

TECHNOLOGY



Automation Testing

JMeter Introduction



A Day in the Life of an Automation Test Engineer

Alex became familiar with non-functional testing. He gained an understanding of non-functional objectives, parameter types and tools used for the same. Now, he wants to check the usability and performance of the newly developed application.

For automation testing, there are a number of tools available. In order to do the testing, he decided to use the Apache JMeter tool. However, he must first install JMeter and understand its features.

Let's help Alex install and configure Apache JMeter so that he can start automating tests



Learning Objectives

By the end of this lesson, you will be able to:

- 🕒 Analyze JMeter tool
- 🕒 Discuss applications of JMeter testing
- 🕒 Enumerate JMeter process
- 🕒 Installation of JMeter



Introduction to Apache JMeter

Introduction to JMeter

Apache JMeter is open-source software, a 100% pure Java application designed to check load tests and measure performance.

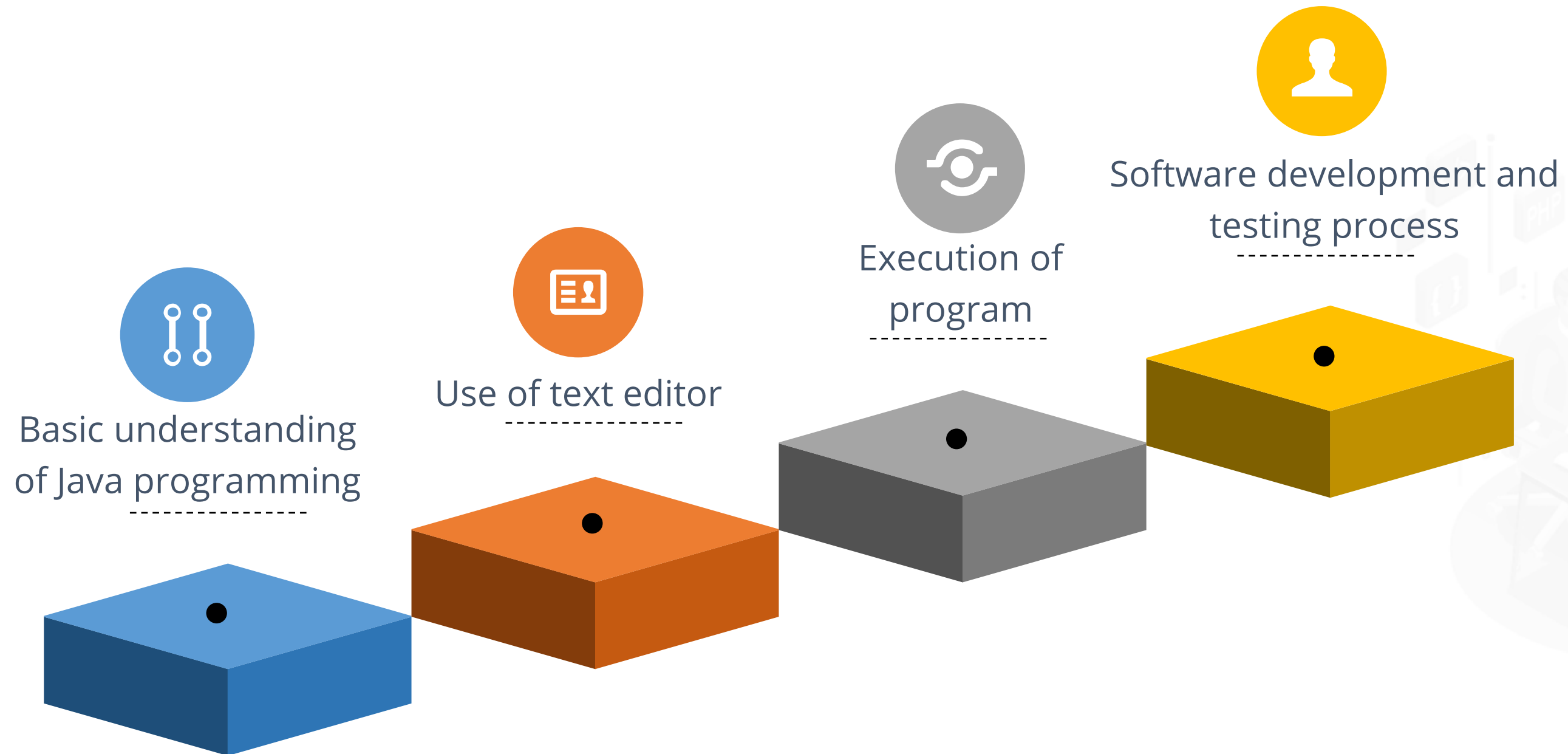


JMeter is a performance testing tool.



Pre-requisites

User must have the following pre-requisites:



Why JMeter?

JMeter can be used to test APIs and check how much load can be handled by an API. JMeter can provide performance metrics. This way, they can validate if the product meets expectations.



API Testing












Heavy Load Testing

JMeter can simulate a heavy load on a server by creating virtual concurrent users.

Applications Testing with JMeter

JMeter can test a wide variety of applications:

- | | | | | | |
|----|-------------------------|---|----|--------------------------|---|
| 01 | Websites HTTP/HTTPS |  | 06 | Mail Servers –SMTP, POP3 |  |
| 02 | Web Services REST, SOAP |  | 07 | Shell Scripts |  |
| 03 | Database Servers |  | 08 | TCP Servers |  |
| 04 | FTP Servers |  | 09 | System Management |  |
| 05 | LDAP Servers |  | | | |

Advantages of JMeter

The JMeter platform fills a big void by making the testing process easy.

01 Open Source

02 Application Testing

03 Platform Independent

04 User Friendly

05 Test Recorder

06 Generate Reports

07 Data Extraction

08 Command Line

09 Easy Installation

10 Unlimited Load Tester



Jmeter Installation

JMeter Installation

JMeter is a pure Java desktop GUI application. JMeter is compatible with all operating systems.

Windows

Linux

Mac OS

Ubuntu



Pre-requisites to Install JMeter

Users need one pre-requisite for downloading and installing JMeter.



. Open the command prompt and put the command **java -version**.



Install Java

Follow the below steps to download and install Java:

In the browser, type Java SE and select Oracle official link



Once the link appears, select the right version as per operating system



Choose the right extension file and download it.
Follow the installation instructions



JMeter Installation

Visit the official Apache JMeter website to download JMeter.

Binaries

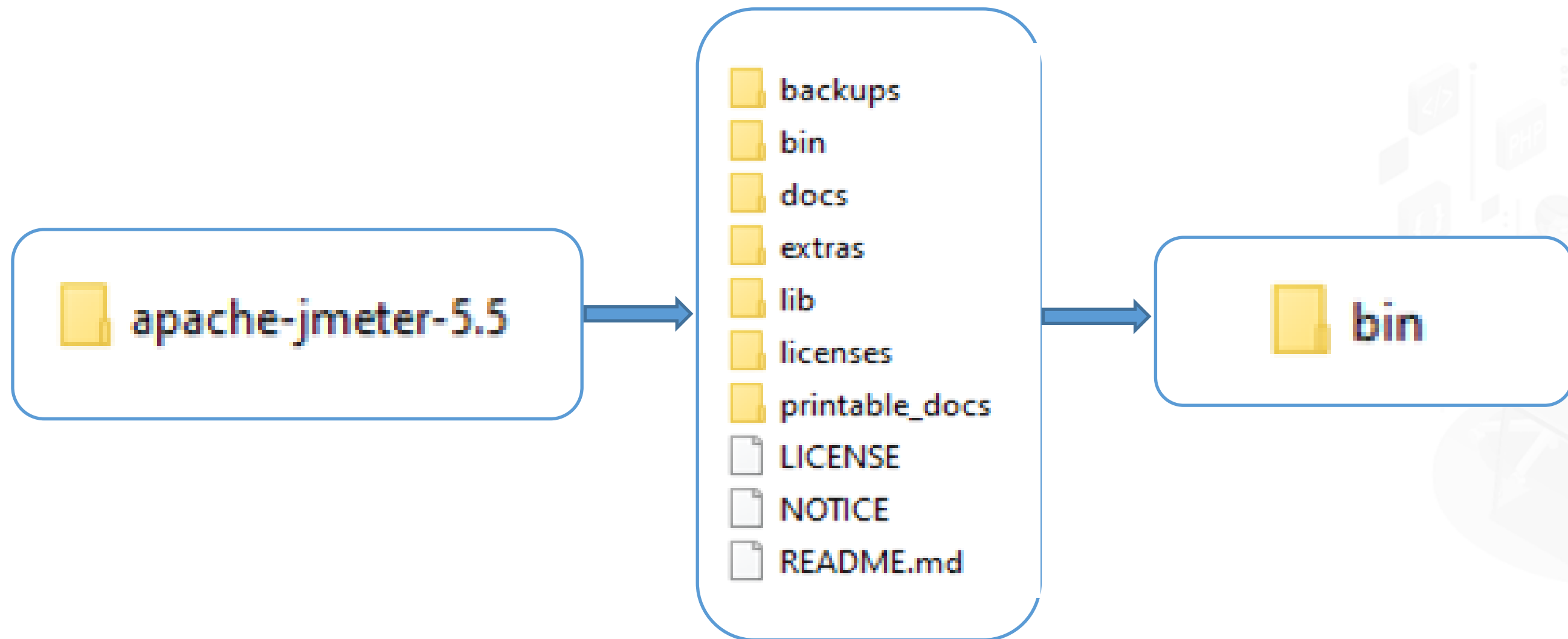
[apache-jmeter-5.5.tgz](#) [sha512](#) [pgp](#)

[apache-jmeter-5.5.zip](#) [sha512](#) [pgp](#)



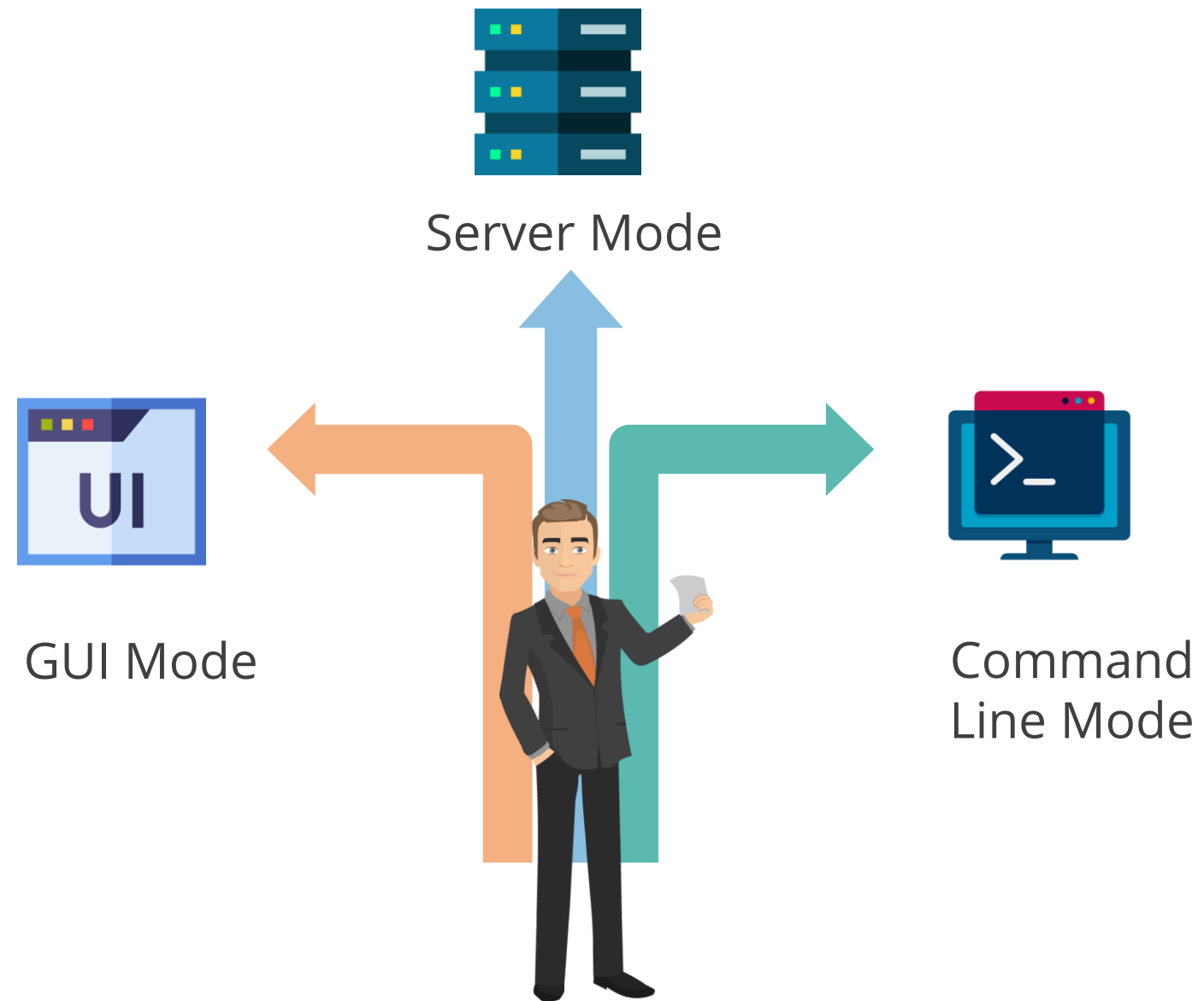
JMeter Installation (Cont...)

Follow the steps to install JMeter as per the operating system.



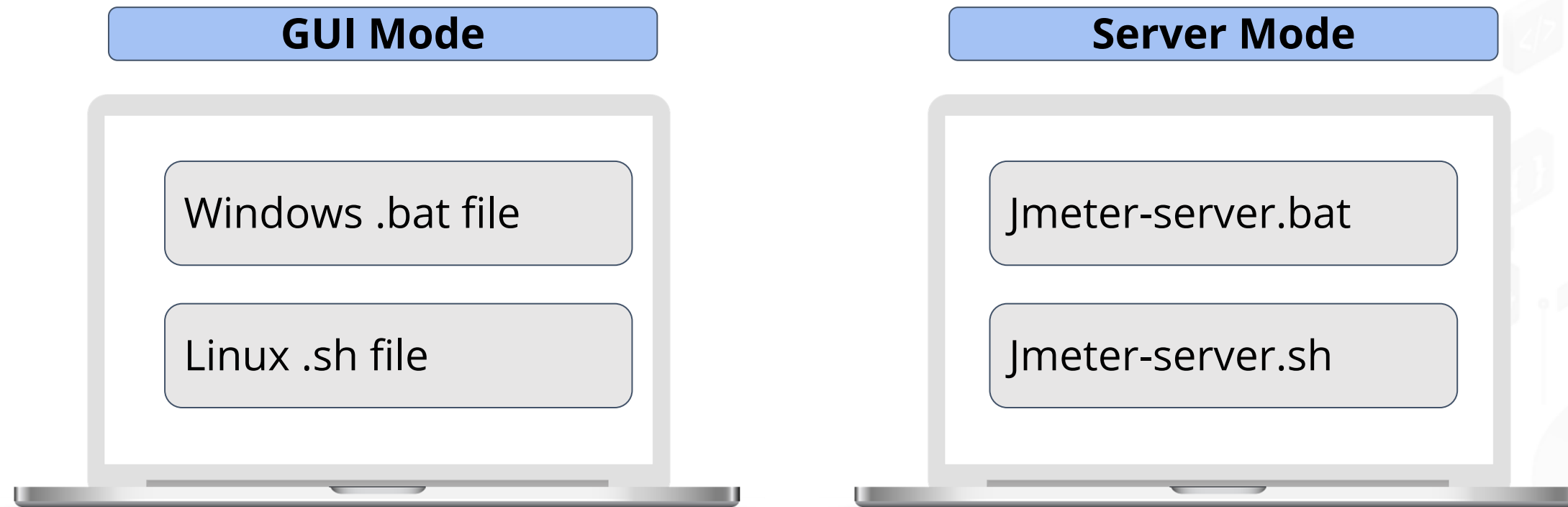
Launch JMeter

JMeter can be launched in three modes:



JMeter GUI & Server Launch

Navigate to the bin directory. Windows users can double-click the ".bat" file to launch JMeter, and Linux users can double-click the ".sh" file



JMeter Command Line Launch

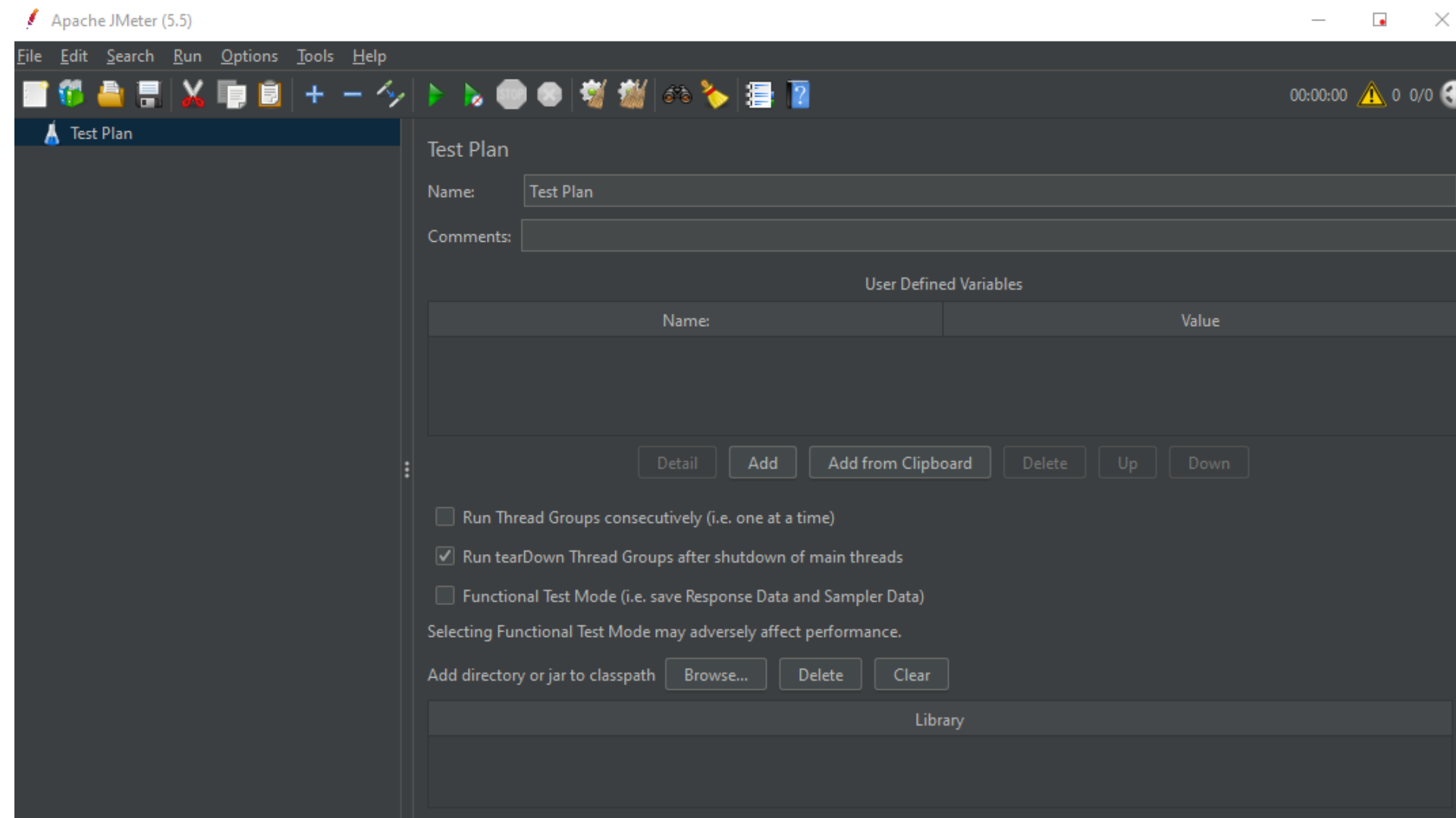
Open the command prompt and go to the bin folder of JMeter to use command line .

```
jmeter -n -t (location of your jmeter  
test script) -l (location of the result  
file)
```



JMeter Interface

On opening JMeter, the interface will look like this:



Key Takeaways

- Apache JMeter is open-source software, a 100% pure Java application designed to check load tests and measure performance.
- Apache JMeter is a great graphical user interface to use for API testing and virtual load testing in a very easy and simple way.
- JMeter is capable of testing a wide variety of applications: website HTTP/HTTPS, web services REST, SOAP, database servers and others.
- Installation and setup of JMeter, including prerequisites like Java setup with GUI, server and command line prompt.

