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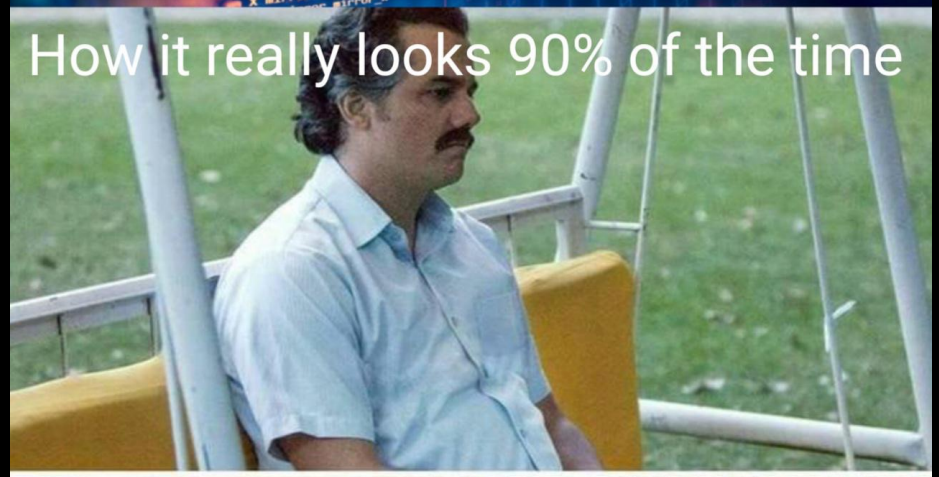
findElements() Method
CheckBox
Radio Button

How people think programming looks


How it really looks 90% of the time

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Topics

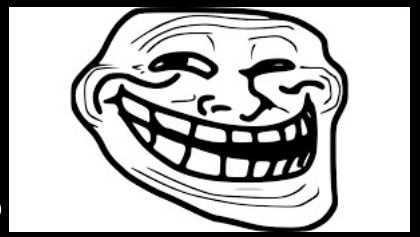
- FindElements
- FindElement vs FindElements
- Checkboxes
- Radiobuttons
- Practices

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);

- implicitWait is a type of **Selenium waits.**
- implicitWait will check DOM (HTML PAGE) and wait until given seconds if there are any web elements not available
- implicitWait 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

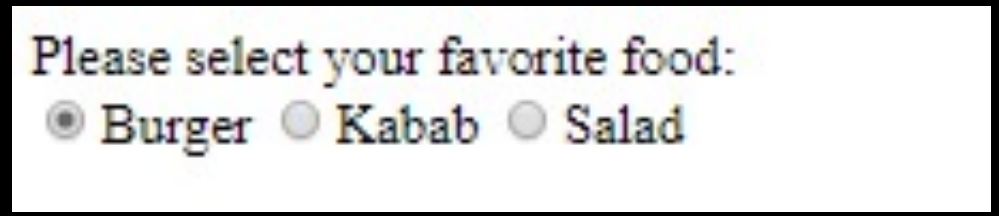
The name attribute is sent to the server with the value of the option the user selects.

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>
```



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<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.

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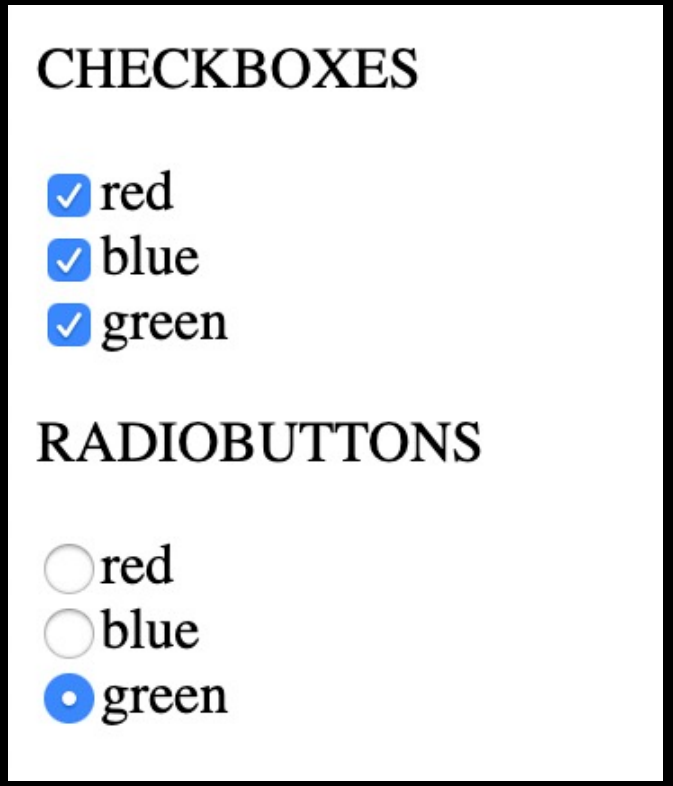
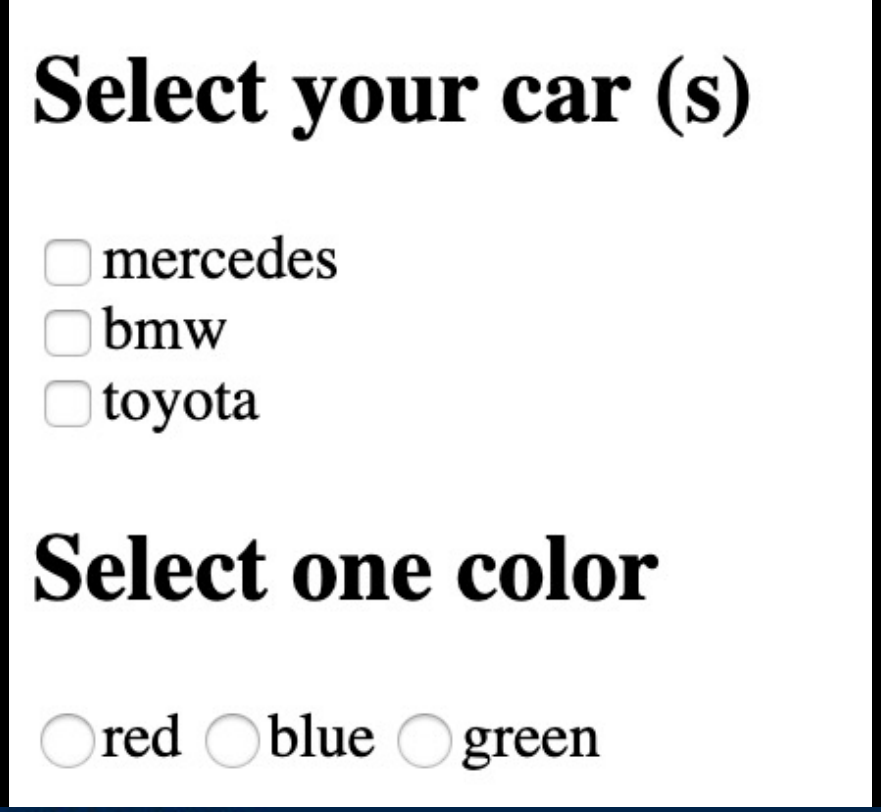
What are the differences between radio button and checkboxes?

- 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.






```
<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
```

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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.

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

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.