1. Perquisites

☒Installing Java

☒ Installing Eclipse

☒ Installing Firefox

☒ Installing Firebug

☒ Installing FirePath

☒ Downloading WebDriver client library (language bindings)

☒ Downloading the Firefox Driver

☒ Downloading the Example Code

1. ☒ Introducing WebDriver and WebElements
   1. ☒ Understanding the history of Selenium
      1. ☒ Selenium 1 or Selenium Remote Control or Selenium RC
      2. ☒ Selenium 2 or Selenium WebDriver or WebDriver
      3. ☒ Differences between Selenium 1 and Selenium 2
         1. ☒ Handling the browser
         2. ☒ Having better APIs
         3. ☒ Testing mobile apps
         4. ☒ Having developer support and advanced functionalities
   2. ☒ Setting up a project in Eclipse
   3. ☒ WebElements
      1. ☒ Locating WebElements using WebDriver
         1. ☒ The findElement() method
         2. ☒ The findElements() method
         3. ☒ Firebug
         4. ☒ Using the By locating mechanism
            1. ☒ The By.name() method
            2. ☒ The By.id() method
            3. ☒ The By.tagName() method
            4. ☐ The By.className() method
            5. ☐ The By.linkText() method
            6. ☒ The By.partialLinkText() method
            7. ☒ The By.xpath() method
            8. ☒ The By.cssSelector() method
      2. ☒ Actions on WebElements
         1. ☒ The getAttribute() method
         2. ☒ The sendKeys() method
         3. ☒ The clear() method
         4. ☒ The submit() method
         5. ☒ The getCssValue() method
         6. ☒ The getLocation() method
         7. ☒ The getSize() method
         8. ☒ The getText() method
         9. ☒ The getTagName() method
         10. ☒ The isDisplayed() method
         11. ☒ The isEnabled() method
         12. ☒ The isSelected() method
   4. ☒ Summary
2. ☒ Exploring Advanced Interactions of WebDriver
   1. ☒ Understanding actions, build, and perform
      1. ☒ Learning mouse-based interactions
         1. ☒ The moveByOffset action
         2. ☒ The click at current location action
         3. ☒ The click on a WebElement action
         4. ☒ The clickAndHold at current location action
         5. ☒ The clickAndHold a WebElement action
         6. ☒ The release at current location action
         7. ☒ The release on another WebElement action
         8. ☒ The moveToElement action
         9. ☒ The dragAndDropBy action
         10. ☒ The dragAndDrop action
         11. ☒ The doubleClick at current location action
         12. ☒ The doubleClick on WebElement action
         13. ☒ The contextClick on WebElement action
         14. ☒ The contextClick at current location action
      2. ☒ Learning keyboard-based interactions
         1. ☒ The keyDown and keyUp actions
         2. ☒ The sendKeys() method
   2. ☒ Summary
3. ☒ Exploring the Features of WebDriver
   1. ☒ Setting the desired capabilities for a browser
   2. ☒ Taking screenshots
   3. ☒ Locating target windows and iFrames
      1. ☒ Switching among windows
      2. ☒ Switching among frames
      3. ☒ Handling alerts
   4. ☒ Exploring Navigate
   5. ☒ Waiting for WebElements to load
      1. ☒ Implicit wait time
      2. ☒ Explicit wait time
   6. ☒ Handling cookies
   7. ☒ Summary
4. ☒ Different Available WebDrivers
   1. ☒ FirefoxDriver
      1. ☒ Understanding the Firefox profile
         1. ☒ Adding the extension to Firefox
         2. ☒ Storing and retrieving a profile
      2. ☒ Dealing with Firefox preferences
         1. ☒ Setting preferences
         2. ☒ Understanding frozen preferences
      3. ☒ Firefox binary
         1. ☒ Installing multiple versions of Firefox
   2. ☒ InternetExplorerDriver
      1. ☒ Installing InternetExplorerDriver
      2. ☒ Writing your first test script for the IE browser
      3. ☒ Building the InternetExplorer driver service
      4. ☒ Understanding IEDriver capabilities
   3. ☒ ChromeDriver
      1. ☒ Installing ChromeDriver
      2. ☒ Writing your first test script for the Chrome browser
      3. ☒ Using ChromeOptions
   4. ☒ SafariDriver
      1. ☒ Writing your first test script for the Safari browser
   5. ☒ OperaDriver
      1. ☒ Installing OperaDriver
      2. ☒ Writing your first test script for the Opera browser
   6. ☒ Summary

6. ☒ Understanding WebDriver Events

1. ☒ Introducing EventFiringWebDriver and EventListener classes
2. ☒ Creating an instance of EventListener
   1. ☒ Implementing WebDriverEventListener
   2. ☒ Extending AbstractWebDriverEventListener
   3. ☒ Creating a WebDriver instance
   4. ☒ Creating EventFiringWebDriver and EventListener instances
   5. ☒ Registering EventListener with EventFiringWebDriver
   6. ☒ Executing and verifying the events
      1. ☒ Registering multiple EventListeners
3. ☒ Exploring different WebDriver event listeners
   1. ☒ Listening for WebElement value change
   2. ☒ Listening for WebElement clicked
   3. ☒ Listening for a WebElement search event
   4. ☒ Listening for browser back navigation
   5. ☒ Listening for browser forward navigation
   6. ☒ Listening for browser navigateTo events
   7. ☒ Listening for script execution
   8. ☒ Listening for any exception
   9. ☒ Unregistering EventListener with EventFiringWebDriver
4. ☒ Summary

7. ☒ Exploring RemoteWebDriver and WebDriverBackedSelenium

* 1. ☒ Introducing RemoteWebDriver
     1. ☒ Understanding the RemoteWebDriver server
        1. ☒ Downloading the server
        2. ☒ Running the server
     2. ☒ Understanding the RemoteWebDriver client
        1. ☒ Converting an existing test script to use RemoteWebDriver server
     3. ☐ Using RemoteWebDriver for the Firefox browser
     4. ☒ Using RemoteWebDriver and the IE browser
     5. ☒ Using RemoteWebDriver and the Chrome browser
     6. ☒ Extending the RemoteWebDriver client to take screenshots
  2. ☒ Understanding the JSON wire protocol
  3. ☒ Replacing the client library with your own code
  4. ☒ Exploring WebDriverBackedSelenium
  5. ☒ Summary

8. ☒ Understanding Selenium Grid

* 1. ☒ Exploring Selenium Grid
  2. ☒ Understanding the hub
  3. ☒ Understanding the node
  4. ☒ Modifying the existing test script to use Selenium Grid
     1. ☒ Requesting for nonregistered capabilities
     2. ☒ Queuing up the request if the node is busy
     3. ☒ Dealing with two nodes with matching capabilities
  5. ☒ Configuring Selenium Grid
     1. ☒ Specifying node configuration parameters
        1. ☒ Setting supported browsers by a node
        2. ☒ Setting node timeouts
        3. ☒ Setting the limit on browser instances
        4. ☒ Reregistering the node automatically
        5. ☒ Setting node health-check time
        6. ☒ Unregistering an unavailable node
        7. ☒ Setting the browser timeout
     2. ☒ Hub configuration parameters
        1. ☒ Waiting for a match of desired capability
        2. ☒ Customized CapabilityMatcher
        3. ☒ WaitTimeout for a new session
     3. ☒ Different ways to specify the configuration
  6. ☒ Summary

9. ☒ Understanding PageObject Pattern

* 1. ☒ Creating test cases for our WordPress blog
     1. ☒ Test case 1 – Adding a new post to our WordPress blog
     2. ☒ Test case 2 – Deleting a post from our WordPress blog
     3. ☒ Test case 3 – Counting the number of posts on our WordPress blog
  2. ☒ What is the PageObject pattern?
     1. ☒ Using the @FindBy annotation
     2. ☒ Understanding PageFactory
  3. ☒ Good practices for the PageObjects design
     1. ☒ Consider a web page as a services provider
     2. ☒ Always look for implied services
     3. ☒ Using PageObjects within a PageObject
        1. ☒ The AddNewPost PageObject
        2. ☒ The AllPostsPage PageObject
     4. ☒ Consider methods in PageObjects as services and not as User Actions
     5. ☒ Identifying some WebElements on the fly
     6. ☒ Keeping the page-specific details off the test script
  4. ☒ Understanding loadable components
  5. ☒ Working on an end-to-end example of WordPress
     1. ☒ Looking at all the PageObjects
        1. ☒ The AdminLoginPage PageObject
        2. ☒ The AllPostsPage PageObject
        3. ☒ The AddNewPostPage PageObject
        4. ☒ The EditPostPage PageObject
        5. ☒ The DeletePostPage PageObject
     2. ☒ Looking at the test cases
        1. ☒ Adding a new post
        2. ☒ Editing a post
        3. ☒ Deleting a post
        4. ☒ Counting posts
  6. ☒ Summary

10. ☒ Testing iOS and Android Apps

* 1. ☒ Different forms of mobile applications
  2. ☒ Available software tools
  3. ☒ Automating iOS and Android tests using Appium
     1. ☒ Automating iOS application tests
     2. ☒ Automating Android application tests
     3. ☒ Prerequisites for Appium
        1. ☒ Setting up Xcode
        2. ☒ Setting up Android SDK
           1. ☒ Creating Android Emulator
           2. ☒ Using real device for executing your tests
     4. ☒ Installing Appium
     5. ☒ Automating for iOS
     6. ☒ Automating for Android

1. ☒ Summary