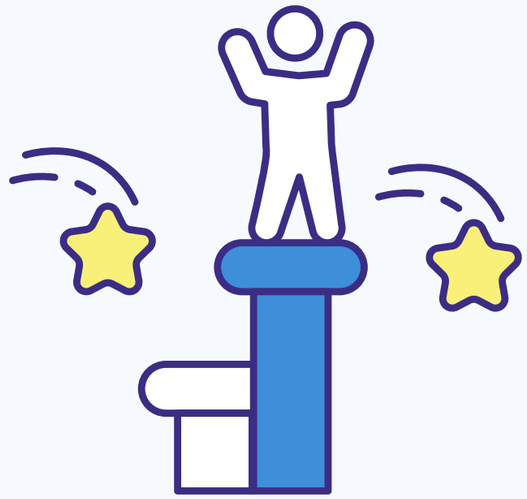

DEVOPS PRE-REQUISITES

Beginner Level

1 - DevOps Pre-Requisites → 2 - DevOps Fundamentals → 3 - DevOps Core → 4 - DevOps Advanced

TECHWORLD WITH NANA

1 - DevOps Pre-Requisites

Week 1

📅 Weekly Progress Tracker

START **Linux - 2.01:** Introduction to Operating Systems
END **Linux - 2.14:** Shell Scripting Part 3 - Concepts & Synta..

📂 Key Topics for the Week

- **OS and VM Basics:** Overview of OS types, RAM, storage, and virtual machines (Type 1 vs Type 2)
- **CLI and Commands:** Key Linux commands (*pwd, ls, rm*), GUI vs CLI
- **User and File Management:** User creation, setting permissions, manage file ownership (*chown*)
- **Shell Scripting:** Writing bash scripts with conditionals, functions, and best practices

✅ Checklist for This Week

- ☐ *Complete Ubuntu VM setup on VirtualBox*
- ☐ *Practise Linux commands*

📌 Recommendations & Tips

- **Remember:** Ensure you allocate enough system resources to your Ubuntu VM in VirtualBox
- **Tip:** This module's GitLab repository contains a number of useful CLI commands - make sure you check them out!

Week 2

📅 Weekly Progress Tracker

START **Linux - 2.15:** Environment Variables
END **Git - 3.13:** Going Back in History

📂 Key Topics for the Week

- **Environment Variables:** Define and print environment variables, and understand their use cases
- **Networking Fundamentals:** IP addressing, Subnets, NAT, Firewalls and DNS
- **Version Control Overview:** Understand version control, merges, conflicts, and best practices
- **Git Commands:** Practise essential Git commands - *git add, git commit, git log, git pull*
- **Branching and Conflicts:** Manage branches, create and resolve merge conflicts, and practice stashing files

✅ Checklist for This Week

- ☐ *Configure environment variables and practice using them in scripts*
- ☐ *Create a DigitalOcean Droplet and connect via SSH*
- ☐ *Practice using basic Git commands*
- ☐ *Work on multiple branches and resolve a merge conflict*

📌 Recommendations & Tips

- **Tip:** You can destroy the DigitalOcean droplet and delete the Ubuntu VM in VirtualBox at the end of this week as neither of these will be used again in the Bootcamp!

Week 3

📅 Weekly Progress Tracker

START **Git - 3.14:** Undoing commits
END **Build Tools - 4.13:** Build Tools for DevOps

📂 Key Topics for the Week

- **Branch Merging:** Practise merging bugfix and master branches
- **Databases in Software Development**: Overview of local vs. remote databases, how to configure database connections and best practices for managing databases in prod. environments
- **Types of Databases**: Explanation of different database types, including key-value, wide column, document, relational, graph, and search databases, and their use cases in modern applications
- **Build Tools:** Understand the purpose and use cases of build tools like Maven and Gradle
- **Windows vs Linux CLI:** Learn key differences between Windows and Linux CLI
- **Package Management:** Explore pom.xml, build.gradle, and package.json files for dependency management in Maven and Gradle
- **Build Tools for DevOps:** Understand how Docker simplifies build processes with an example Dockerfile and how to deploy build tools as part of CI/CD pipelines

✅ Checklist for This Week

- ☐ *Merge bugfix and master branches and resolve conflicts*
- ☐ *Install IntelliJ IDEA, Java SDK, Node.js, and Git on your local machine*
- ☐ *Build Maven and Gradle applications*
- ☐ *Review the pom.xml, build.gradle, and package.json files*

📌 Recommendations & Tips

- **Tip:** If you are a mac user there is no requirement to complete the Windows lectures - and vice versa for Windows users!
- **Reminder:** When installing tools on Windows, be sure to carefully configure the PATH variable to avoid issues with command execution
- **Tip:** Ensure you are installing the exact versions of Gradle and Java as shown in the demos

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