



DataArt



QA Automation

Locators. Requirements. Environment.

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HTML

Hypertext Markup Language (HTML) is the standard markup language for documents designed to be displayed in a web browser. It can be assisted by technologies such as Cascading Style Sheets (CSS) and scripting languages such as JavaScript.

HTML Tags

Page base (Tags: `<html>`, `<head>`, `<body>`)

Page title (Tags: `<title>`)

Headers (Tags: `<h1>`, `<h2>`, `<h3>`, `<h4>`, `<h5>`, `<h6>`)

Paragraphs (Tags: `<p>`)

Image (Tags: ``)

Line brake (Tags: `
`)

Horizontal line (Tags: `<hr />`)

Hyperlink (Tags: `<a>`)

Lists (Tags: ``, ``, ``)

Containers (Tags: `<div>`, ``)

Table (Tags: `<table>`, `<tr>`, `<td>`, `<th>`)

Locator Types

Simple

Id
Name
Class
LinkText
PartialLinkText
TagName

Complex

CSS
XPath

Simple Locators



Easy to write
Support
Performance

Complex Locators

When there is no way to use simple
Item need to be searched by position (table)
Search by multiple item attributes
Search relative to other items

CSS Selectors

*****– find any element

button– find all elements with tag button

#myid– find element with id=myid

.myclass– find element with class=myclass

div[attribute='value']–find element div with an attribute 'value'

div button– find a child of a button inside a div at any nesting level

More here:

http://www.w3schools.com/cssref/css_selectors.asp

Xpath

/ - move to level 1

// - transition to several levels

//* - search for any item at any level

// div - search div at any level

/.. – rise to level

//div/button – find the button next to the div

//button[2] - find the second buttons (following the button)

Xpath

`//*[@id= 'myid']` - find an element on the page with id = myid

`//*[text()='some']` - find an element with some text

`//*[contains(@id, '123')]` - find the element whose id contains 123

`//*[@name!='Bob']` - find the element with the name NOT Bob

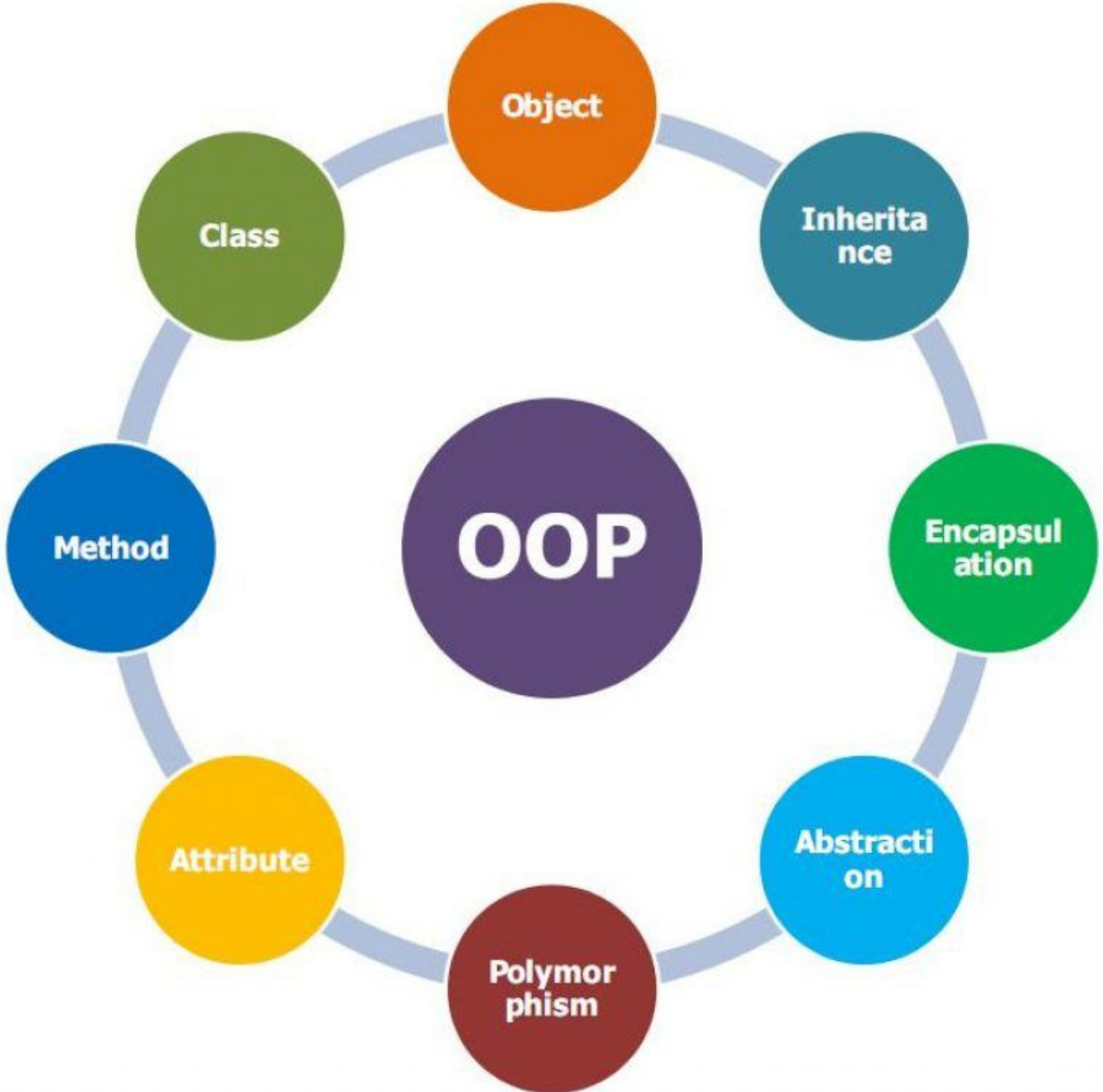
`//*[@class='a 'and @name='b']` - example AND

`//*[@class='a' or @name='b']` - OR example

http://www.w3schools.com/xsl/xpath_syntax.asp

OOP Principles

OOP Principles



OOP Principles

1. Encapsulation

2. Abstraction

3. Inheritance

4. Polymorphism

```
public class Employee {  
    private String name;  
    private Date dob;  
    public String getName() {  
        return name;  
    }  
    public void setName(String name) {  
        this.name = name;  
    }  
    public Date getDob() {  
        return dob;  
    }  
    public void setDob(Date dob) {  
        this.dob = dob;  
    }  
}
```

OOP Principles

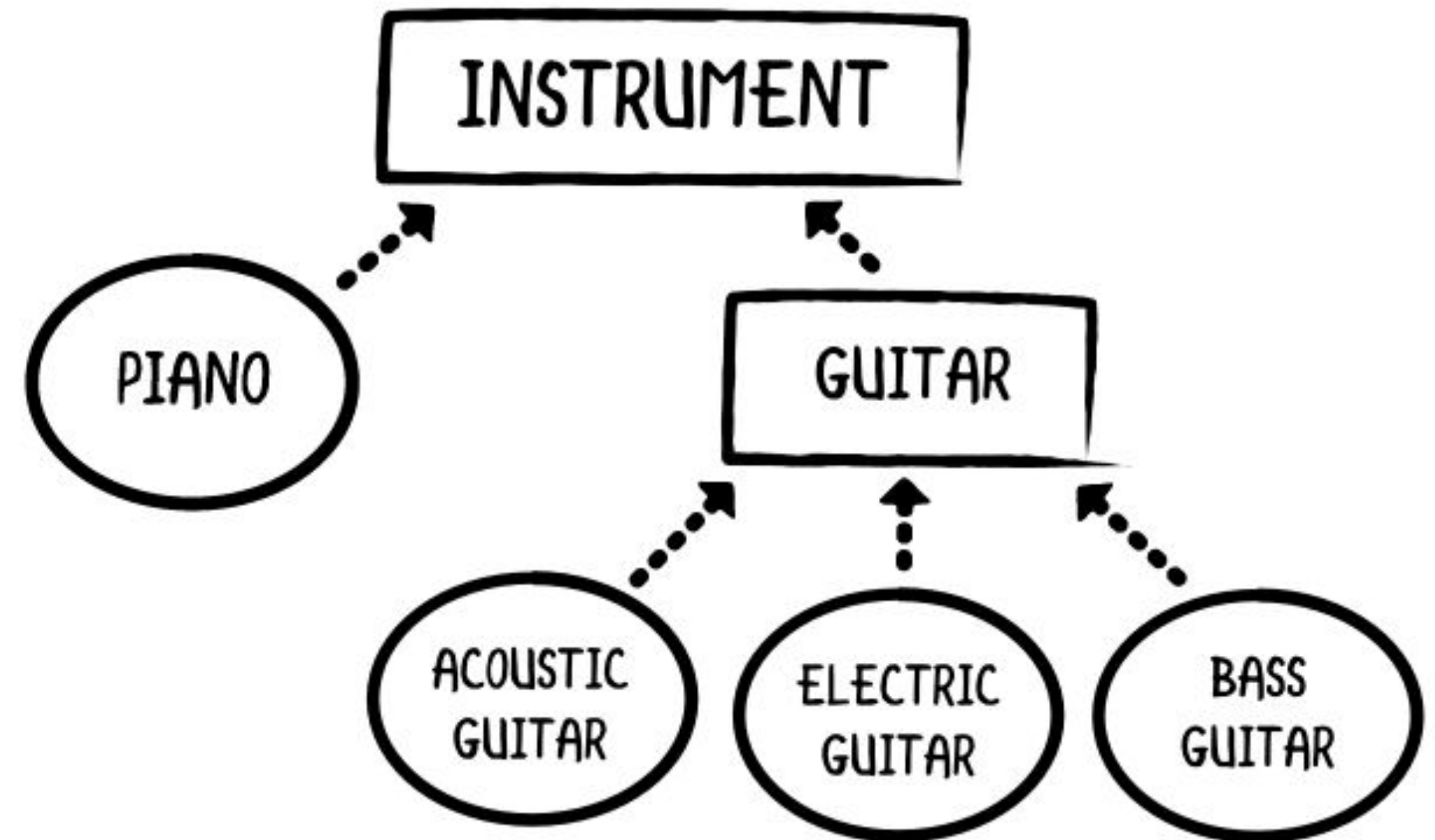


1. Encapsulation
- 2. Abstraction**
3. Inheritance
4. Polymorphism

```
public abstract class Employee {  
    private String name;  
    private String address;  
    private int number;  
  
    public abstract double  
computePay();  
    // Remainder of class definition  
}
```

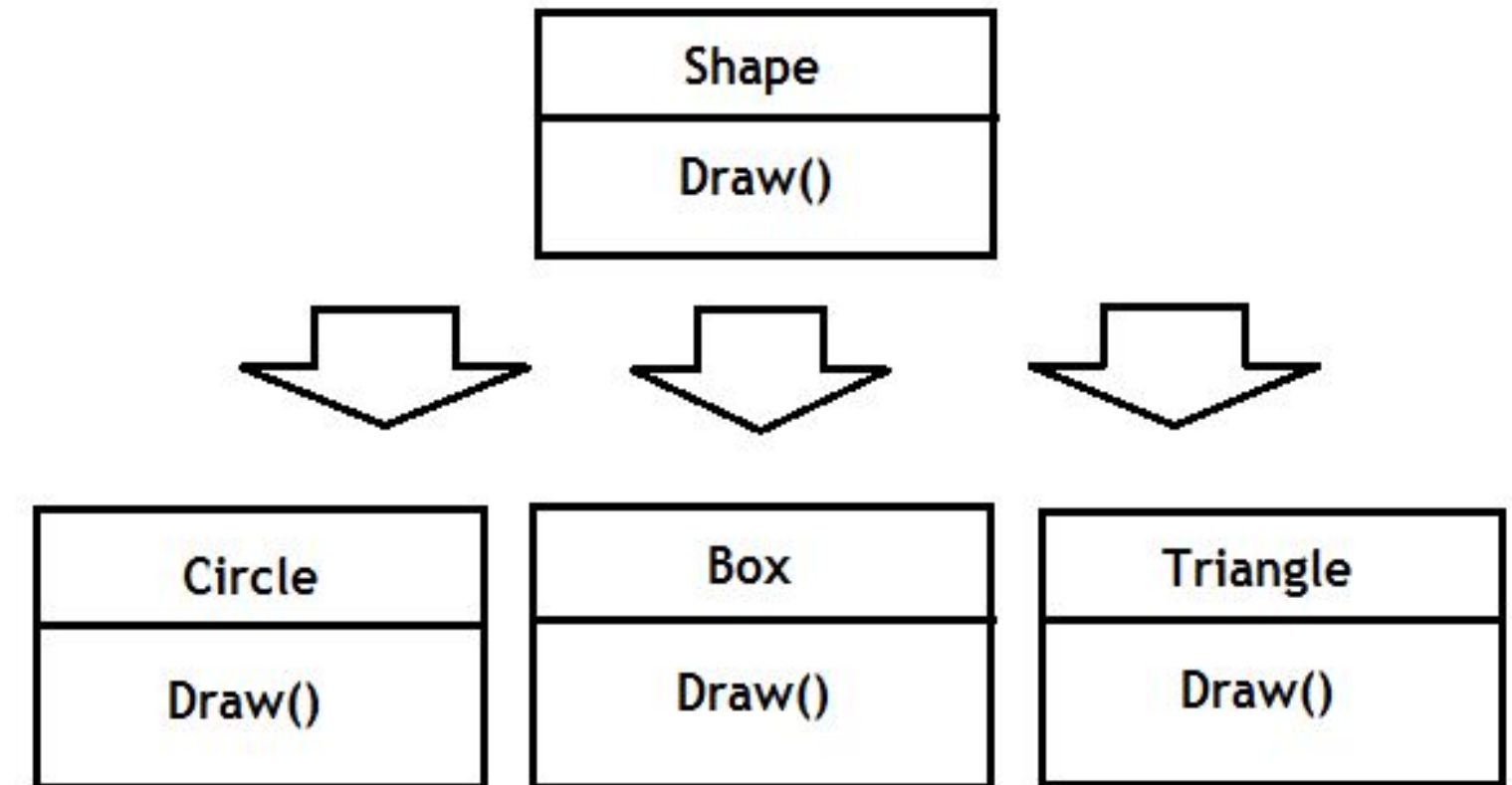

OOP Principles

- 1. Encapsulation
- 2. Abstraction
- 3. Inheritance**
- 4. Polymorphism



OOP Principles

1. Encapsulation
2. Abstraction
3. Inheritance
4. **Polymorphism**

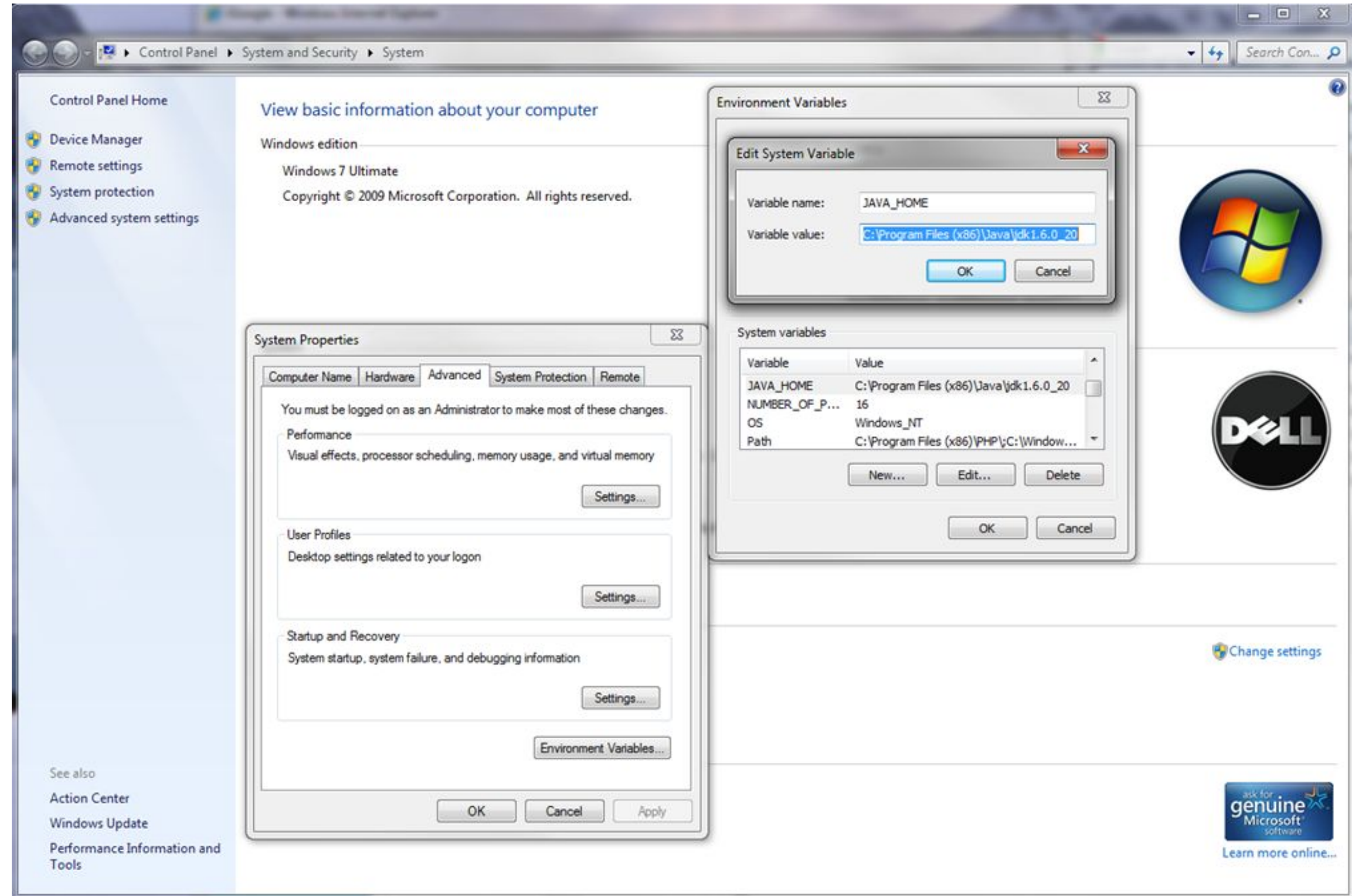


Java Basics

- Variables and methods
- Operators and data types (int, double, boolean, Strings etc)
- Modifiers (private, protected...; final, static, abstract)
- Loops (for, while, do-while)
- If-else, switch-case statements
- Collections (ArrayList, HashMap, HashSet etc)
- Exceptions (try/catch/throw/finally)
- Stream Filters with Lambda Expressions

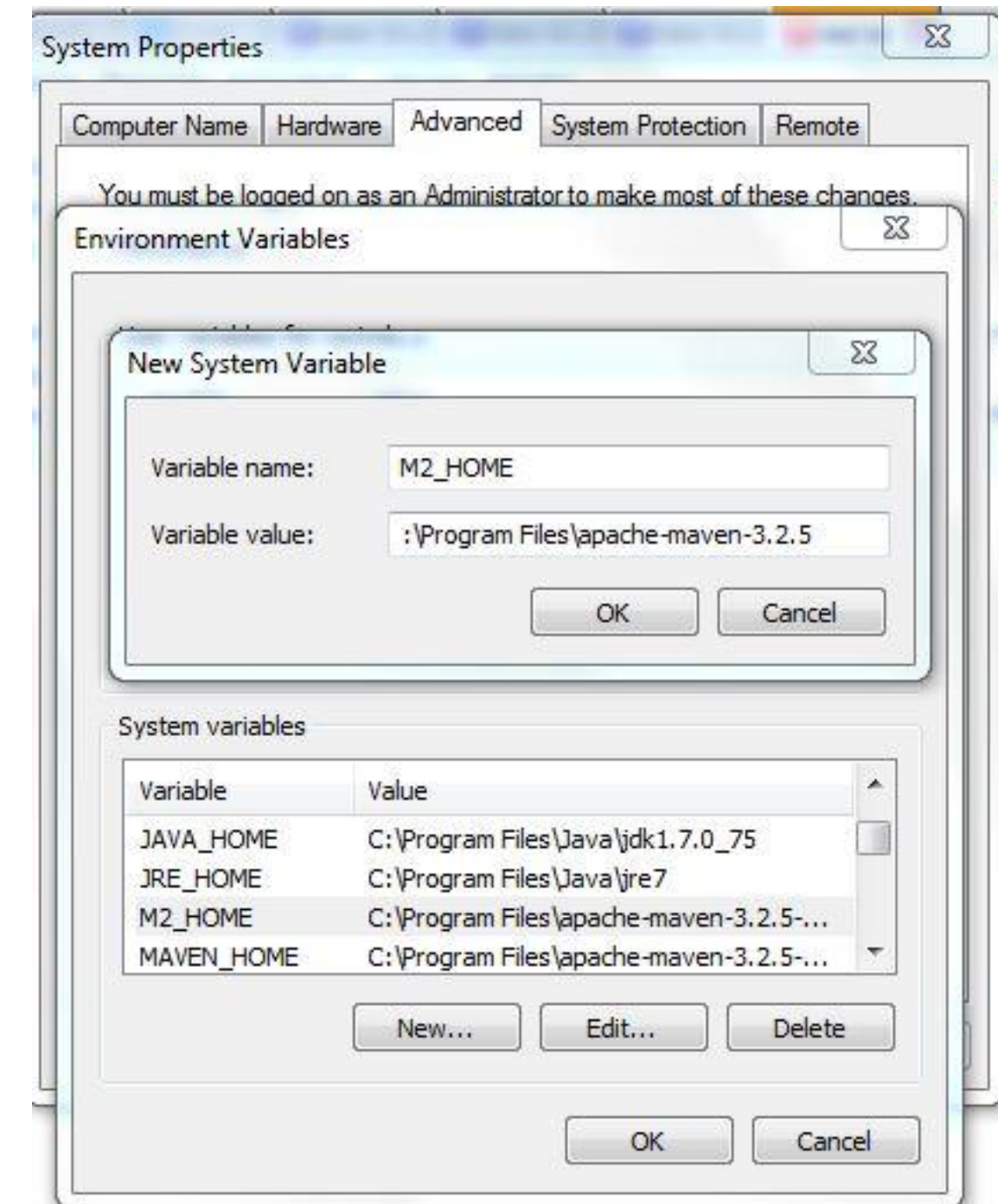
Java

- Download and install Java Development Kit 8+
- Set JAVA_HOME as environment variable (see pic).



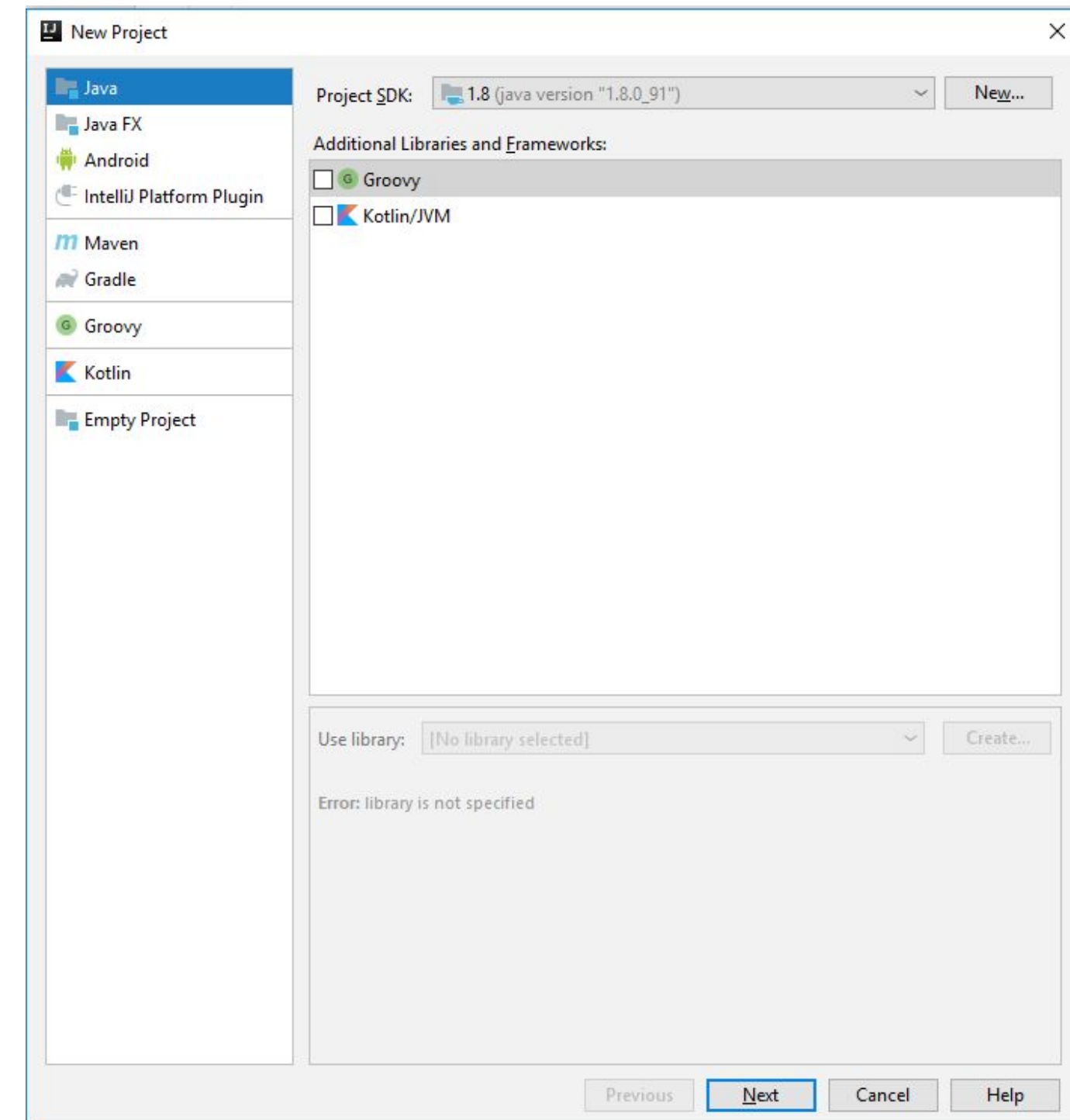
Maven

- Download and install Maven
- Set M2_HOME as environment variable (see pic).



IntelliJ IDEA

- Download **Community** version of IntelliJ IDEA.
- Open IntelliJ IDEA and create a new Maven Project.



Dependencies

- Search for TestNG and Selenium dependencies on <https://mvnrepository.com>
- Choose latest version
- Copy provided xml and paste it in pom.xml
- Download chromedriver

Annotations

@BeforeClass

@BeforeMethod

@BeforeTest

@Test

@AfterMethod

@AfterClass

@AfterTest

Assertions

```
assertTrue(logo.isDisplayed());
```

```
assertFalse(logo.isDisplayed());
```

```
assertEquals("Expected text", "Actual text")
```

```
assertNotEquals("Expected text", "Actual text")
```

```
assertNull(value)
```

```
assertNotNull(value)
```

QUESTIONS?