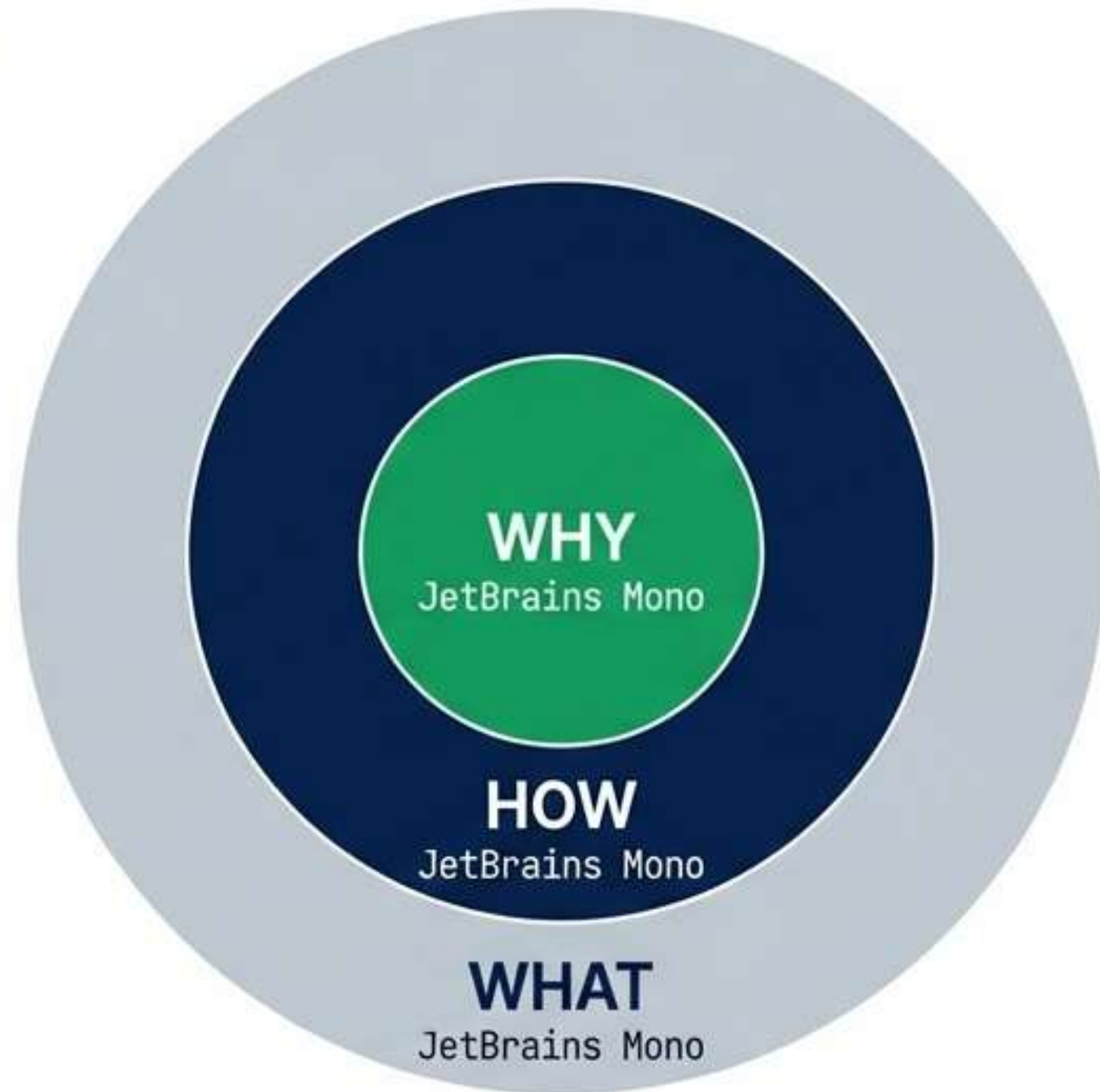




Essentials of Test Automation & Java

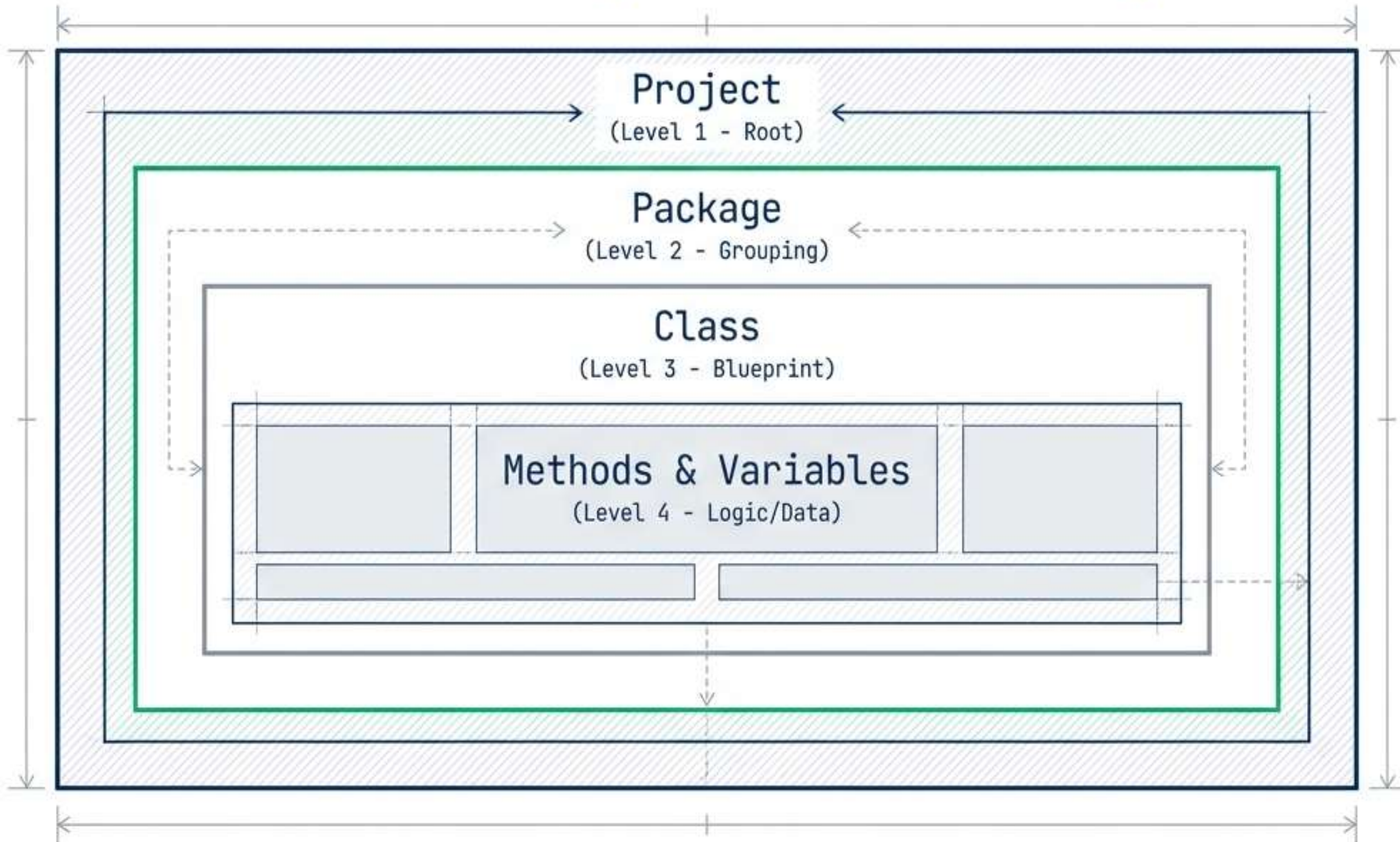
Foundation for Selenium WebDriver

The Golden Circle of Automation



- **Why:** Save time, save cost, improve quality.
- **How:** Utilising software tools (market-standard automation frameworks).
- **What:** Automating repetitive test scenarios with static logic.

The Anatomy of a Java Project



Execution Essentials

```
public static void main(String args[])
```

Entry Point: The JVM requires this specific signature to execute.

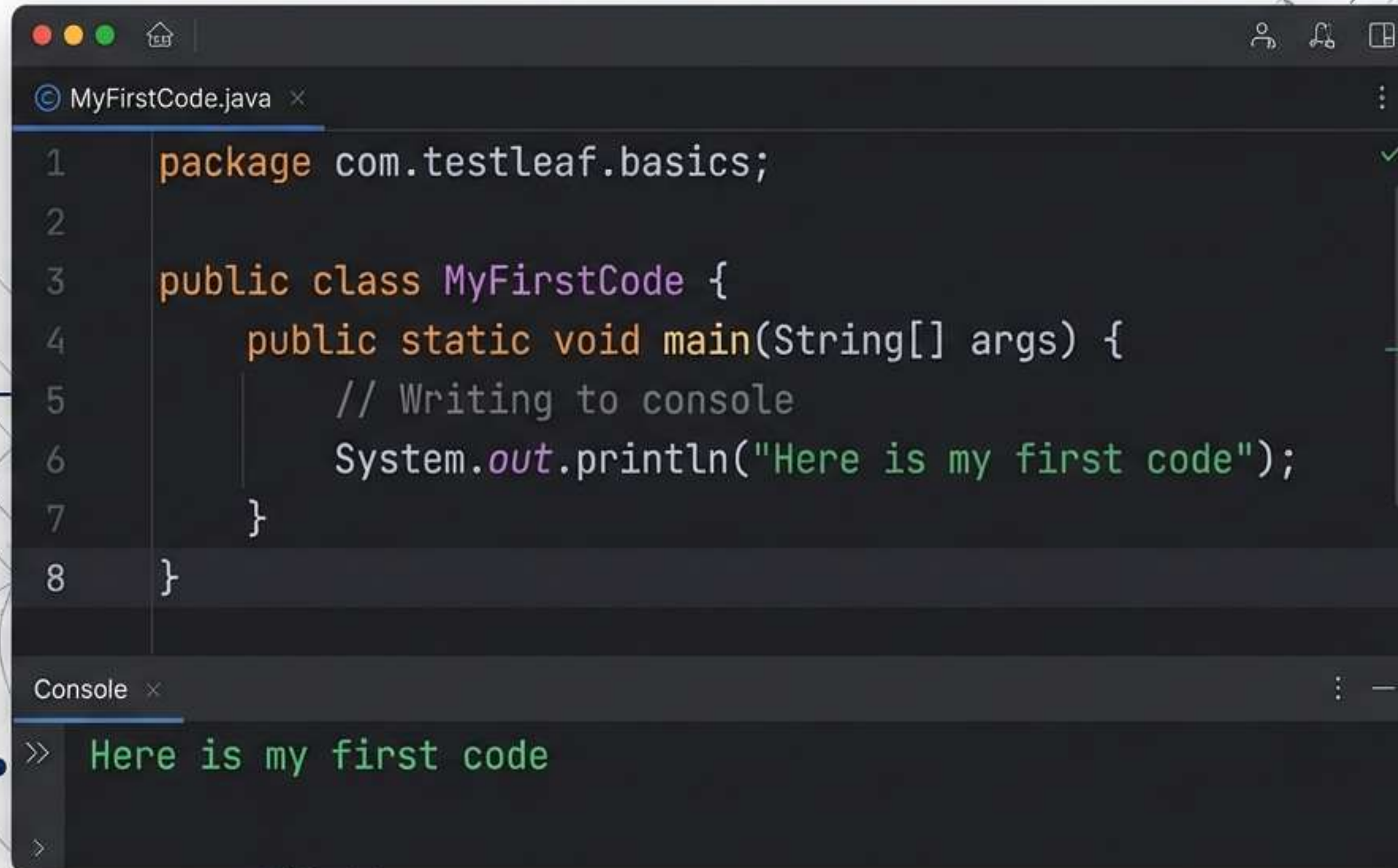
```
System.out.println()
```

Output: Prints values to the console for verification.

Pro-Tip

Use Ctrl + Space for auto-completion.

Real-World Example



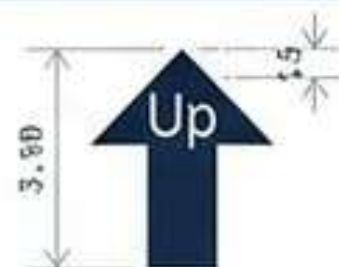
```
1 package com.testleaf.basics;
2
3 public class MyFirstCode {
4     public static void main(String[] args) {
5         // Writing to console
6         System.out.println("Here is my first code");
7     }
8 }
```

Console

>> Here is my first code

Naming Conventions & Best Practices

Case Sensitivity Rule: Java distinguishes between “String” and “string”.



Upper Case (PascalCase)

- Project Names
 - MyFirstCode (from Image-1)
- Class Names
 - MyFirstCode (from Image-1)



Lower Case (camelCase)

- Package Names
 - com.testleaf.basics
- Methods & Variables
 - main (from Image-1)
 - args (from Image-1)

Advanced Challenges: Implementation Pitfalls



Signature Mismatch

The main method must exactly match **'public static void main'**. Missing **'static'** or **'void'** prevents execution.



Case Sensitivity

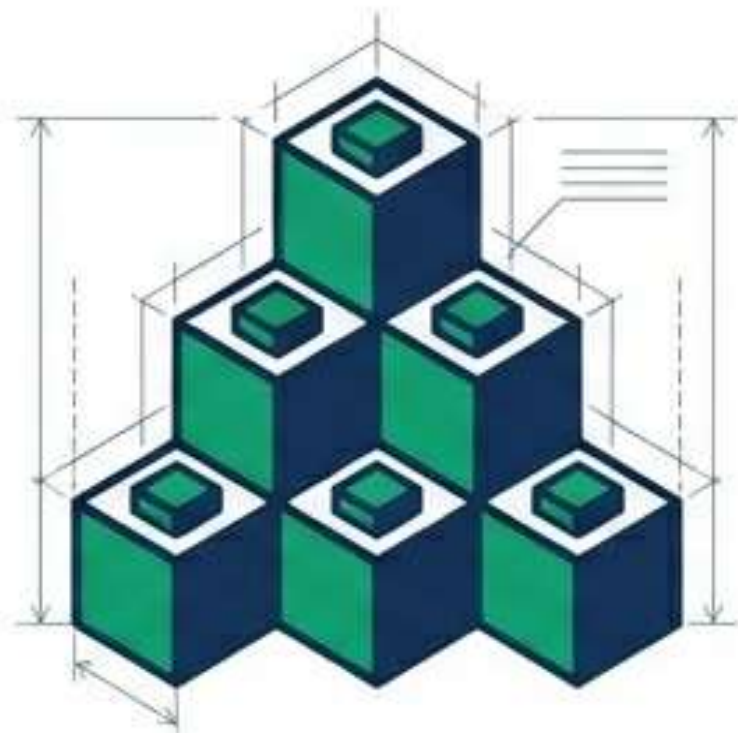
Typing 'System' as ~~'system'~~ or 'String' ~~'string'~~ will cause immediate compilation failure.



Scope Errors

Placing executable code **outside** of the Class brackets **{ }** is frequent logical error.

Key Takeaways



The Goal:

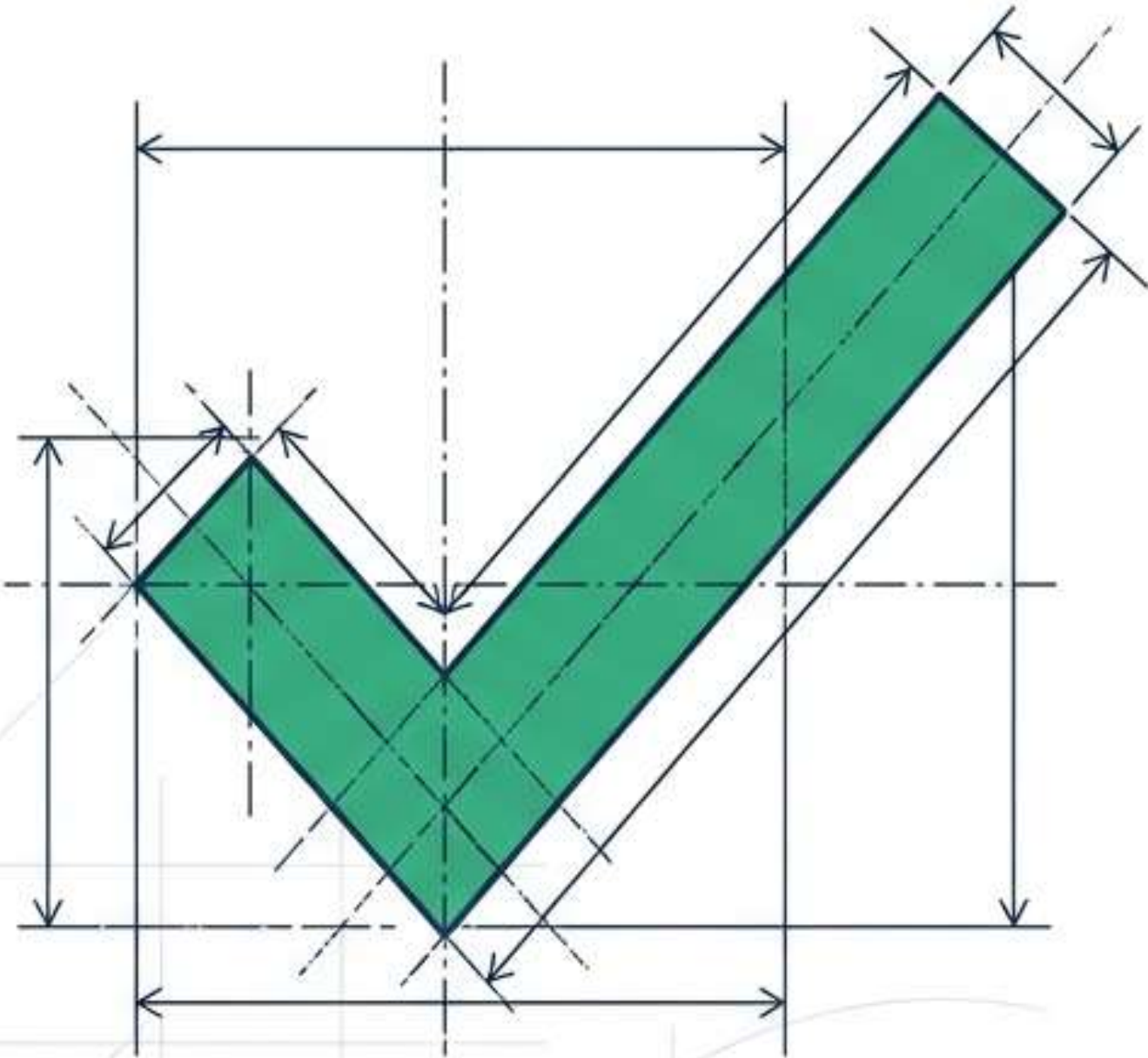
Automation exists to reduce repetition and cost while boosting quality.

The Structure:

Adhere to the strict hierarchy: Project > Package > Class.

The Rules: Follow Naming Conventions and ensure the main method is present for execution.

Summary



- ✓ • Covered the 'Why, How, What' of Test Automation.
- ✓ • Reviewed Core Java Internals (JDK/JRE) and Editor options.
- ✓ • Defined Naming Conventions for Projects, Packages, and Classes.
- ✓ • Executed the first script using Sysout and the main method.