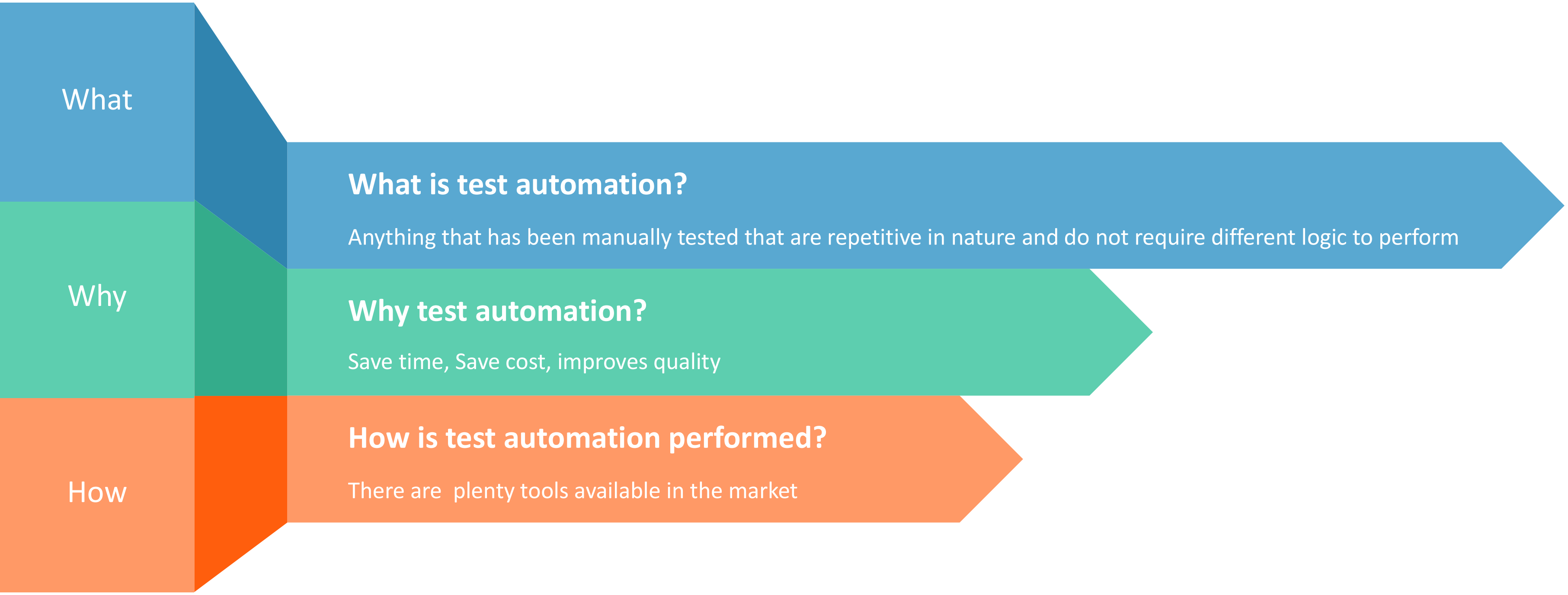
Selenium WebDriver Training

Test Automation : What, Why & How?

Testleaf
Always Ahead

The Golden Circle



What

Why

How

What is test automation?

Anything that has been manually tested that are repetitive in nature and do not require different logic to perform

Why test automation?

Save time, Save cost, improves quality

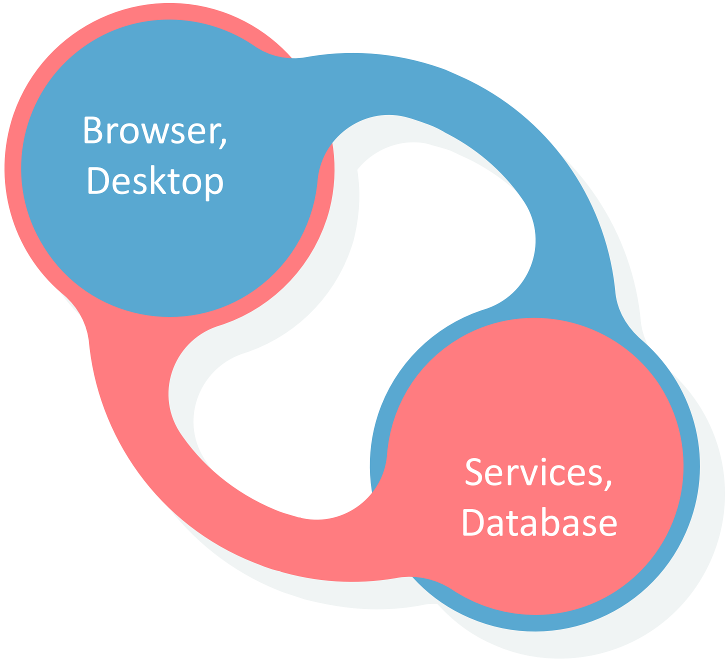
How is test automation performed?

There are plenty tools available in the market

Types of Automation

1

Front End Automation



Browser, Desktop

Services, Database

2

Backend Automation

2023 – Language Forecast

HackerRank

LANGUAGE

2023 Language Forecast

What does 2023 hold for languages? Considering market uncertainty, we're keeping our forecast conservative and sticking to the lower end of the 95% confidence interval in our models.

Overall, our forecast predicts consistency through the first months of 2023.

The languages that grew in 2021 and 2022 will continue to grow. Mostly. We expect to see a seasonal dip in December before they resume climbing.

At this point we aren't anticipating any major place-trading among the top-ranking languages.

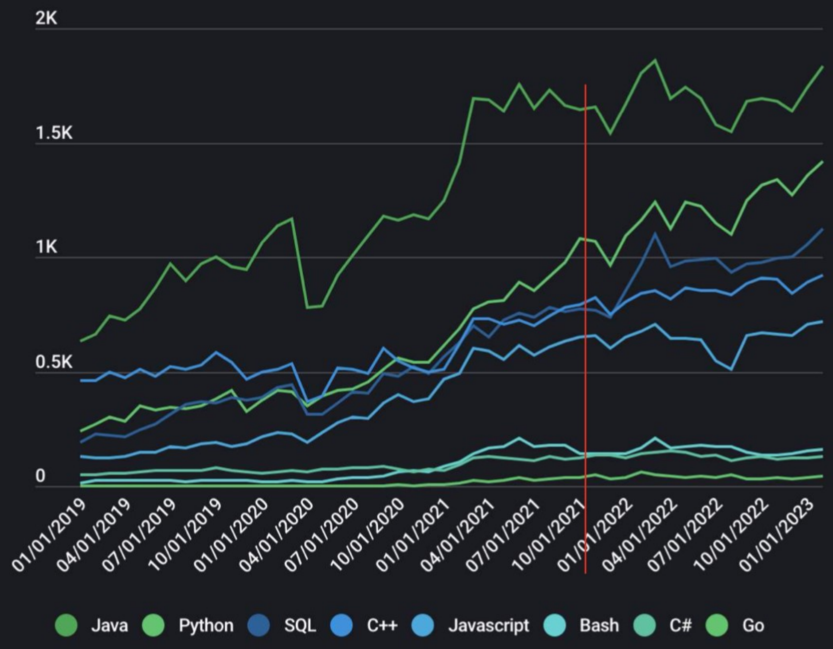
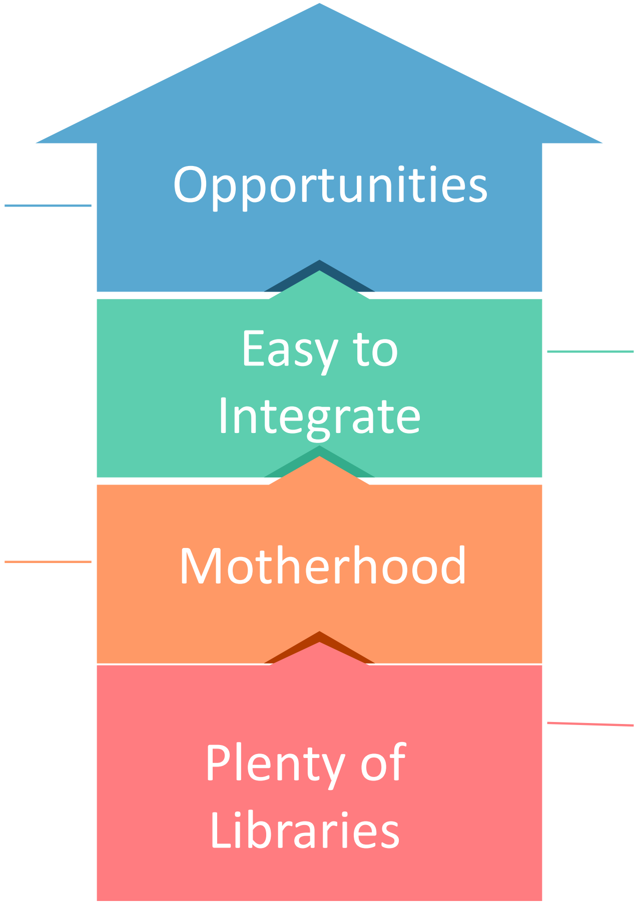


Figure 9: Actual and forecasted (9/2022 - 2/2023) monthly active tests - mandatory language.

Java is Popular Because



More than 70% of the automation openings are in Java with Selenium

Integration with API / Services or Containerization / Virtualization is easier

Selenium WebDriver is built primarily on Core Java

TestNG, Apache POI, Extent Reports

Java Editors

IntelliJ

Eclipse

NetBeans

Check !

Java is ___________________________________

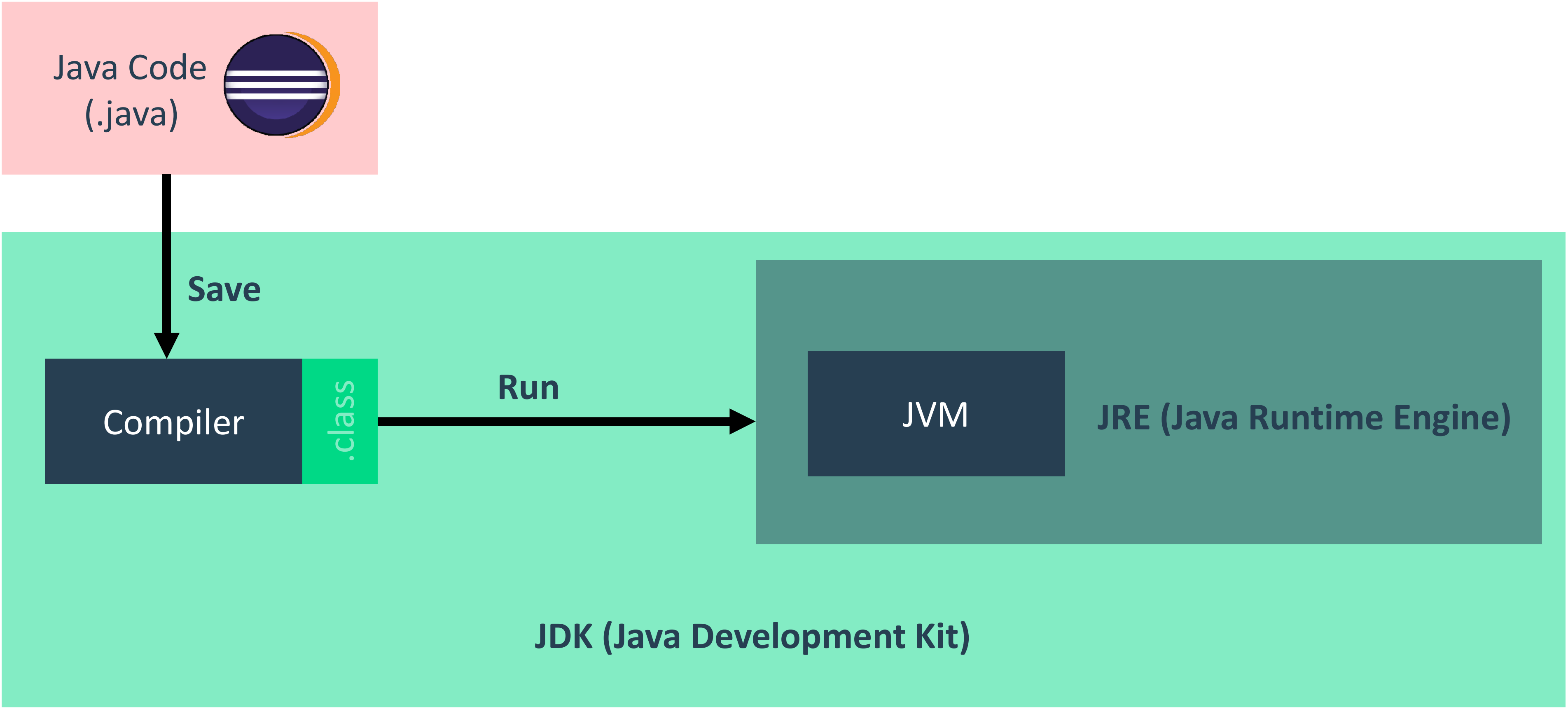
● Object oriented Programming language

● Most popular language used by developers and automation engineers

● Base language for Selenium WebDriver

● All the above

How Java Works?



4 Things to Know before you start coding

- Project
- Package
- Class
- Variable & Method

A. Maven Project (starts with Upper case)

- Easy to manage the software dependencies and versions
- Easy to build as execution project library

B. Package (starts with lower case)

- Like a folder in a drive (package in a project)
- Helps to organize, provide security

C. Class Name (starts with Upper case)

- Equivalent to a testcase (on closest comparison)
- Perform set of actions (using methods)
- It stores value (using variables)

D. Variable / Method Name (starts with lower case)

- Both are members of the class
- Variable – Store data
- Method – Perform action

Note the naming conventions

- Project (**Upper** case)
- Package (**lower** case)
- Class (**Upper** case)
- Variable & Method (**lower** case)

Other 2 things before you start coding

- main method
- console output (print)

#1 Java main method ..

- Main method is the entry point for executing Java Program
- Without main method, the Java code will not execute by itself

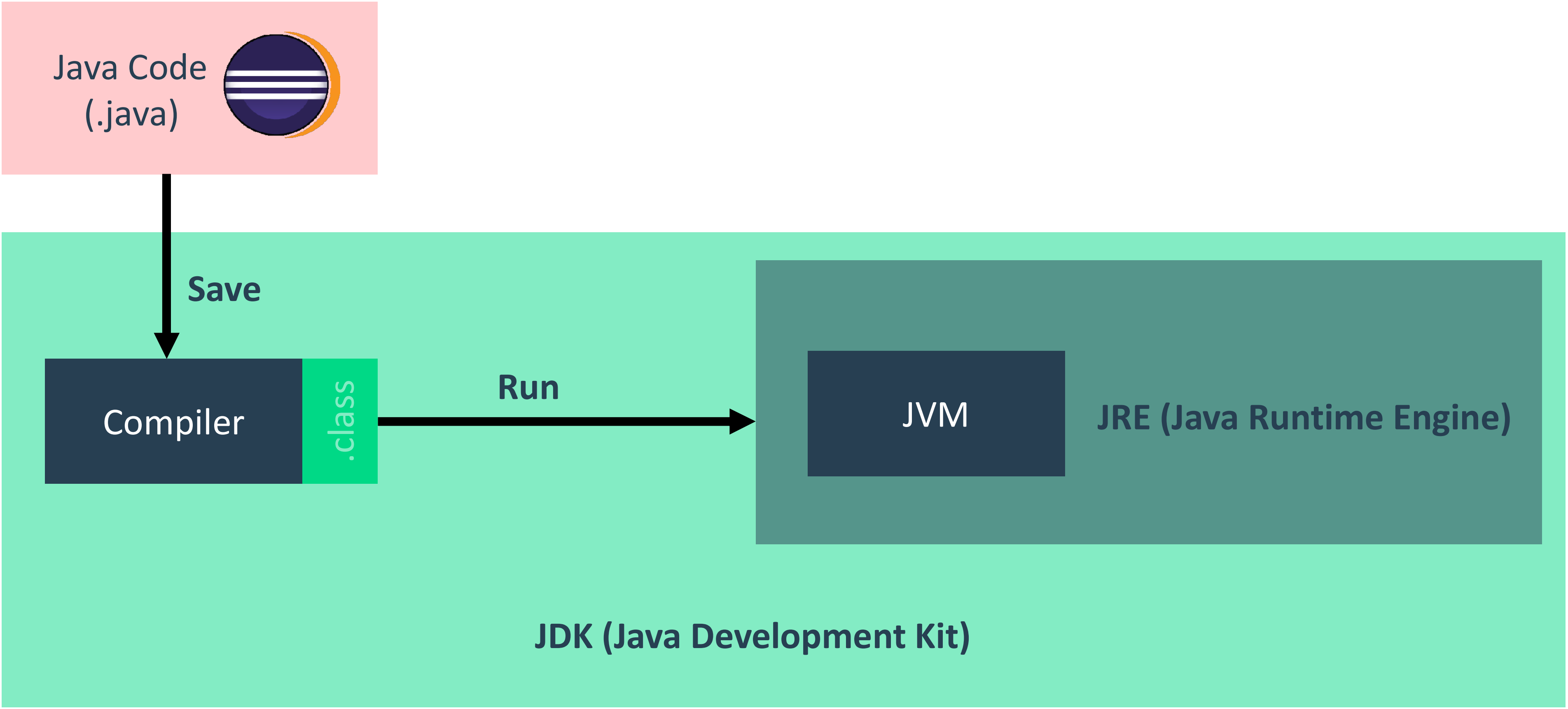
```
public static void main(String args[]){

   // write your code here

}
```

#2 sysout statement

- Print the expected value in the console using sysout (shortcut) : ctrl + space

```
public static void main(String args[]){
    System.out.println(”Here is my first code”);
}
```

Let us write a sample code ..



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Summary

- What, Why and How : UI Test Automation
- Core Java Internals : JDK, JRE and JVM
- Project, Package, Class, Method : Naming Convention

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Classroom Exercise (Breakout)

- Create a maven project using dependencies given (if not done before)
- Create a new package by name : **week1.day1** (lower case)
- Create a new class by name : **HelloSelenium** (starts with Upper case)
- Check main method and write a sysout statement
- Save and run the code to confirm the value is printed
- Go to target folder and confirm the class file is created