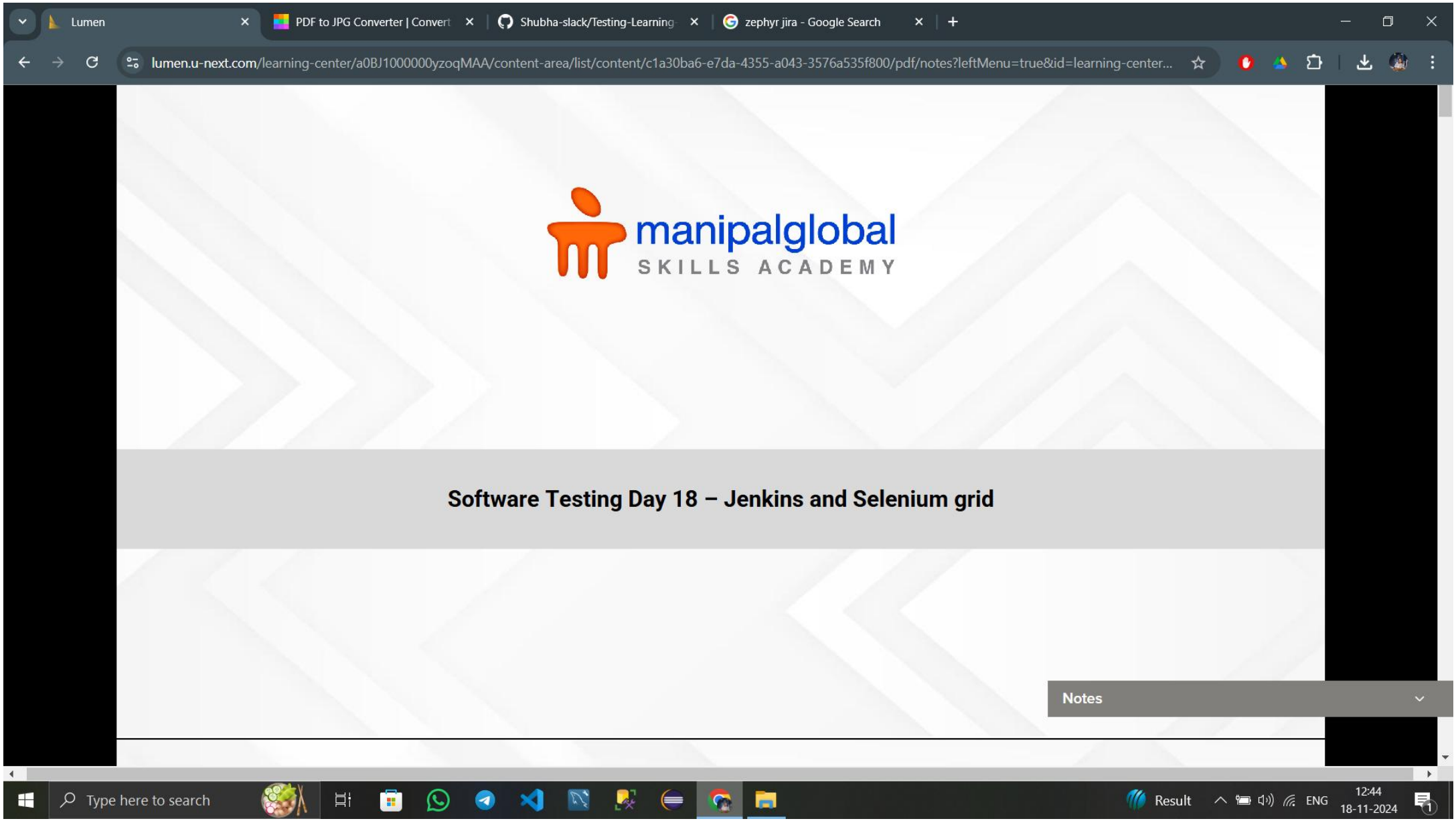

Lumen
PDF to JPG Converter | Convert
Shubha-slack/Testing-Learning
zephyr jira - Google Search
lumen.u-next.com/learning-center/a0BJ1000000yzoqMAA/content-area/list/content/c1a30ba6-e7da-4355-a043-3576a535f800/pdf/notes?leftMenu=true&id=learning-center...
manipalglobal
SKILLS ACADEMY
Software Testing Day 18 – Jenkins and Selenium grid
Notes
Type here to search
Result
ENG
12:44
18-11-2024

Lumen | PDF to JPG Converter | Convert | Shubha-slack/Testing-Learning | zephyr jira - Google Search

lumen.u-next.com/learning-center/a0BJ1000000yzoqMAA/content-area/list/content/c1a30ba6-e7da-4355-a043-3576a535f800/pdf/notes?leftMenu=true&id=learning-center...

manipalglobal SKILLS ACADEMY

100%

Bookmark | Prev | Next

Agenda

- Jenkins
- Selenium grid

Notes

2 / 16

Notes | Ask Doubts | Rotate | Fit to Width | Exit Full Screen

Type here to search

Result | ENG | 12:44 | 18-11-2024

manipalglobal SKILLS ACADEMY

CI CD

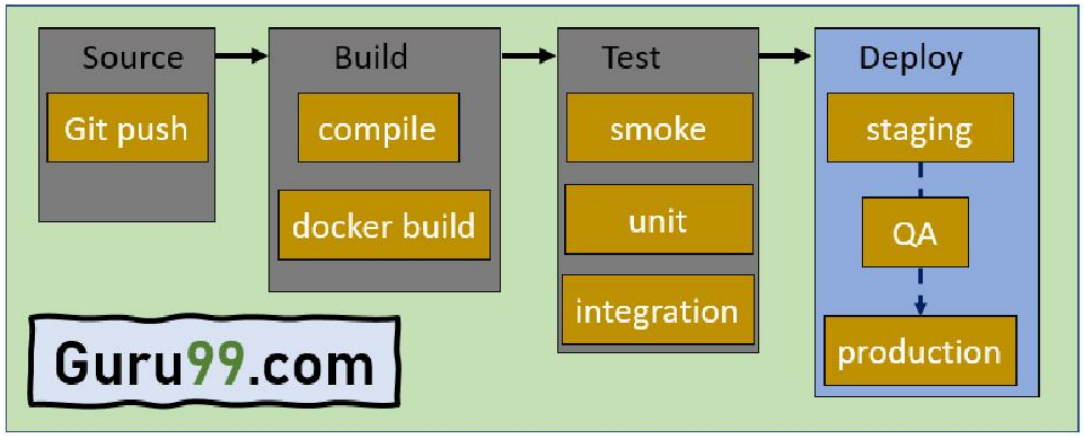
- **Continuous integration** is a software development method where members of the team can integrate their work at least once a day. In this method, every integration is checked by an automated build to search the error.

- **Continuous delivery** is a software engineering method in which a team develops software products in a short cycle. It ensures that software can be easily released at any time.

- **Continuous deployment** is a software engineering process in which product functionalities are delivered using automatic deployment. It helps testers to validate whether the codebase changes are correct, and it is stable or not.

manipalglobal SKILLS ACADEMY

CI CD



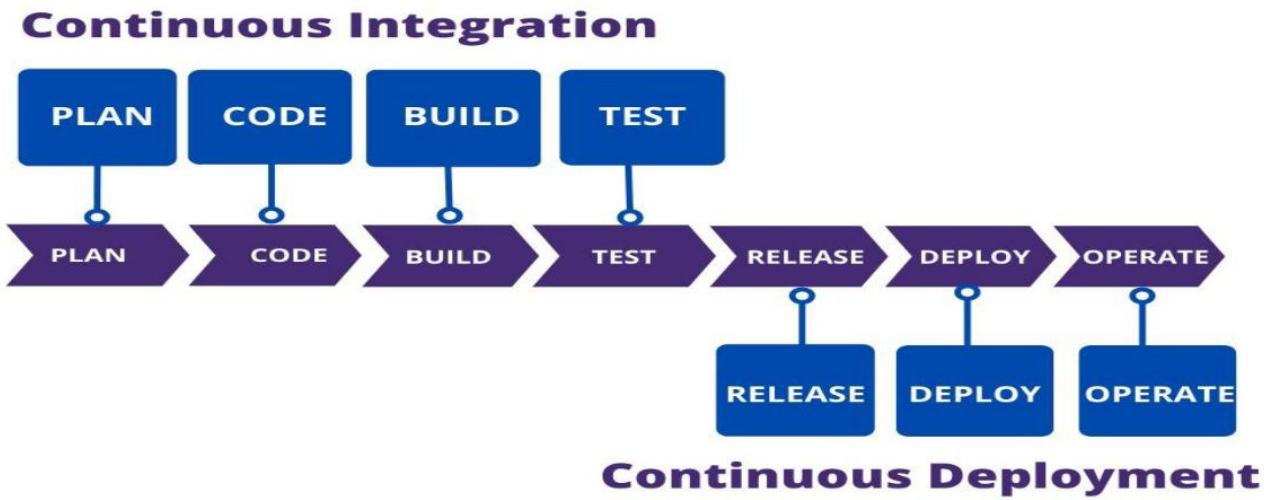
Notes

manipalglobal SKILLS ACADEMY

CI CD

CI/CD PIPELINE

razorops



Notes

manipalglobal SKILLS ACADEMY

CI CD

CI/CD pipeline Best Practices

Here is a CI/CD pipeline best practices:

•Write up the current development process therefore, you can know the procedures that require to change and one that can be easily automated.

•Start off with a small proof of project before going ahead and complete whole development process at once.

•Set up a pipeline with more than one stage in which fast fundamental tests run first.

•Start each workflow from the same, clean, and isolated environment.

•Run open source tools that cover everything from code style to security scanning.

•Setup a better code hub to continuously check the quality of your code by running the standard set of tests against every branch.

•Peer code review each pull request to solve a problem in a collaborative manner.

•You have to define success metrics before you start the transition to CD automation. This will help you to consistently analyze your software, developing progress help refining where needed.

manipalglobal
SKILLS ACADEMY

Advantages of CI/CD pipelines

Here are the pros/ benefits of CI/CD Pipeline:

- Builds and testing can be easily performed manually.
- It can improve the consistency and quality of code.
- Improves flexibility and has the ability to ship new functionalities.
- CI/CD pipeline can streamline communication.
- It can automate the process of software delivery.
- Helps you to achieve faster customer feedback.
- CI/CD pipeline helps you to increase your product visibility.
- It enables you to remove manual errors.
- Reduces costs and labour.
- CI/CD pipelines can make the software development lifecycle faster.
- It has automated pipeline deployment.
- A CD pipeline gives a rapid feedback loop starting from developer to client.
- Improves communications between organization employees.
- It enables developers to know which changes in the build can turn to the brokerage and to avoid them in the future.
- The automated tests, along with few manual test runs, help to fix any issues that may arise.

manipalglobal SKILLS ACADEMY

Jenkins

Jenkins offers a simple way to set up a continuous integration and continuous delivery environment for almost any combination of languages and source code repositories.

Jenkin History

•Kohsuke Kawaguchi, a Java developer, working at SUN Microsystems, was tired of building the code and fixing errors repetitively. In 2004, created an automation server called Hudson that automates build and test task.

•In 2011, Oracle who owned Sun Microsystems had a dispute with Hudson open source community, so they forked Hudson and renamed it as Jenkins.

•Both Hudson and Jenkins continued to operate independently. But in short span of time, Jenkins acquired a lot of projects and contributors while Hudson remained with only 32 projects. With time, Jenkins became more popular, and Hudson is not maintained anymore.

Notes

manipalglobal SKILLS ACADEMY

Jenkins

Jenkins offers a simple way to set up a continuous integration and continuous delivery environment for almost any combination of languages and source code repositories.

Jenkin History

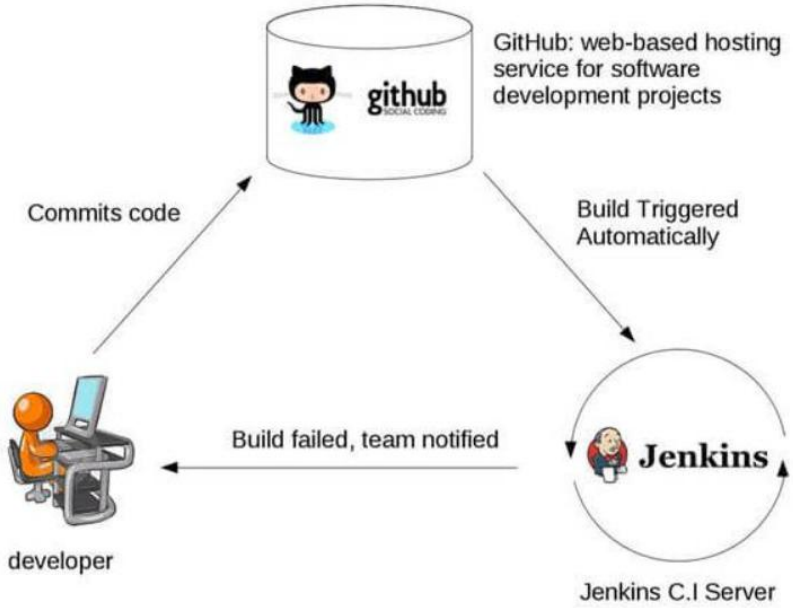
•Kohsuke Kawaguchi, a Java developer, working at SUN Microsystems, was tired of building the code and fixing errors repetitively. In 2004, created an automation server called Hudson that automates build and test task.

•In 2011, Oracle who owned Sun Microsystems had a dispute with Hudson open source community, so they forked Hudson and renamed it as Jenkins.

•Both Hudson and Jenkins continued to operate independently. But in short span of time, Jenkins acquired a lot of projects and contributors while Hudson remained with only 32 projects. With time, Jenkins became more popular, and Hudson is not maintained anymore.

manipalglobal SKILLS ACADEMY

Jenkins



Notes

manipalglobal SKILLS ACADEMY

Jenkins

Advantages of using Jenkins

•Jenkins is being managed by the community which is very open. Every month, they hold public meetings and take inputs from the public for the development of Jenkins project.

•So far around 280 tickets are closed, and the project publishes stable release every three months.
•As technology grows, so does Jenkins. So far Jenkins has around 320 plugins published in its plugins database. With plugins, Jenkins becomes even more powerful and feature rich.

•Jenkins tool also supports cloud-based architecture so that you can deploy Jenkins in cloud-based platforms.

•The reason why Jenkins became popular is that it was created by a developer for developers.

Notes

manipalglobal SKILLS ACADEMY

Jenkins

Though Jenkins is a very powerful tool, it has its flaws.

•Its interface is out dated and not user friendly compared to current UI trends.

•Though Jenkins is loved by many developers, it's not that easy to maintain it because Jenkins runs on a server and requires some skills as server administrator to monitor its activity.

•One of the reasons why many people don't implement Jenkins is due to its difficulty in installing and configuring Jenkins.

•Continuous integrations regularly break due to some small setting changes. Continuous integration will be paused and therefore requires some developer attention.

manipalglobal SKILLS ACADEMY

Selenium Grid

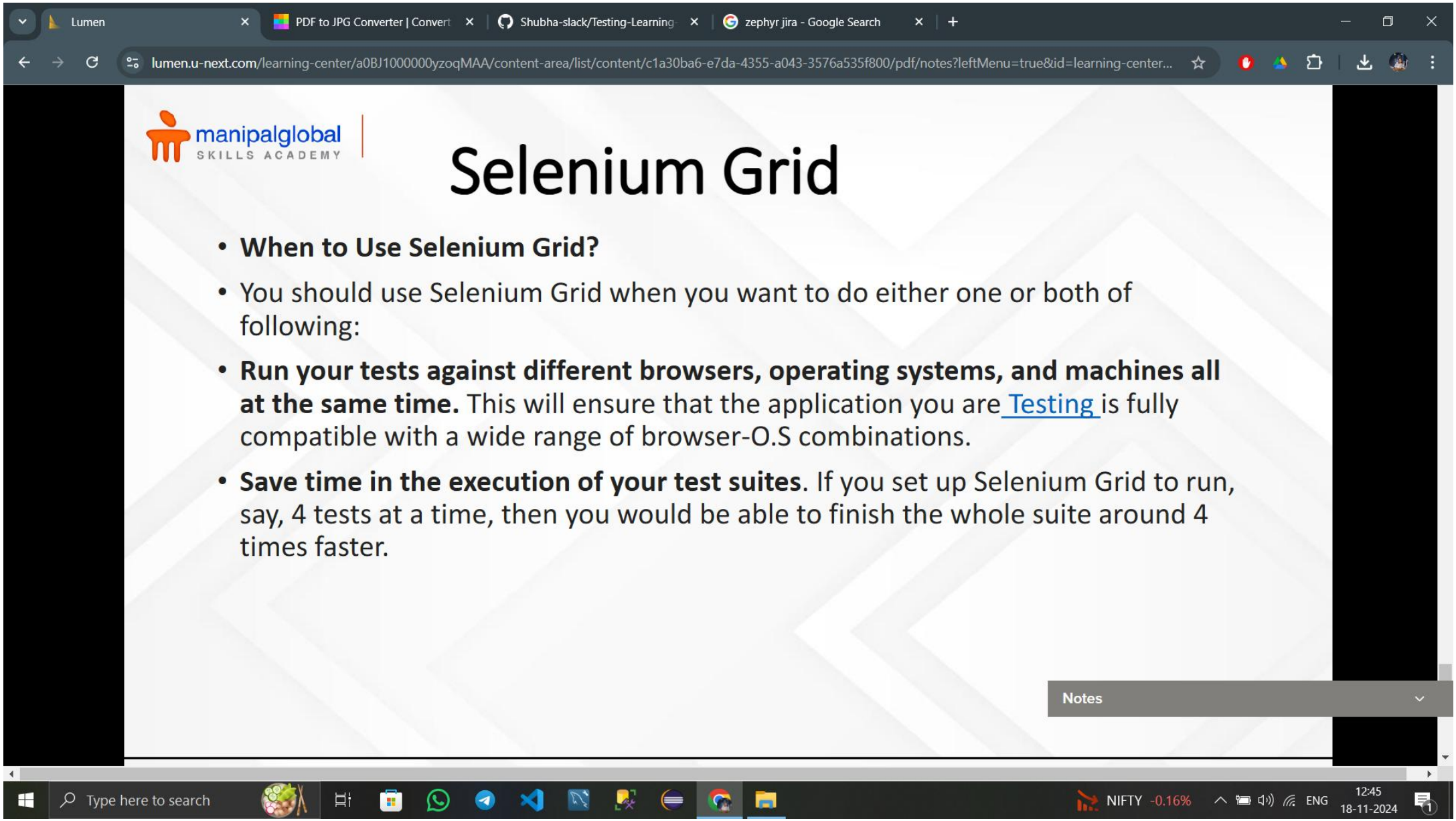
- **Selenium Grid** is a part of the Selenium Suite that specializes in running multiple tests across different browsers, operating systems, and machines in parallel

Notes

manipalglobal SKILLS ACADEMY

Selenium Grid

- **Hub**
- The hub is the central point where you load your tests into.
- There should only be one hub in a grid.
- The hub is launched only on a single machine, say, a computer whose OS is Windows 7 and whose browser is IE.
- The machine containing the hub is where the tests will be run, but you will see the browser being automated on the node.
- **Nodes**
- Nodes are the Selenium instances that will execute the tests that you loaded on the hub.
- There can be one or more nodes in a grid.
- Nodes can be launched on multiple machines with different platforms and browsers.
- The machines running the nodes need not be the same platform as that of the hub.


Lumen
PDF to JPG Converter | Convert
Shubha-slack/Testing-Learning
zephyr jira - Google Search
lumen.u-next.com/learning-center/a0BJ1000000yzoqMAA/content-area/list/content/c1a30ba6-e7da-4355-a043-3576a535f800/pdf/notes?leftMenu=true&id=learning-center...
manipalglobal
SKILLS ACADEMY
Selenium Grid
When to Use Selenium Grid?
You should use Selenium Grid when you want to do either one or both of following:
Run your tests against different browsers, operating systems, and machines all at the same time. This will ensure that the application you are Testing is fully compatible with a wide range of browser-O.S combinations.
Save time in the execution of your test suites. If you set up Selenium Grid to run, say, 4 tests at a time, then you would be able to finish the whole suite around 4 times faster.
Notes
Type here to search
NIFTY -0.16%
ENG
12:45
18-11-2024

manipalglobal SKILLS ACADEMY

Selenium Grid

- **When to Use Selenium Grid?**
- You should use Selenium Grid when you want to do either one or both of following:
- **Run your tests against different browsers, operating systems, and machines all at the same time.** This will ensure that the application you are Testing is fully compatible with a wide range of browser-O.S combinations.
- **Save time in the execution of your test suites**. If you set up Selenium Grid to run, say, 4 tests at a time, then you would be able to finish the whole suite around 4 times faster.