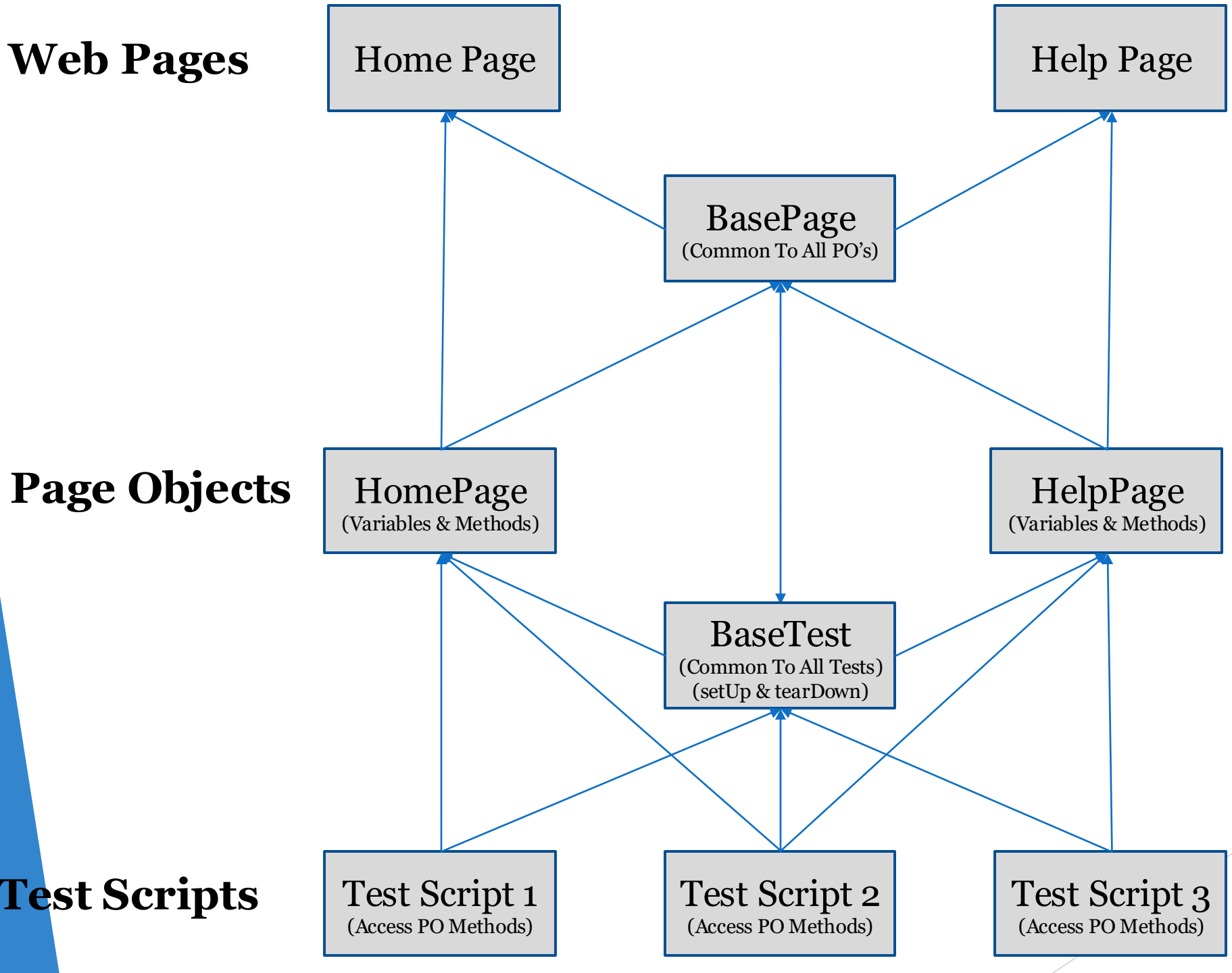
Web Pages



Page Objects

Test Scripts


Web Pages
Home Page
Help Page
BasePage
(Common To All PO's)
Page Objects
HomePage
(Variables & Methods)
HelpPage
(Variables & Methods)
BaseTest
(Common To All Tests)
(setUp & tearDown)
Test Scripts
Test Script 1
(Access PO Methods)
Test Script 2
(Access PO Methods)
Test Script 3
(Access PO Methods)

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Create Page Object Model

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BasePage

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LoginPage

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ProductsPage

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Create Test Using Page Object

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WebDriver API's

> *If you have WebDriver APIs in your test methods, You're Doing It Wrong.*
>
> *Simon Stewart.*

BaseTest

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Login Test Script

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Products Test Script

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4 Tutorial Parts

- ✓ Set Up Project & Create 1st Selenium Test
- ✓ Create Page Object Model
- 3) **Working With WebElements**
- 4) Selenium Interfaces & Methods For Unique Situations

Part 3

Selenium With Java Using Page Object Model

- Scroll Using JavaScriptExecutor
- Work With Radio Buttons
- Work With Checkboxes
- Work With Drop Downs
- Work With Tables
- Work With Links
- Work With Dates

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Scroll Using JavaScriptExecutor

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Work With Radio Buttons

Rex Jones II

Work With Checkboxes

Rex Jones II

Work With Tables

Rex Jones II

Work With Links

Rex Jones II

Work With Drop Downs

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Work With Dates

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4 Tutorial Parts

- ✓ Set Up Project & Create 1st Selenium Test
- ✓ Create Page Object Model
- ✓ Working With WebElements
- 4) **Selenium Interfaces & Methods For Unique Situations**

Part 4

Selenium With Java Using Page Object Model

- How To Take A Screenshot
- How To Handle A Modal
- Switch To Alerts
- Switch To Frames
- Switch To Windows
- Dynamic Wait Statements
- Selenium Interactions

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Take A Screenshot

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How To Handle A Modal

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Switch To Alerts

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Alert Types

1. Information Alert
2. Confirmation Alert
3. Prompt Alert

Information Alert

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Confirmation Alert

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Prompt Alert

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Switch To Frames

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Switching To Frames

1. Switch To Frames Using **String**
2. Switch To Frames Using **Index**
3. Switch To Frames Using **WebElement**

Switch To Frame Using String

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Switch To Frame Using Index

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Switch To Frame Using WebElement

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Switch To Windows

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Switch Method Types For Windows

Method	Description
getWindowHandle()	Get the current window handle
getWindowHandles()	Get the current window handles
switchTo().window()	Switch focus between windows

Dynamic Wait Statements

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Selenium Wait Methods

Method	Description
Thread.sleep()	(Not a Selenium Wait Method) Causes execution to sleep for a certain number of milliseconds
Page Load Timeout	Sets the wait time for a page to load before throwing an error
Script Timeout	Sets the wait time for JavaScript to execute before throwing an error
Implicit Wait	Instructs WebDriver to wait for all WebElements connected to the driver
Explicit Wait	Pauses execution until time has expired or an expected condition is met via WebDriverWait class
Fluent Wait	A specialization used by Explicit Wait and extended by the WebDriverWait class

Explicit Wait

Fluent Wait

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Implicit Wait

Page Load & Script Timeout

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Selenium Interactions

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Selenium Interactions

- Simulate Mouse Movements
- Simulate Keyboard Events

Simulate Mouse Movements

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Simulate Keyboard Events

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4 Tutorial Parts

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- ✓ Work With WebElements
- ✓ Selenium Interfaces & Methods For Unique Situations


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