

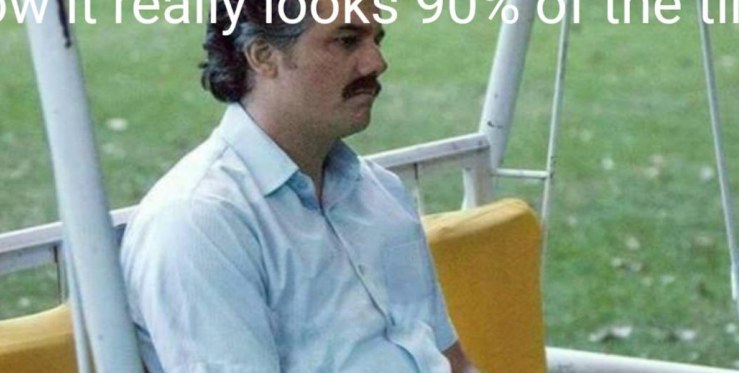
# CYDEO

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# How people think programming looks

How it really looks 90% of the time

A man with a mustache, wearing a light blue short-sleeved button-down shirt, is sitting on a yellow swing. He is looking off to the side with a neutral expression. The swing is part of a larger set with white metal frames. The background is a grassy area with some trees in the distance.

# Topics

- FindElements
- FindElement vs FindElements
- Checkboxes
- Radiobuttons
- Practices

# findElement()

- This method is used to locate a single web element
- Returns a single web element
- Return type is:
  - → “WebElement”
- If it cannot find a WebElement:
  - → throws **NoSuchElementException**.

# findElements() method

- This method is used to find more than one webElement
- Locates and returns all the matching web elements in a list
- Return type:
  - → List <WebElement>
- If it cannot find a webElement:
  - → Does **NOT** throw exception.
- Only returns an **empty list**.



# THREAD SLEEP

- `Thread.sleep(2000);` ==> this is **not Selenium**.
- `Thread.sleep` comes from java.
- STOPS the running of the code for the given milliseconds
- This is not recommended to use.

# IMPLICIT WAIT

- `driver.manage().timeouts().implicitlyWait(15, TimeUnit.SECONDS);`
- `implicitlyWait` is a type of **Selenium waits.**
- `implicitlyWait` will check DOM (HTML PAGE) and wait until given seconds if there are any web elements not available
- `implicitlyWait` will continue when the page is loaded.
- it does NOT have to wait until given seconds, if the page loaded.
- It is triggered ONLY if `.findElement/s` method can't locate web elements immediately.
- By default its value is 0, so it is basically turned off.

# `<input>` - RADIO BUTTON

`type="radio"`

Radio buttons allow users to pick just one of a number of options

`name`

The name attribute is sent to the server with the value of the option the user selects.

`value`

The value attribute determines the value that is sent to the server for the selected option. The value of each of the buttons in a group should be different.



# RADIO BUTTON

```
<form>
  <p>Please select your favorite food:
  <br/>
  <input type="radio" name="food" value="burger"
    checked="checked"/>Burger
  <input type="radio" name="food" value="Kabab"/>Kabab
  <input type="radio" name="food" value="Salad"/>Salad
  </p>
</form>
```

Please select your favorite food:  
☒ Burger ☐ Kabab ☐ Salad

# `<input>` - CHECKBOX

`type="checkbox"`

Checkboxes allow users to select(and unselect) one or more options in answer to a question.

`name`

The name attribute is sent to the server with the value of the option(s) the user selects.

`value`

The value attribute indicates the value sent to the server if this checkbox is checked.

# What are the differences between radio button and checkboxes?

- Each **checkbox** operates individually.
- Options are independent from each other.
- So users are allowed to select **multiple options** at once.
- **Radio buttons**, however, operate as a **group** and are used to allow user to select one from a set of options.
- So users are allowed to select only **one option**.

## CHECKBOXES

☒ red  
☒ blue  
☒ green

## RADIOBUTTONS

☐ red  
☐ blue  
☒ green

## Select your car (s)

- ☐ mercedes
- ☐ bmw
- ☐ toyota

## Select one color

- ☐ red
- ☐ blue
- ☐ green

```
<h2>Select your car (s)</h2>
<input type="checkbox" name="option1" value="mercedes">mercedes <br>
<input type="checkbox" name="option2" value="bmw">bmw <br>
<input type="checkbox" name="option3" value="toyota">toyota <br>
<h2>Select one color</h2>
<input type="radio" name="option" value="red">red
<input type="radio" name="option" value="blue">blue
<input type="radio" name="option" value="green">green
```

# How do we handle checkboxes and radio button in Selenium?

1. We can click.
2. `.isSelected()`; --> if checkbox is selected it will return true, else false
3. `.isEnabled()`; --> if checkbox is enabled on the page, it will return true, else false.

# Syntax:

- `WebElement checkbox = driver.findElement(By.locator);`
- `checkbox.click();`
- `checkbox.isSelected()` --> will return true if checkbox is selected.

# What is StaleElementReferenceException?

- Usually throws when navigation (refresh, forward, back) happens
- OR
- When the element is deleted from the page
- The driver loses its reference of the web element and throws this exception
- Stale word meaning...
- [https://www.selenium.dev/exceptions/#stale\\_element\\_reference](https://www.selenium.dev/exceptions/#stale_element_reference)

# When does it happen?

- When the element is completely deleted from the HTML page.
- When navigation happens on the page.



# How to handle StaleElementReferenceException?

- If StaleElementReferenceException is happening due to element being deleted from the page, then we can handle the situation using try/catch to avoid exception being thrown and set our own condition.
- If StaleElementReferenceException happening due to navigate, we can re-assign the reference/connection of the web element.