**Week 5**

**Build WAR file in DevOps**

**What is DevOps:-**

**DevOps** is a methodology that promotes collaboration between development and operations teams to automate and streamline software development, testing, and deployment. It focuses on continuous integration, continuous delivery (CI/CD), and rapid feedback to improve software quality, speed up releases, and enhance collaboration.

**What is Jenkins:-**

**Jenkins** is an open-source automation server used to automate various aspects of software development, particularly in continuous integration (CI) and continuous delivery (CD) processes. It allows developers to build, test, and deploy code in a consistent and automated manner. Jenkins integrates with a variety of tools and plugins, enabling automated workflows for tasks like code compilation, testing, deployment, and monitoring, making it easier to deliver software quickly and with high quality.

**What is Job:-**

In Jenkins, a **Job** is a single task or set of tasks that Jenkins runs as part of an automation process. Jobs can be configured to perform a variety of actions, such as building software, running tests, or deploying applications. A job can be triggered manually, on a schedule, or automatically in response to certain events (like a code commit). Jenkins offers different types of jobs, such as Freestyle projects, Pipeline jobs, and Multibranch Pipeline jobs, each suited for different use cases in the CI/CD pipeline.

**What is WAR file:-**

In Jenkins, a **WAR (Web Application Archive)** file is the packaged format of Jenkins itself. Jenkins is distributed as a standalone .war file, which can be executed directly using Java to run the Jenkins application. The jenkins.war file contains all the necessary components, including the web server (Jetty or Tomcat) and Jenkins core functionalities, which makes it easy to deploy and run Jenkins on any system with Java installed.

(or)

A **WAR (Web Application Archive)** file is a compressed file format used to package a web application in Java. It contains all the components of a web application, including HTML, JavaScript, CSS files, Java servlets, Java classes, and configuration files, bundled together into a single archive. WAR files are used for easy deployment of Java-based web applications to web servers or application servers like Apache Tomcat, GlassFish, or JBoss. They allow web applications to be distributed and run in a standardized way across different environments.

**Git Bash:-**

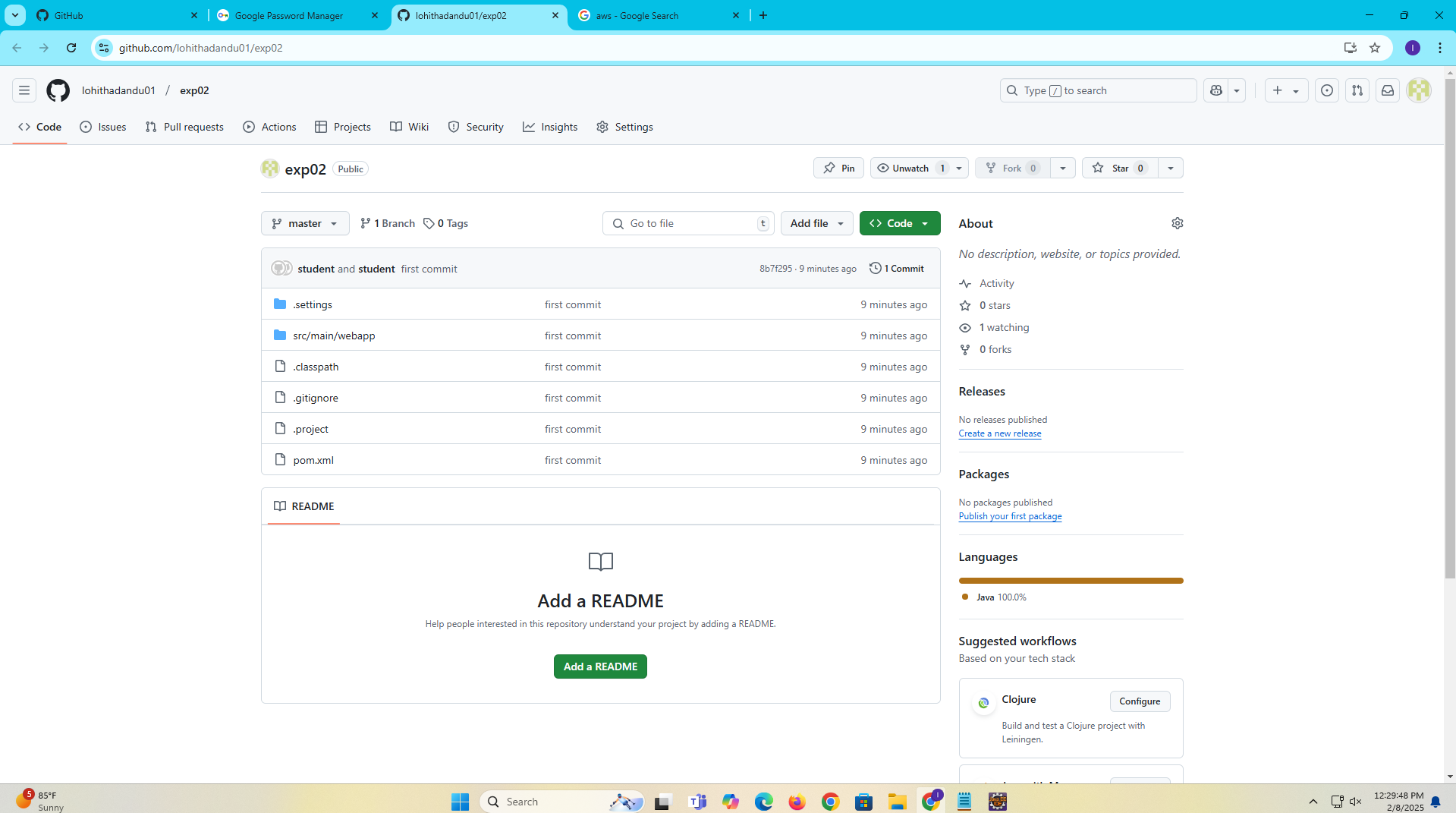
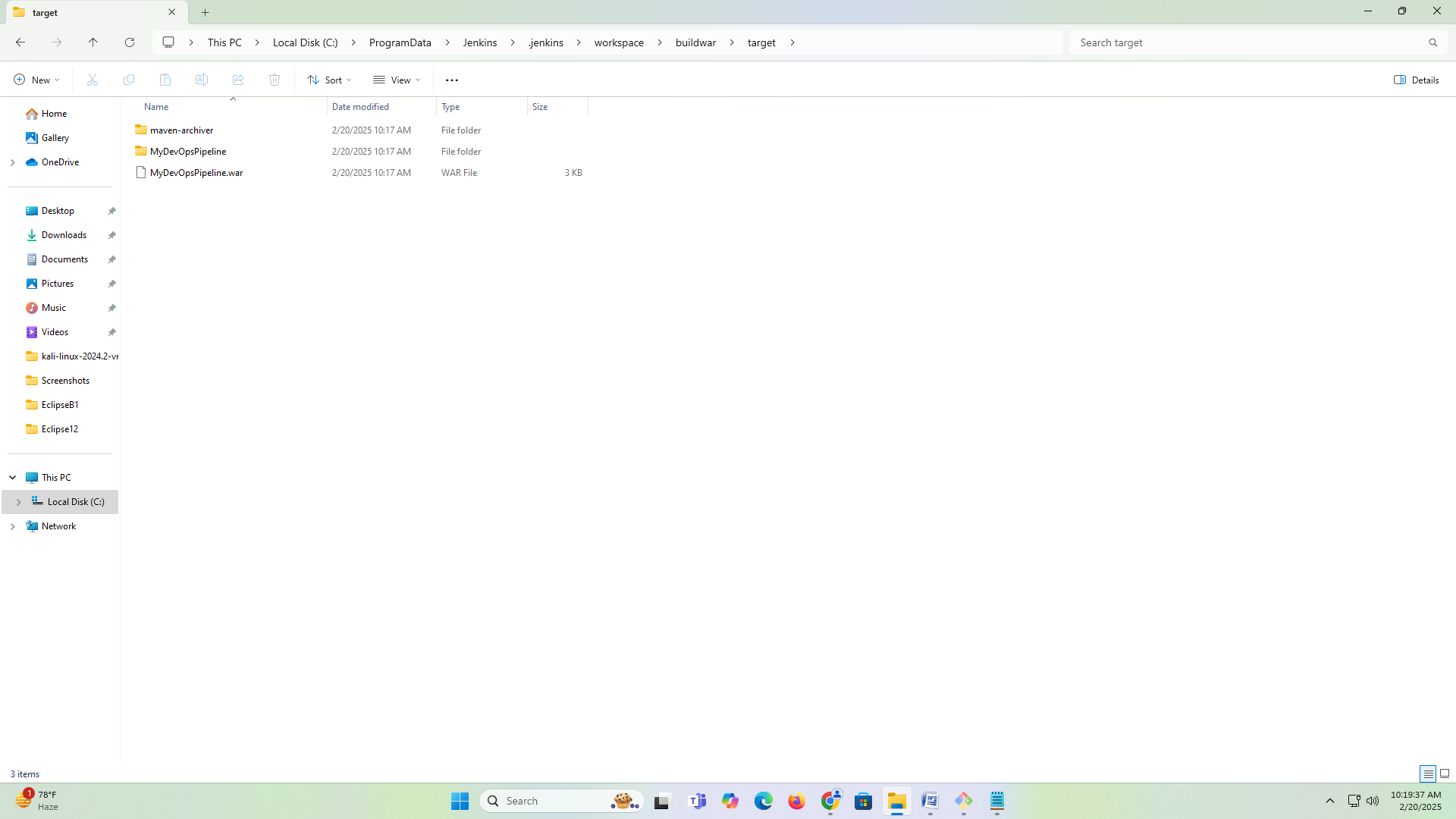
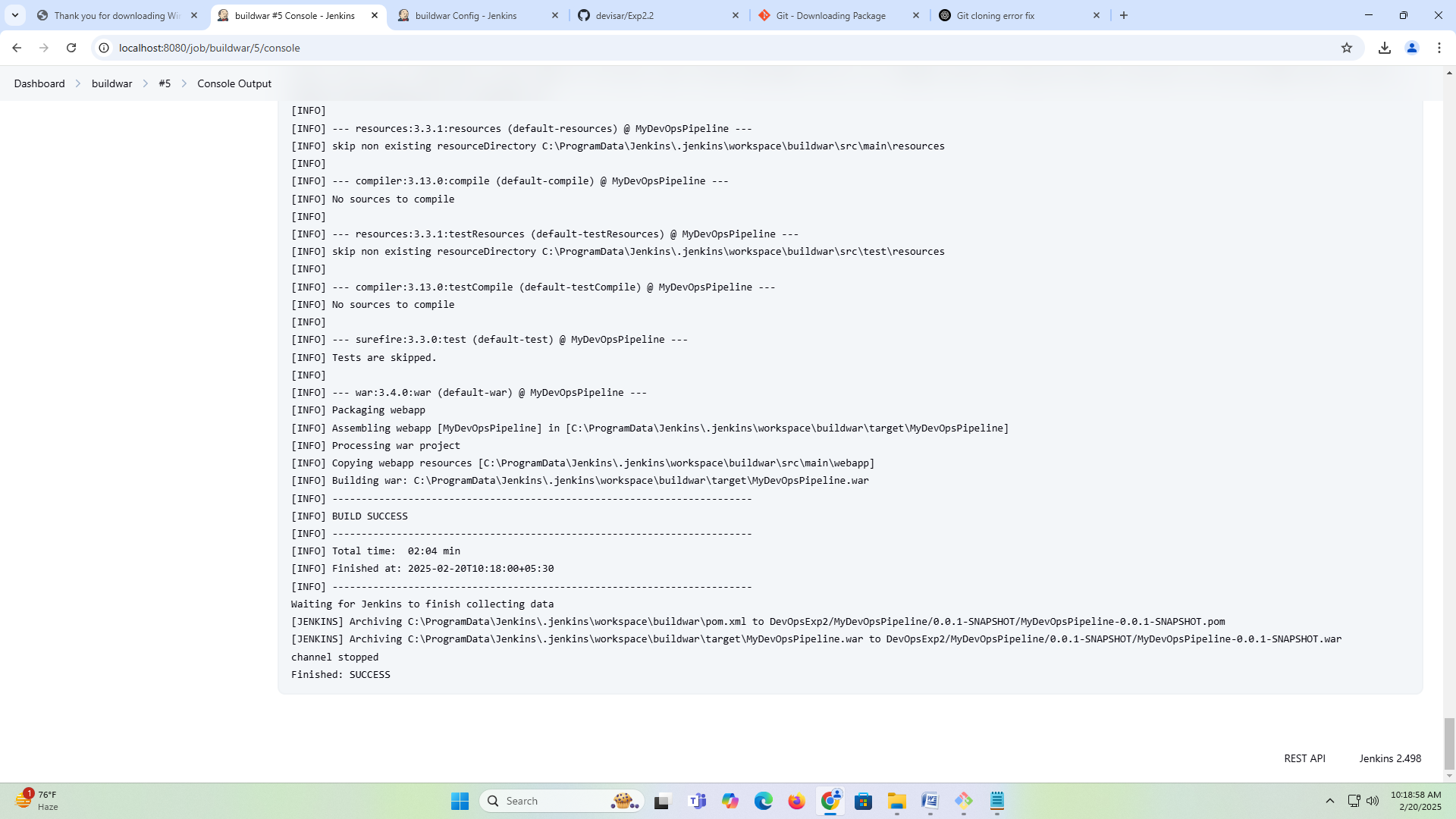
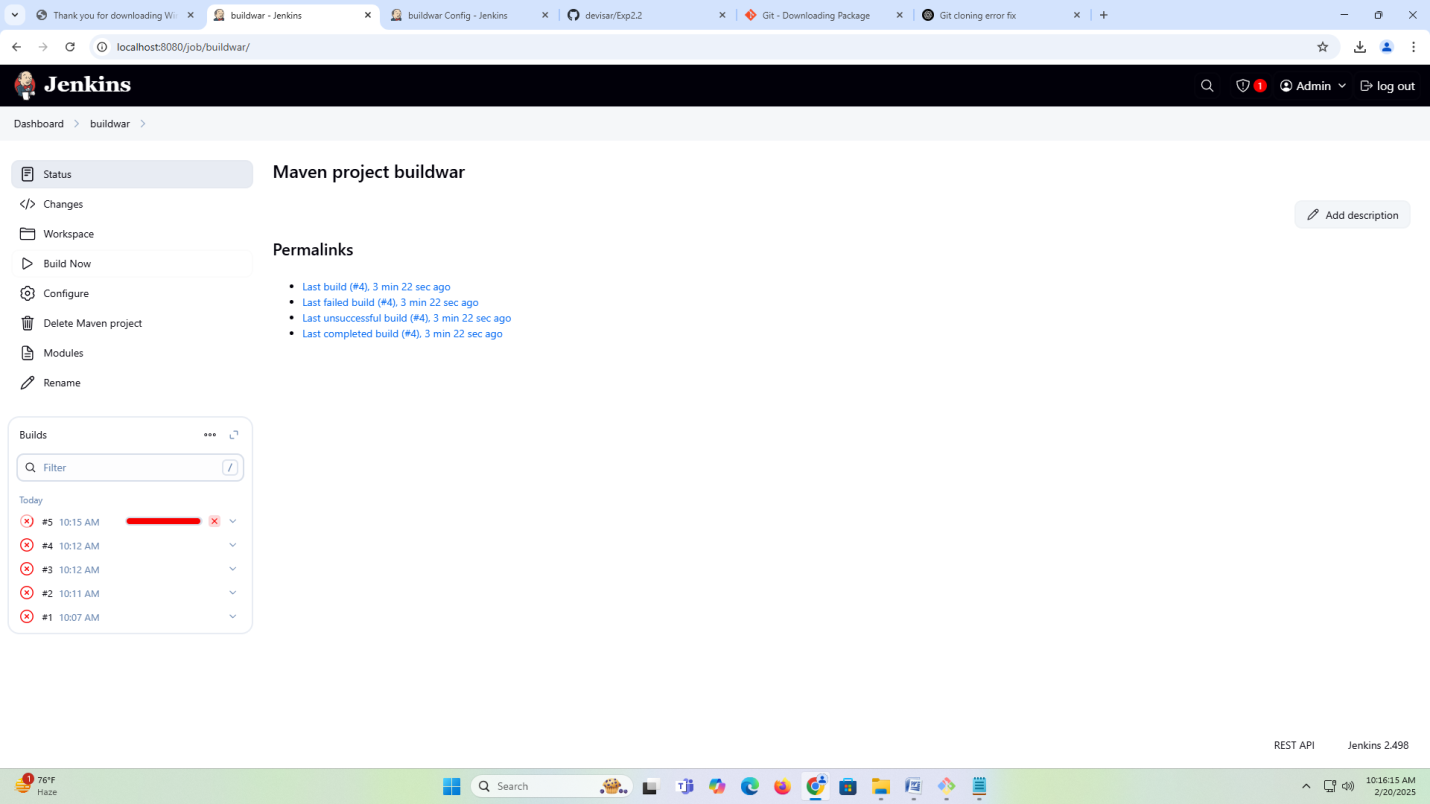
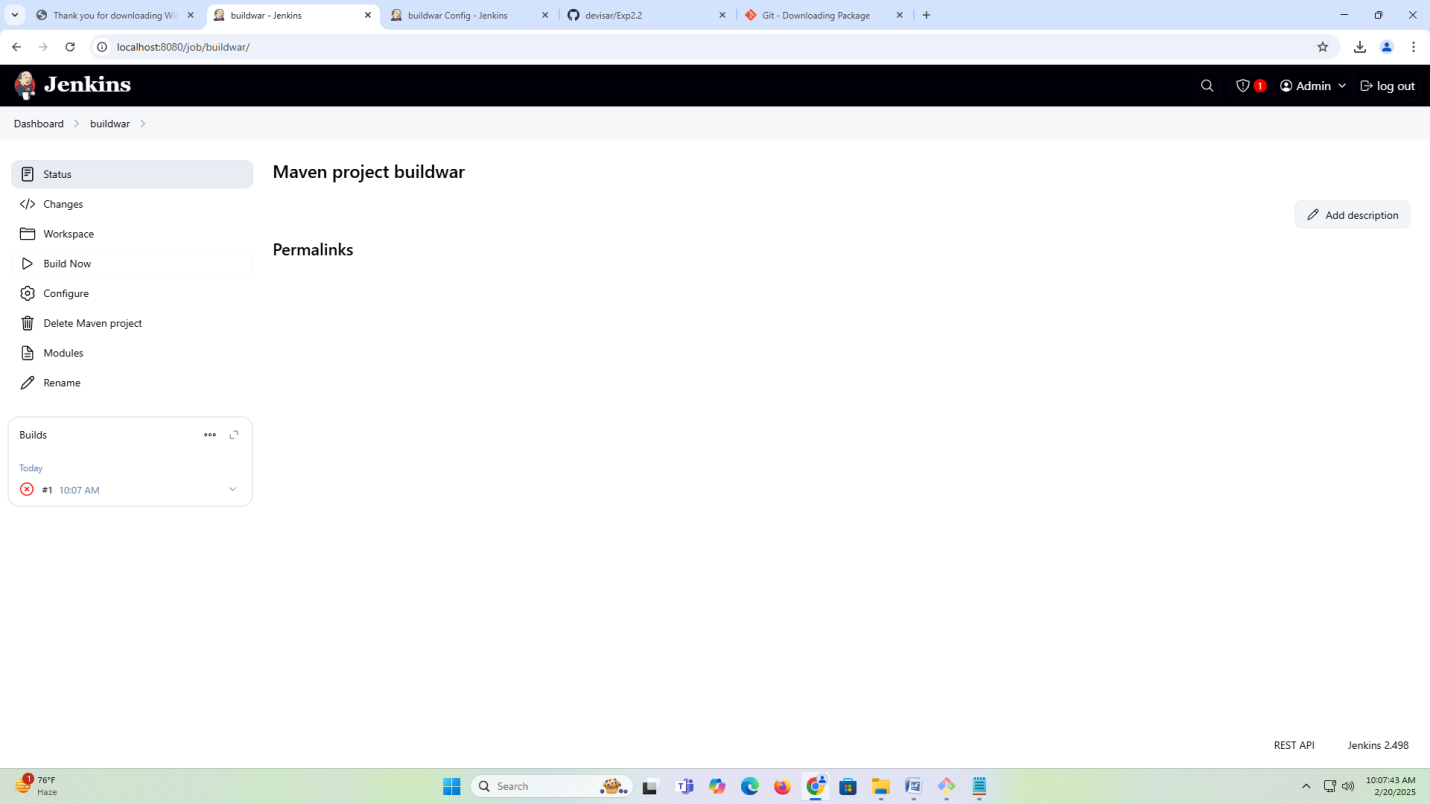
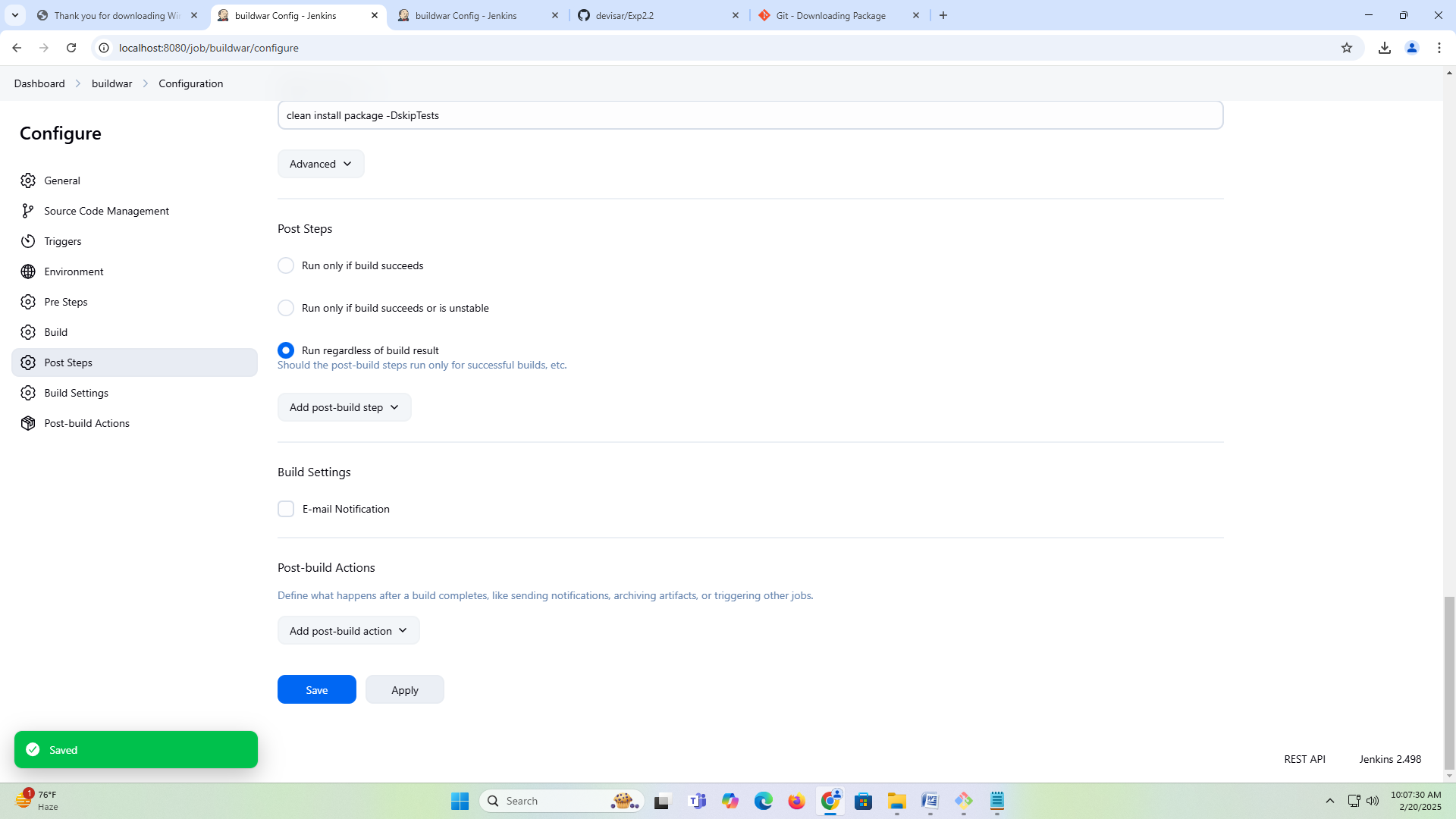
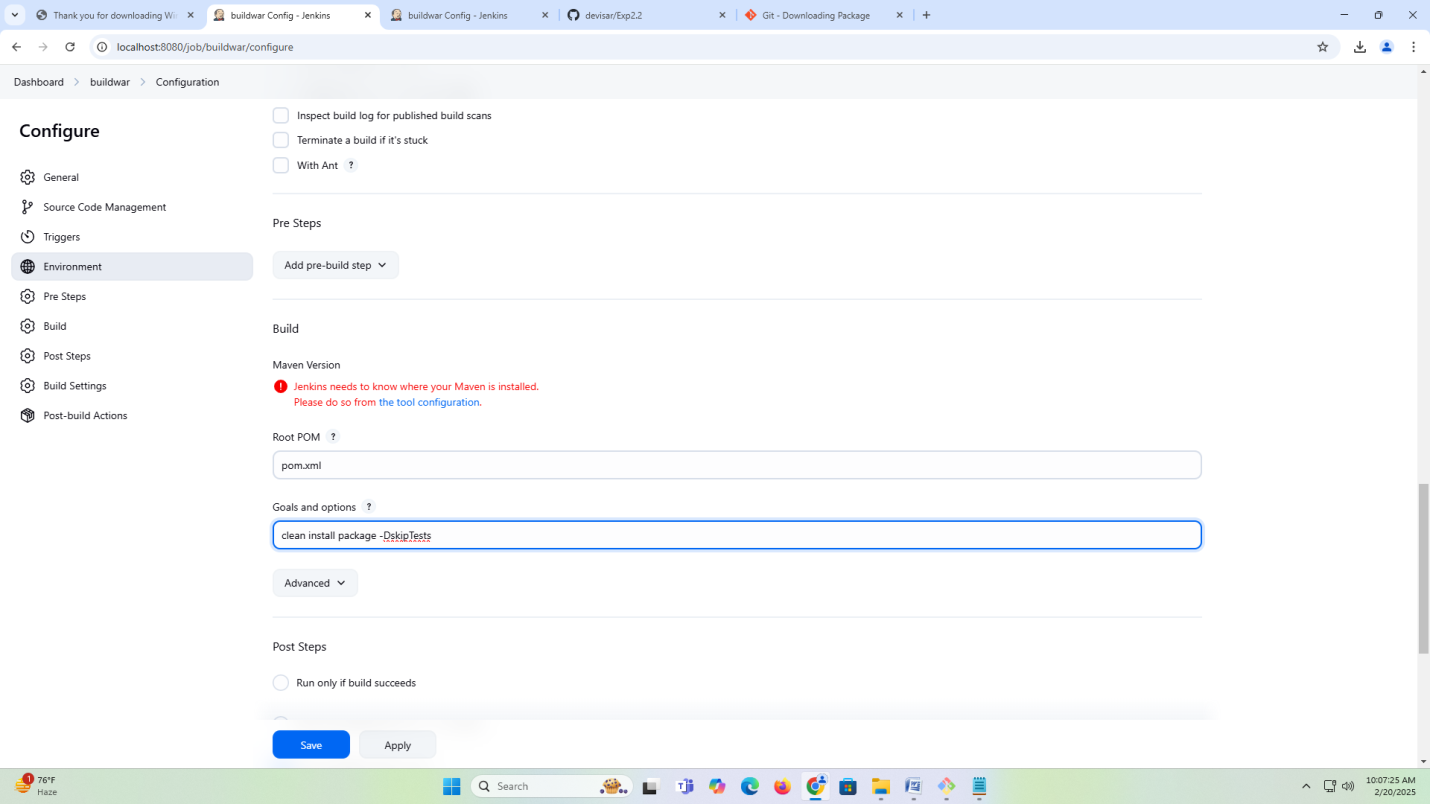
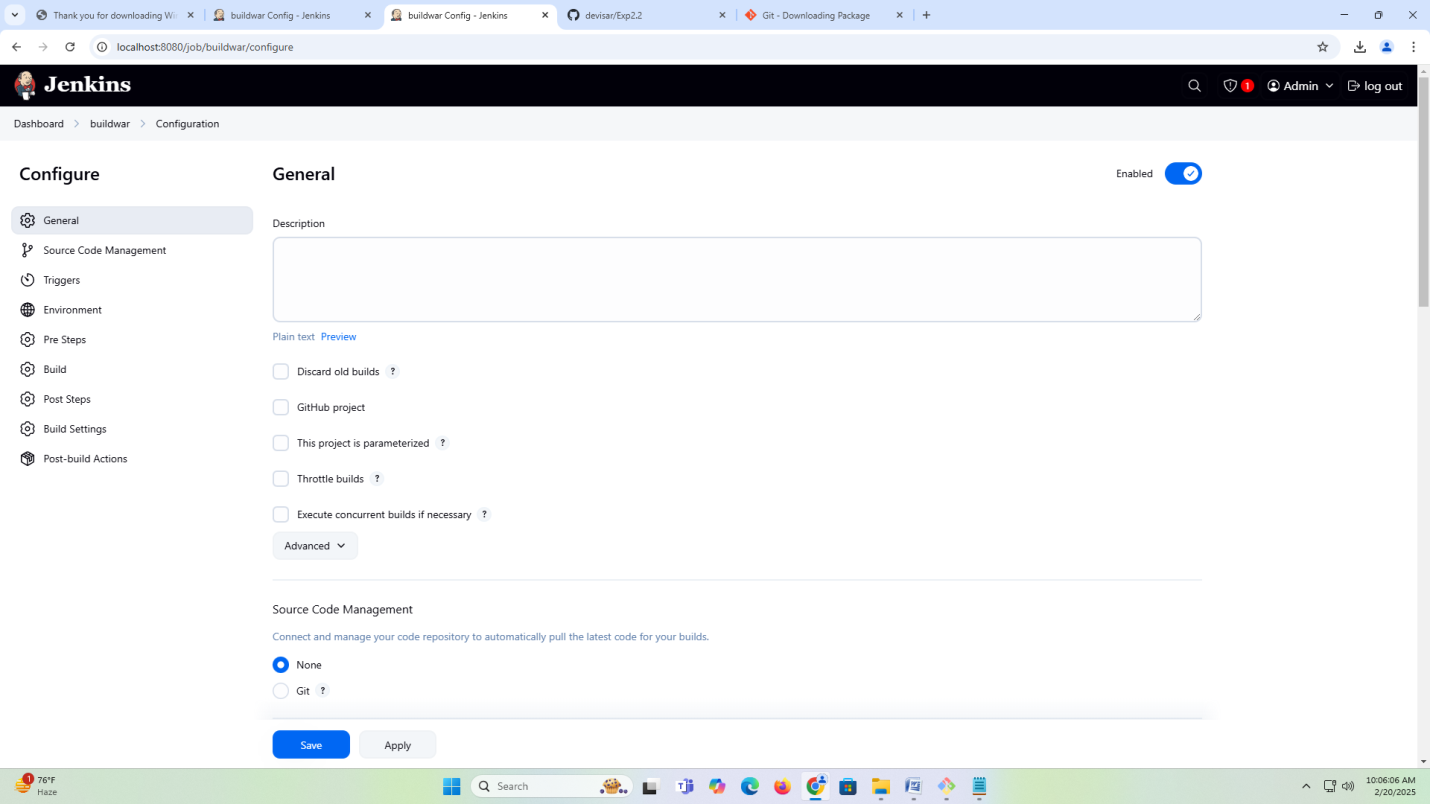
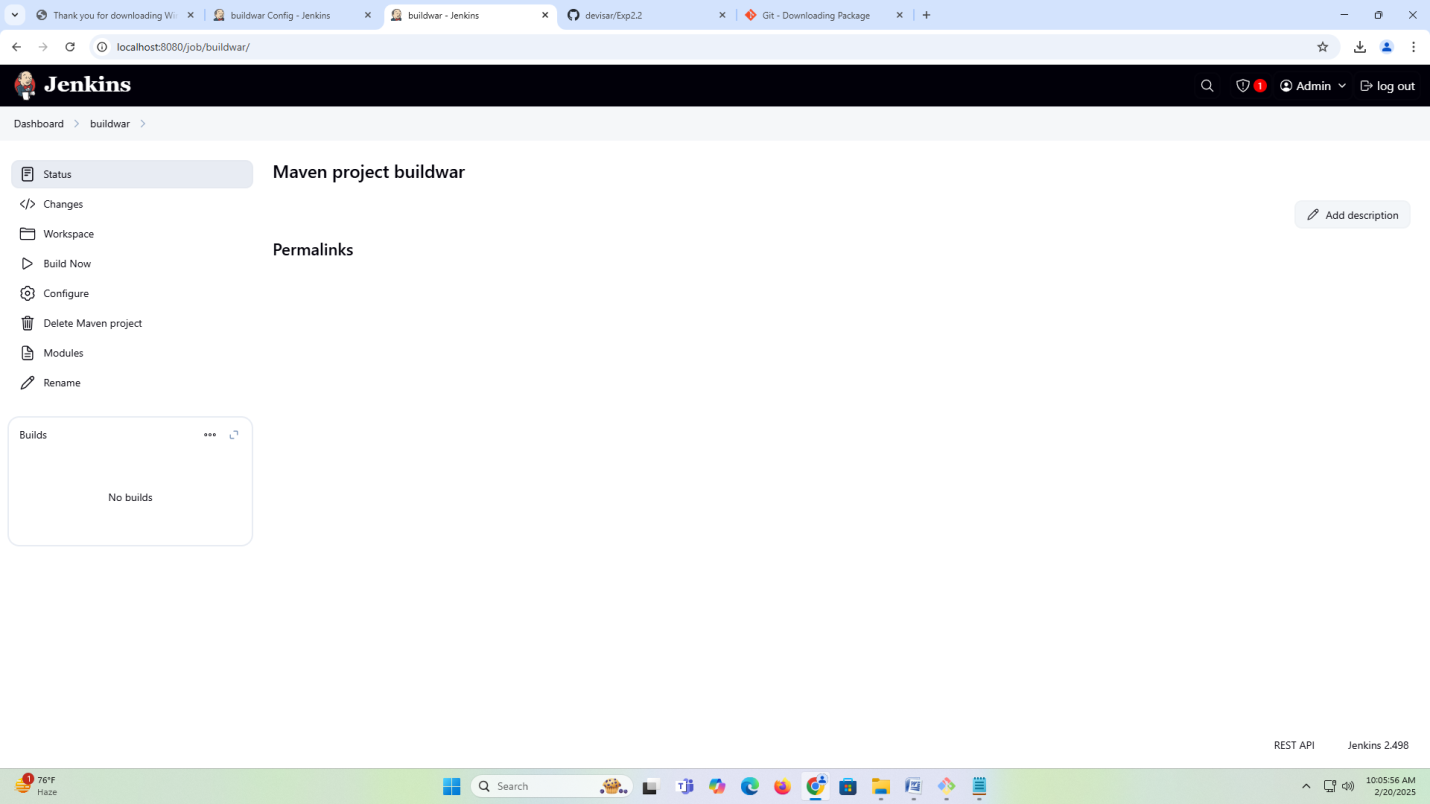
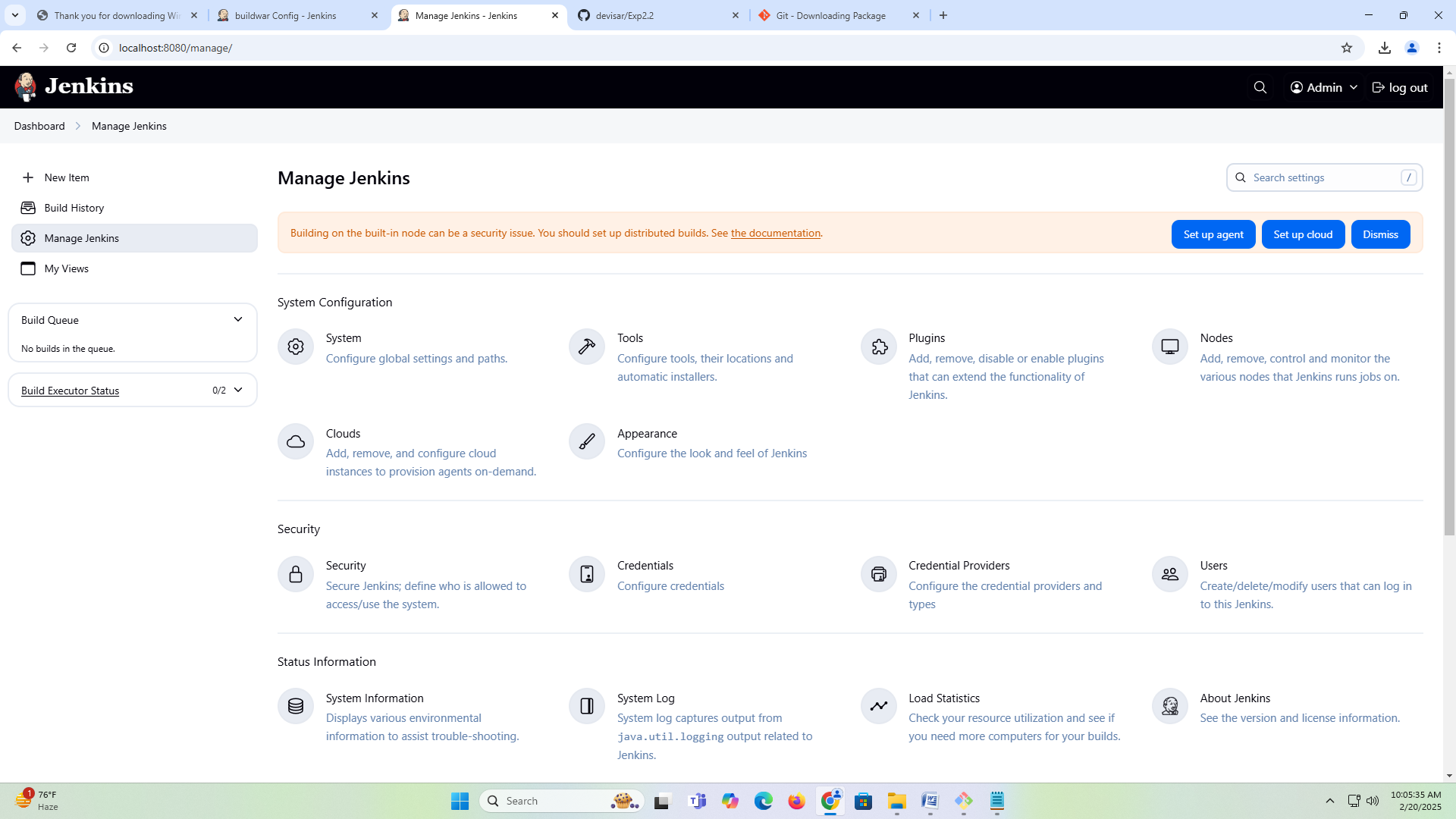
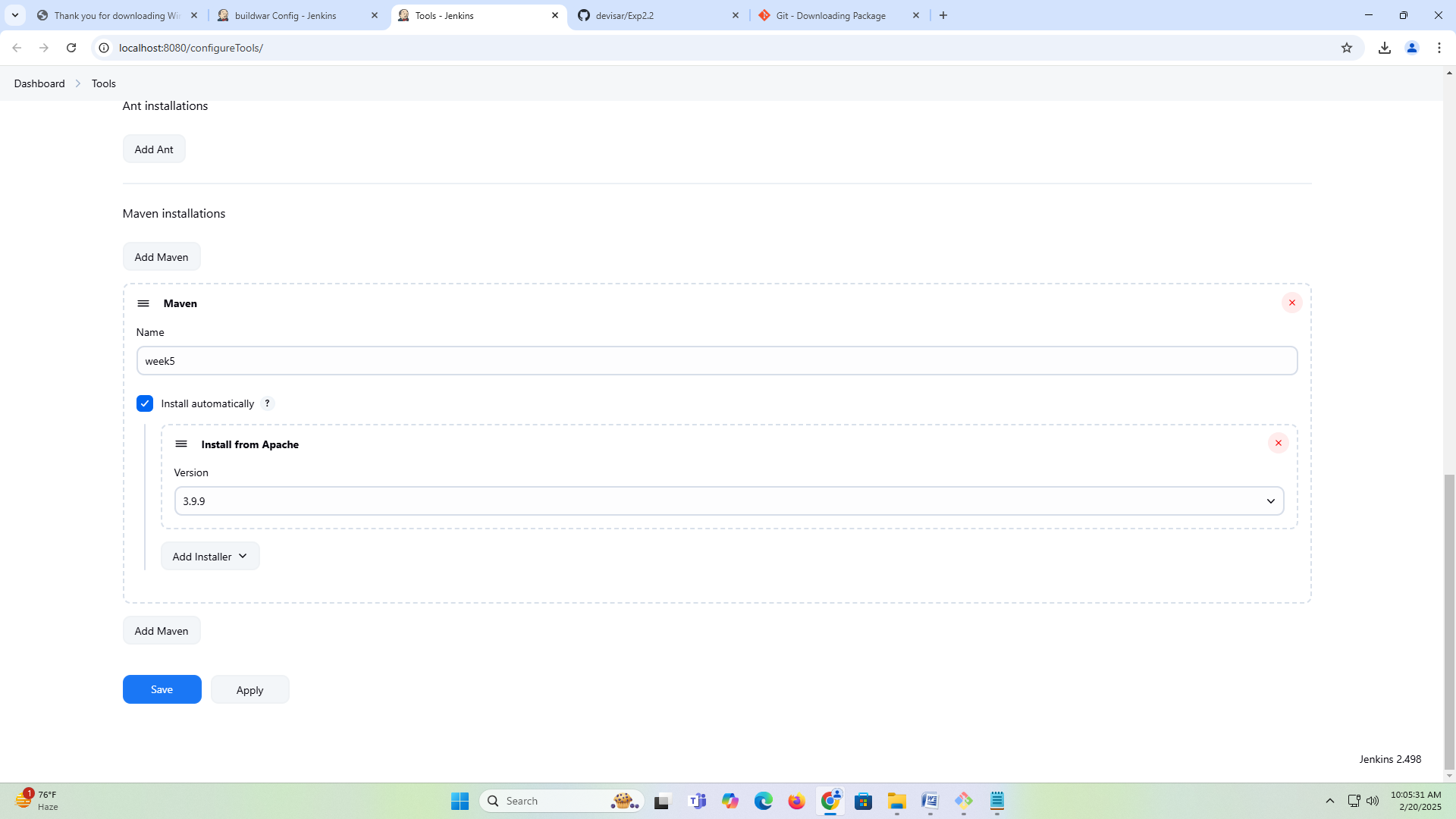
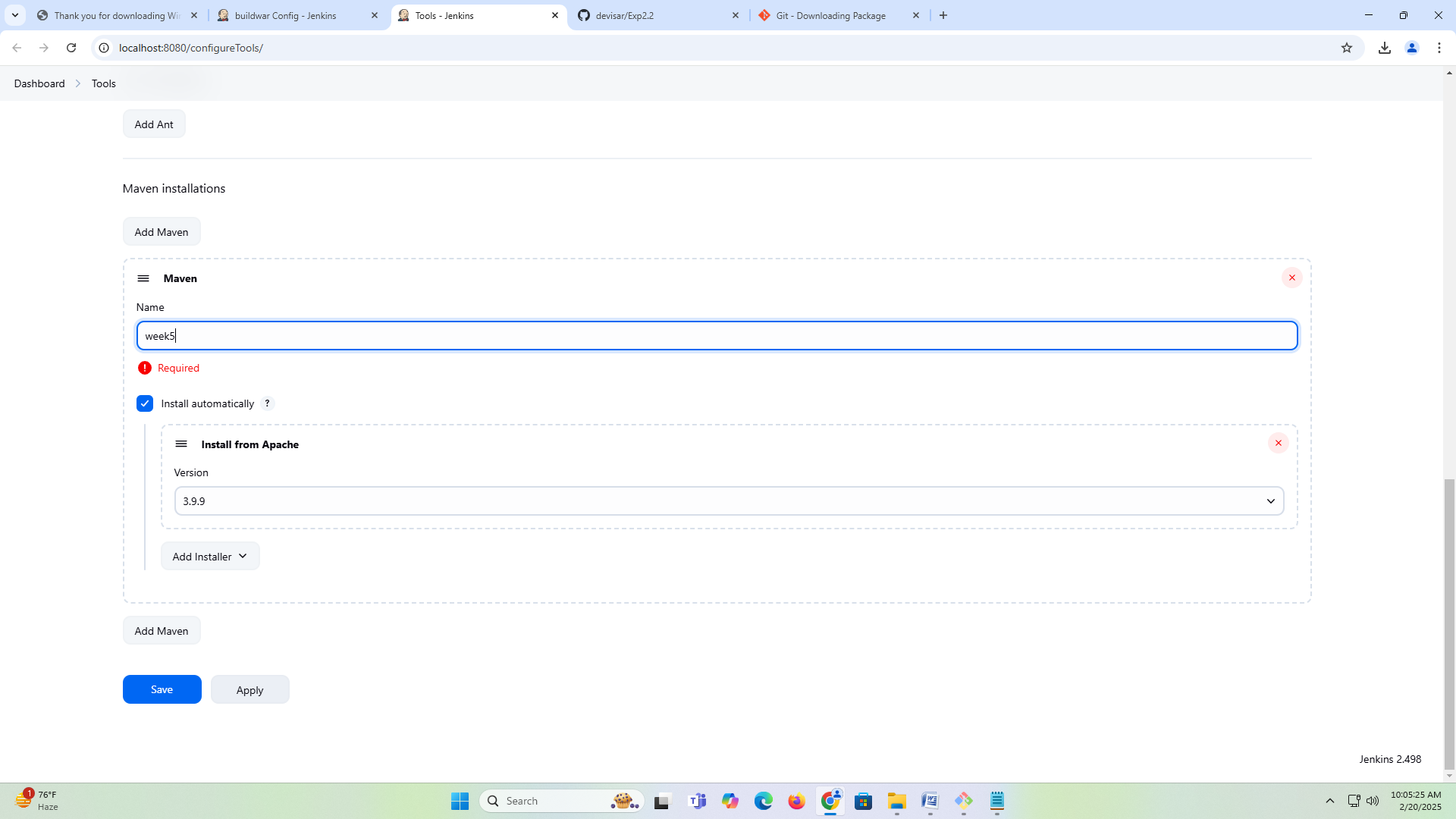
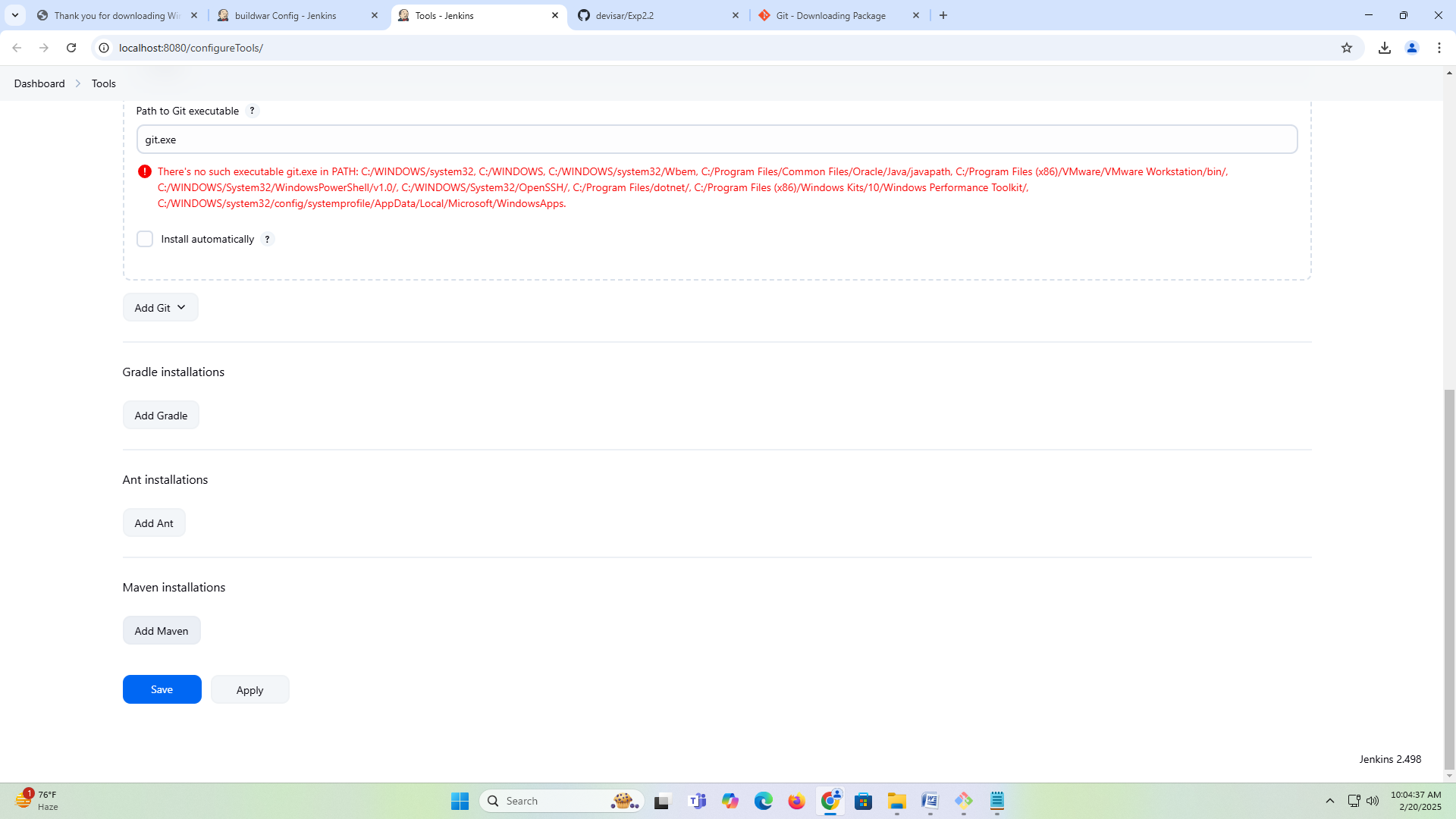
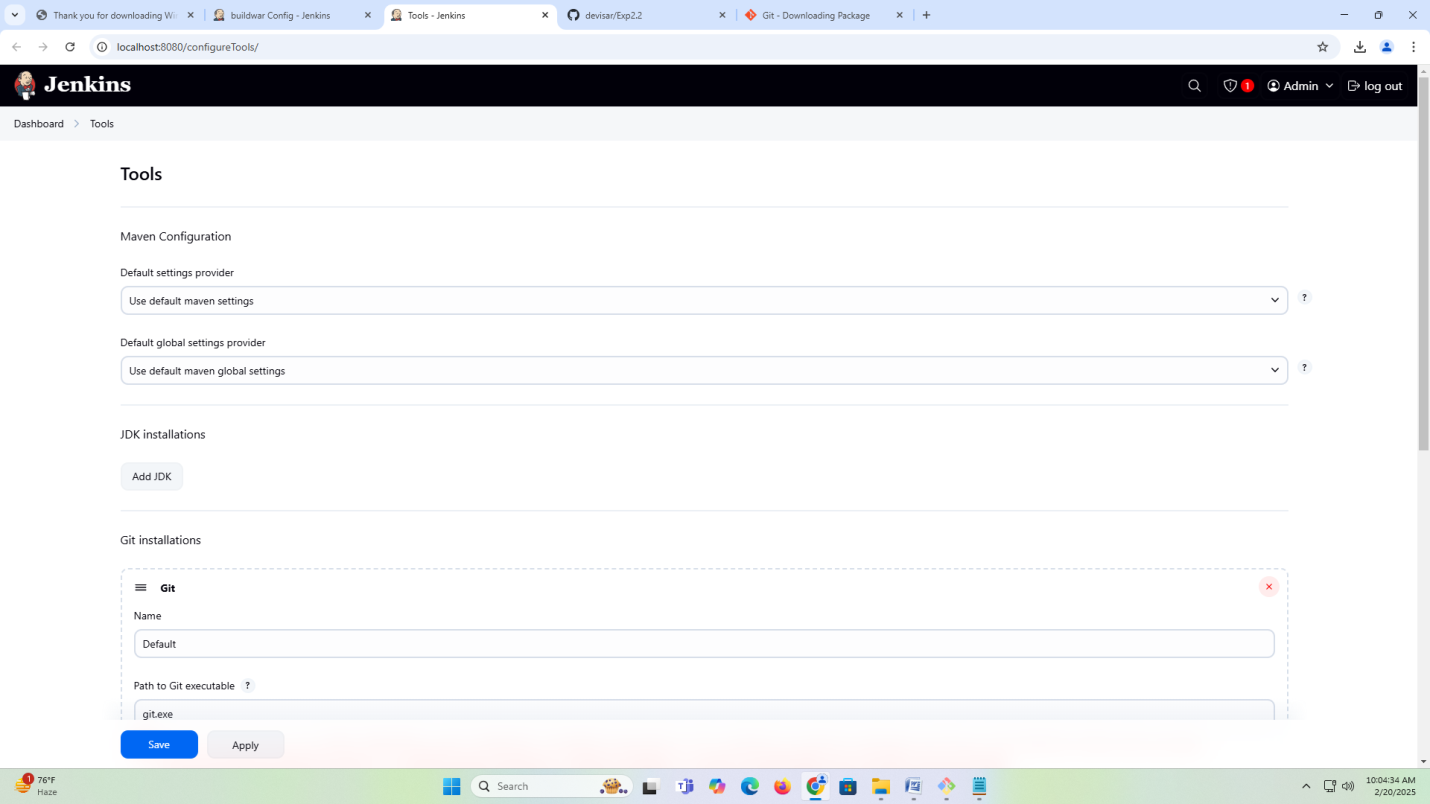
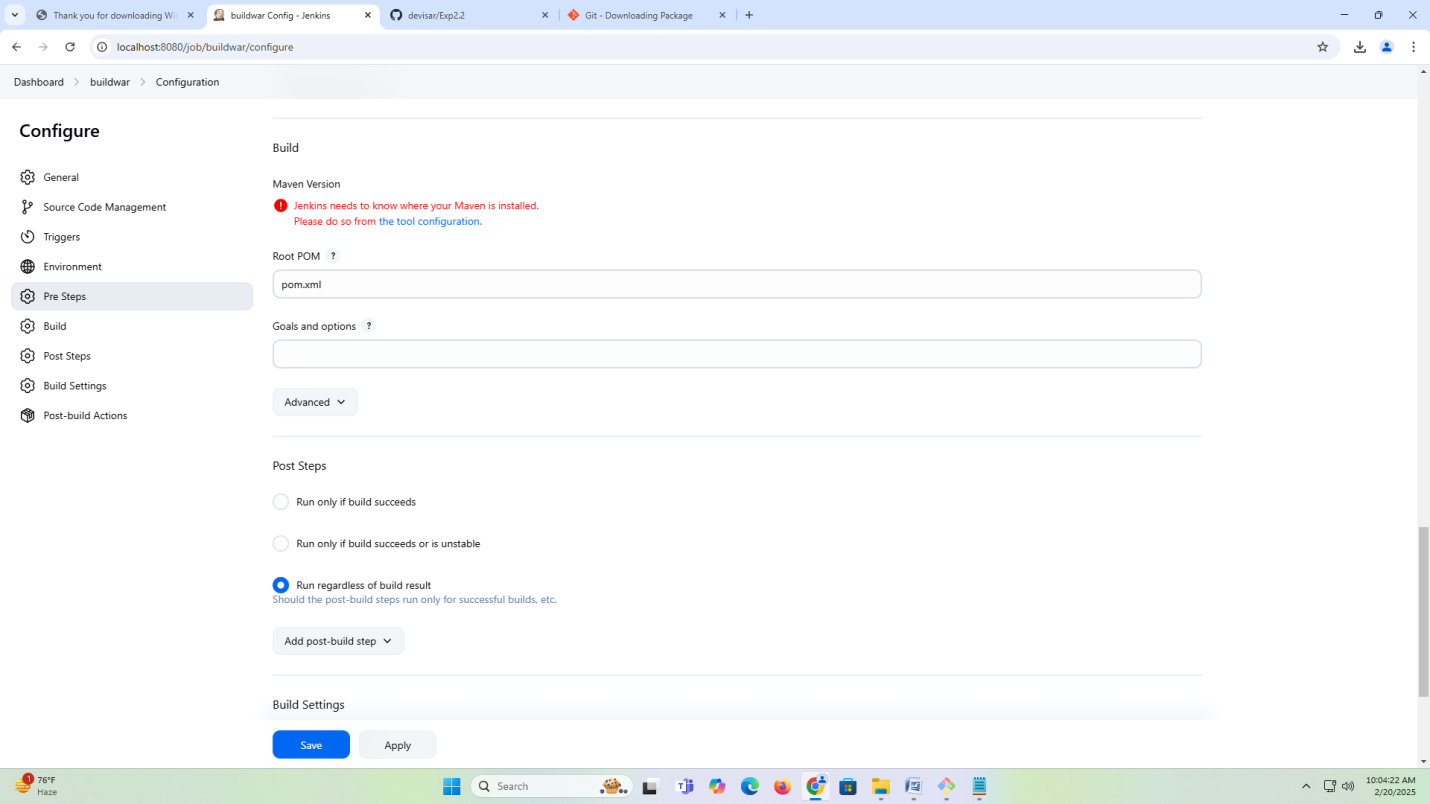
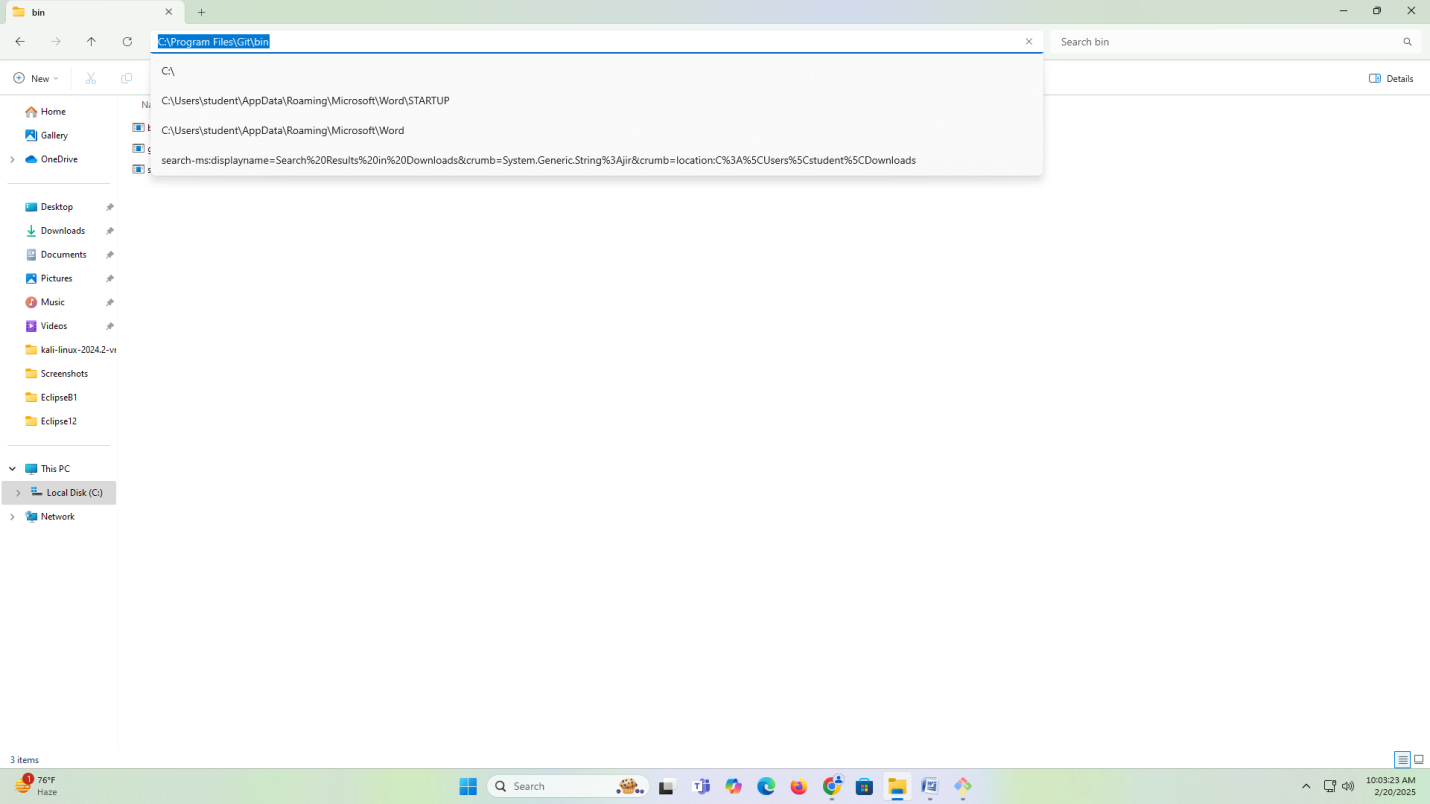
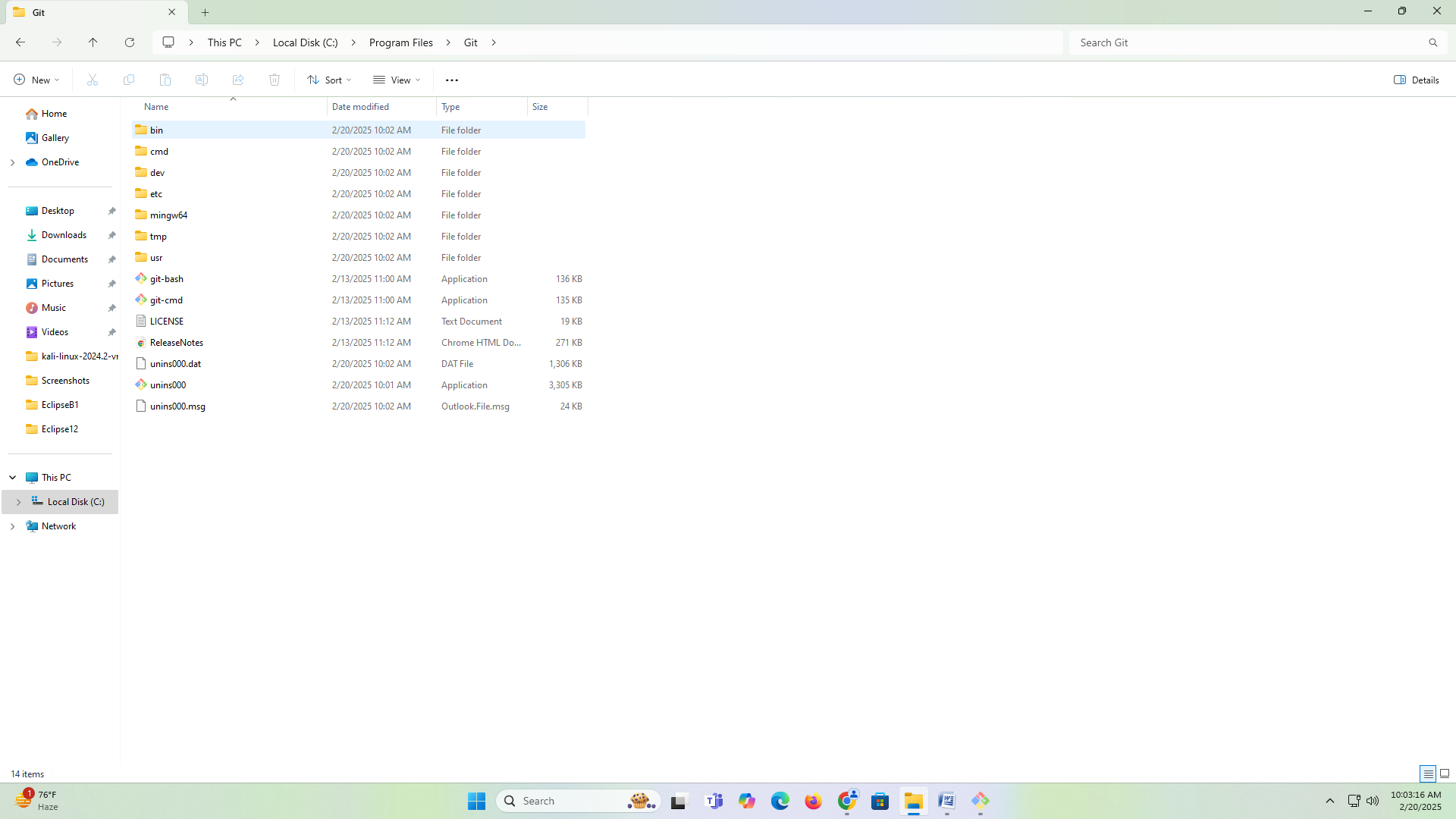
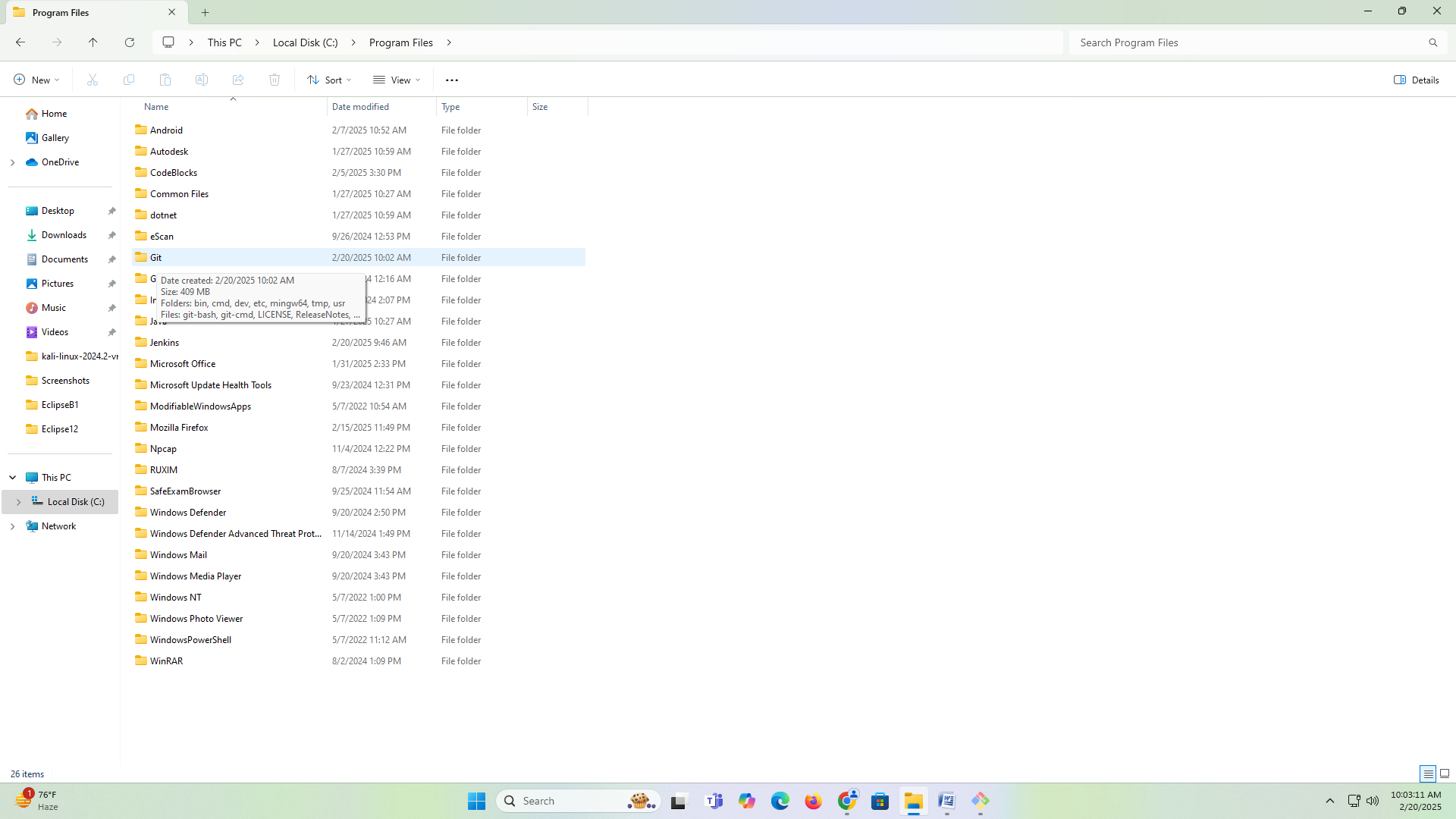
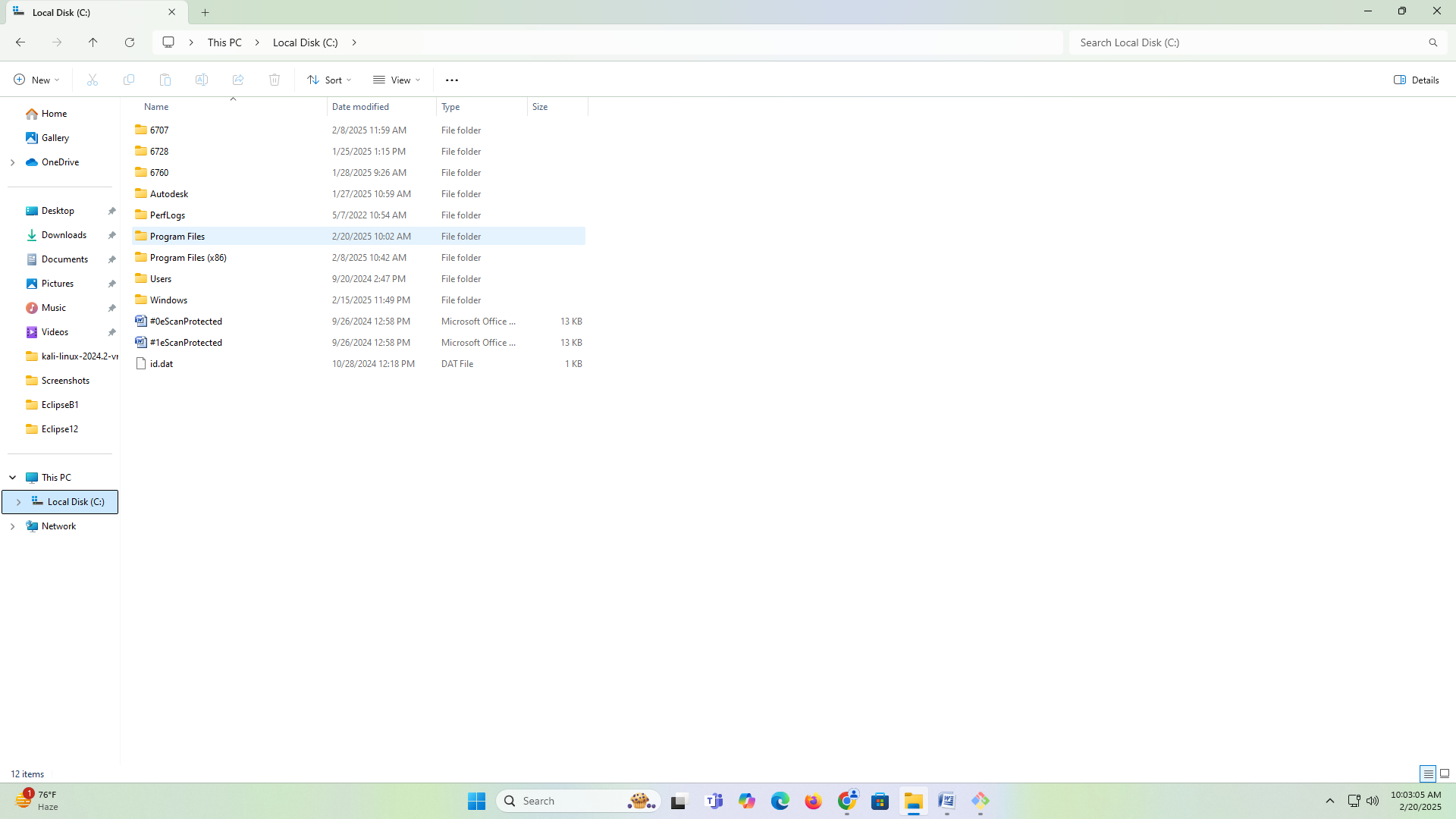
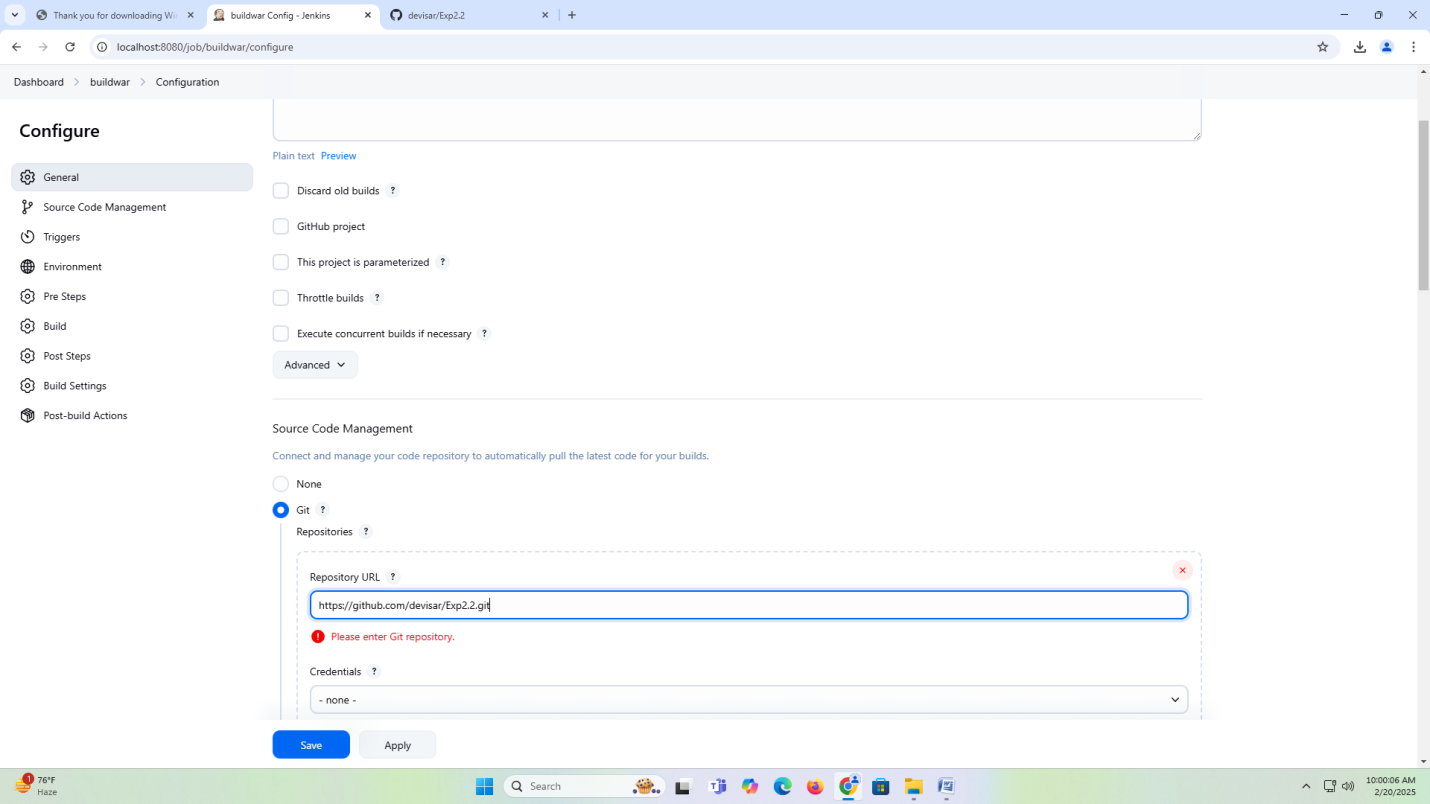
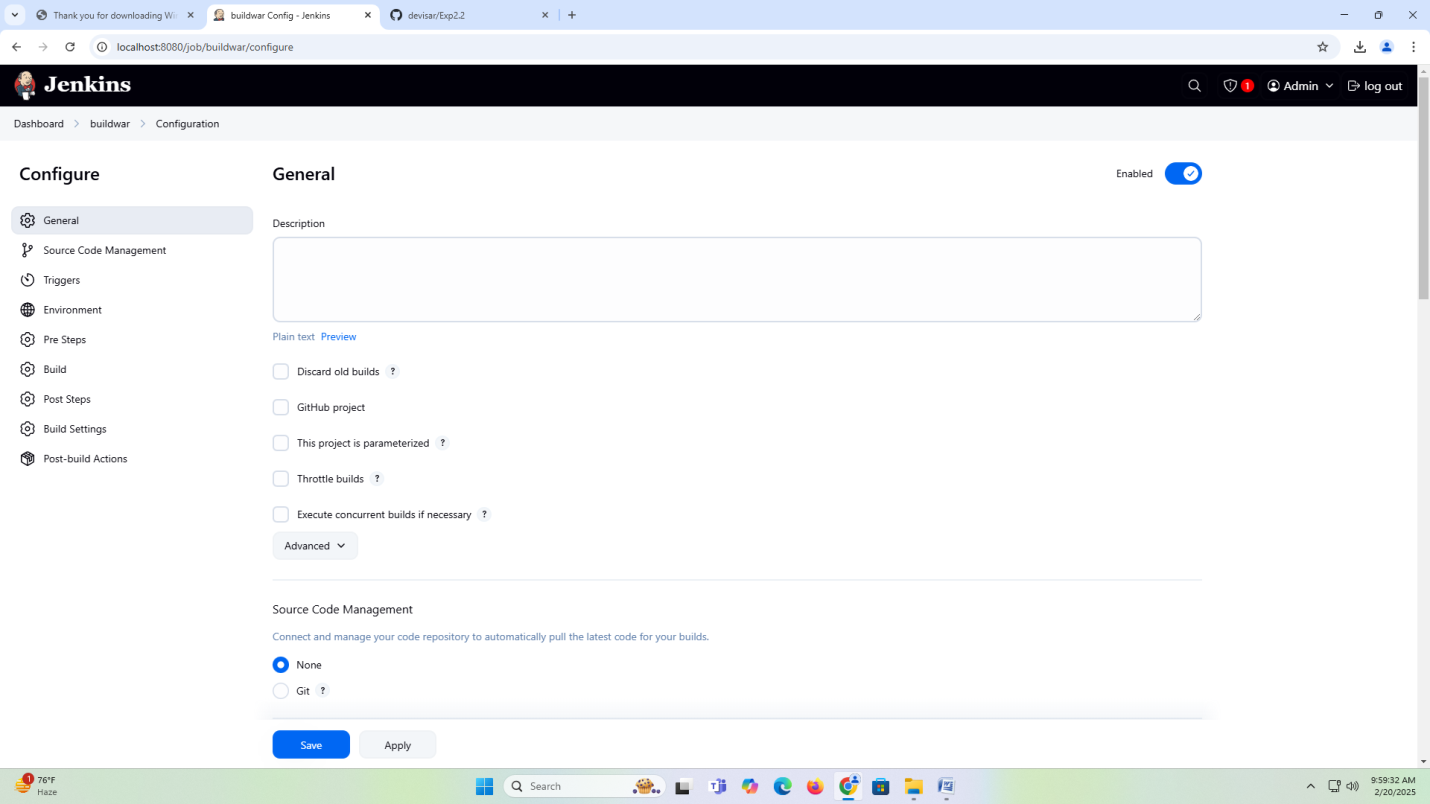
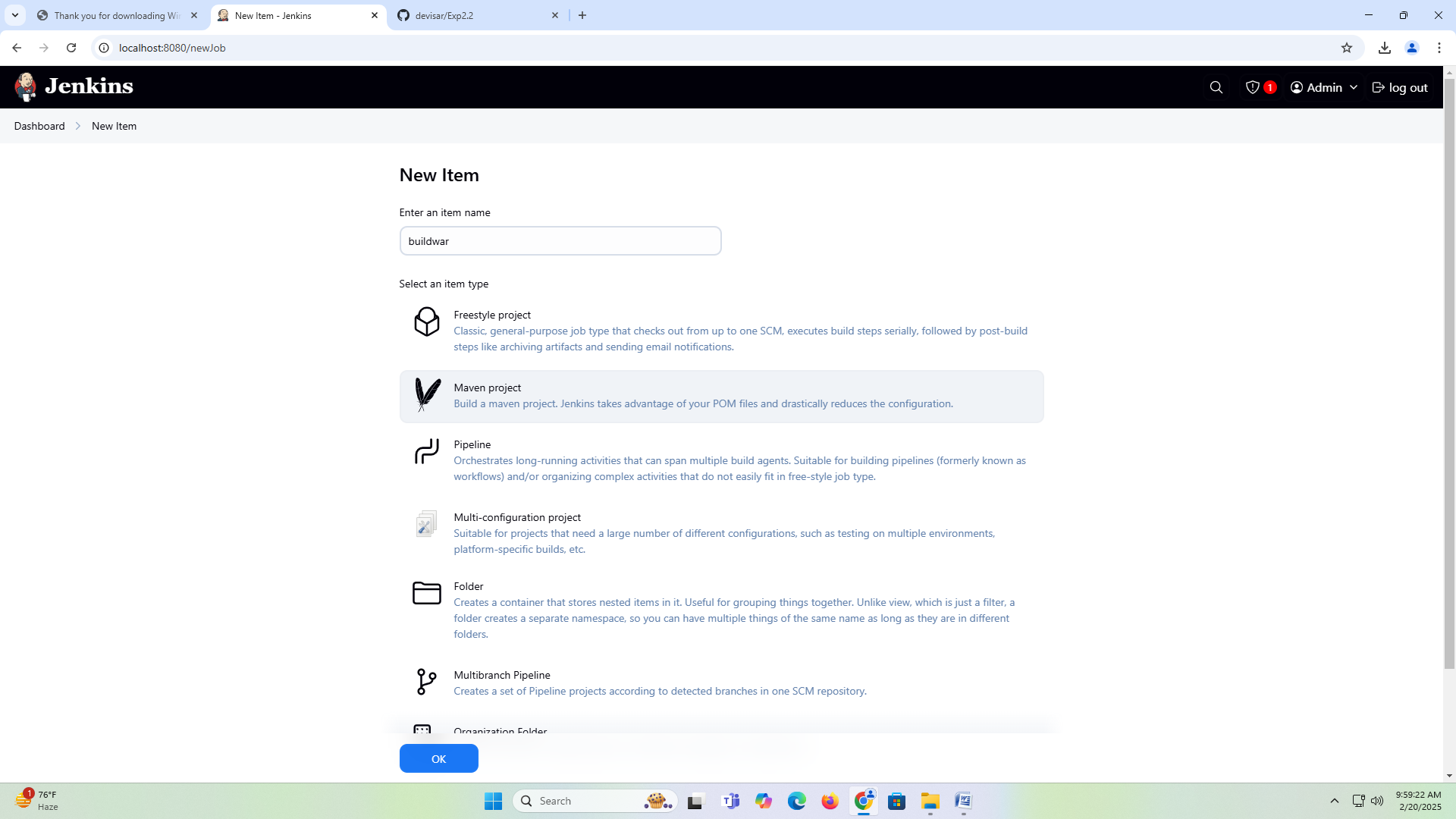
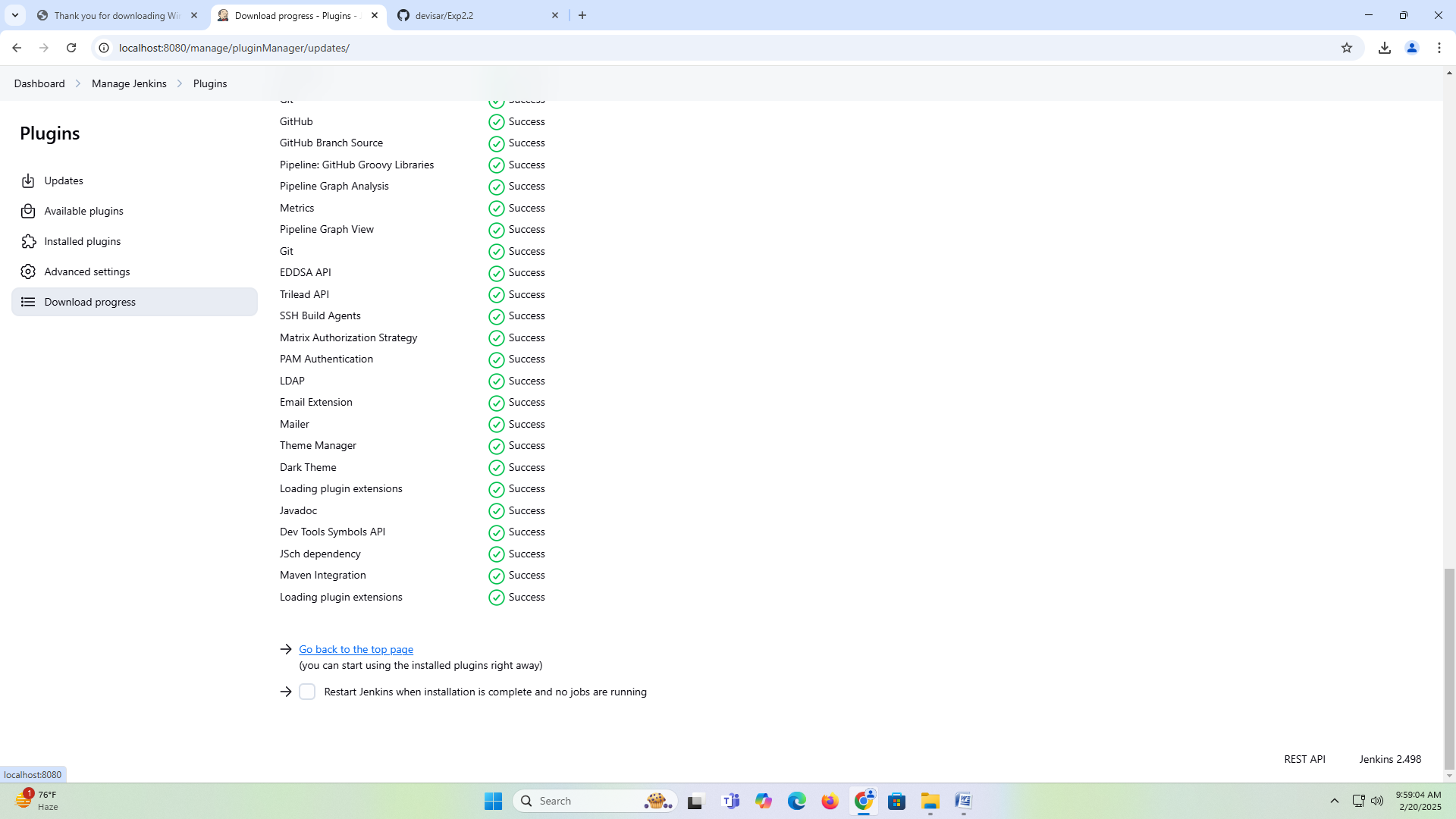
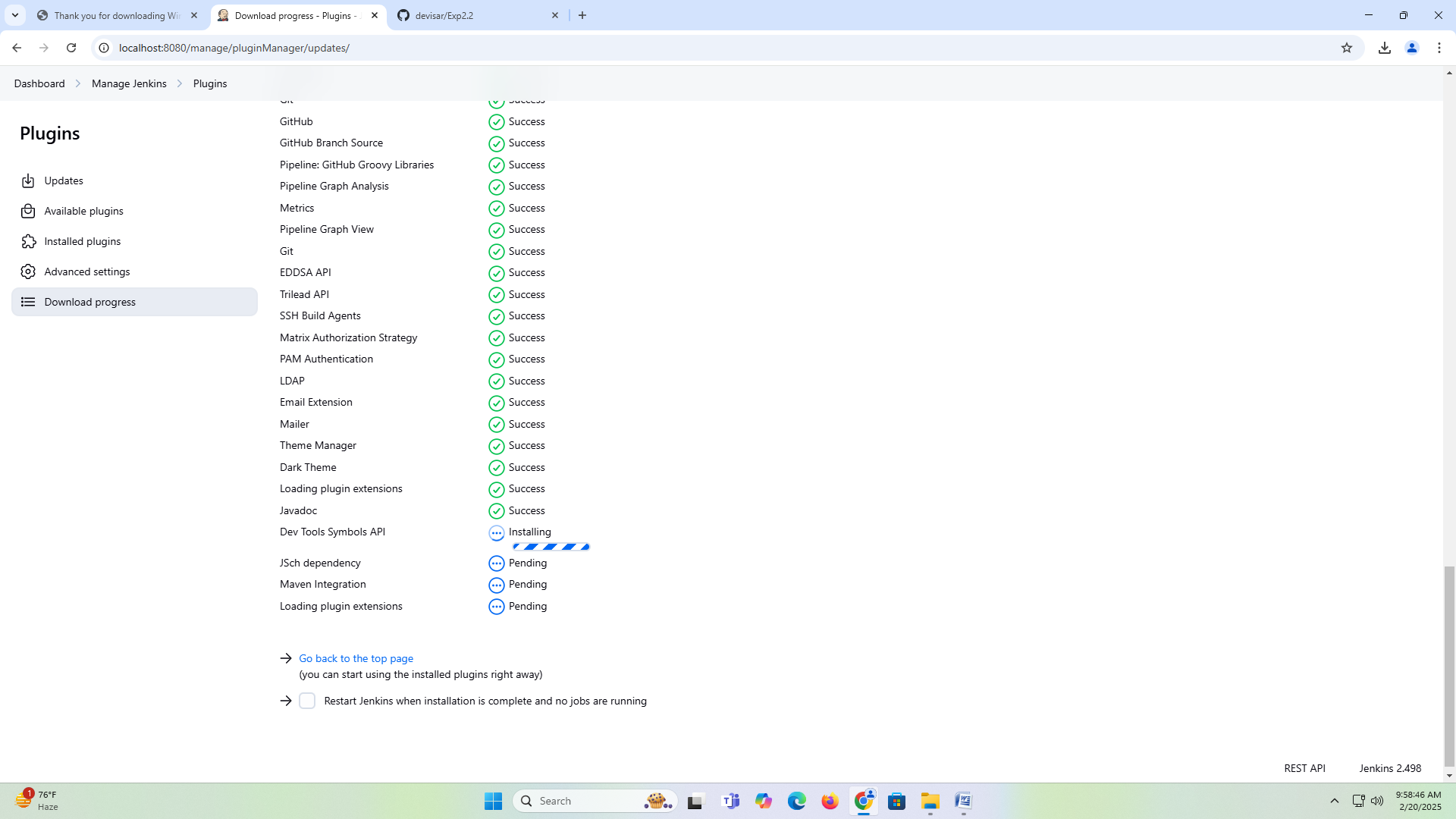
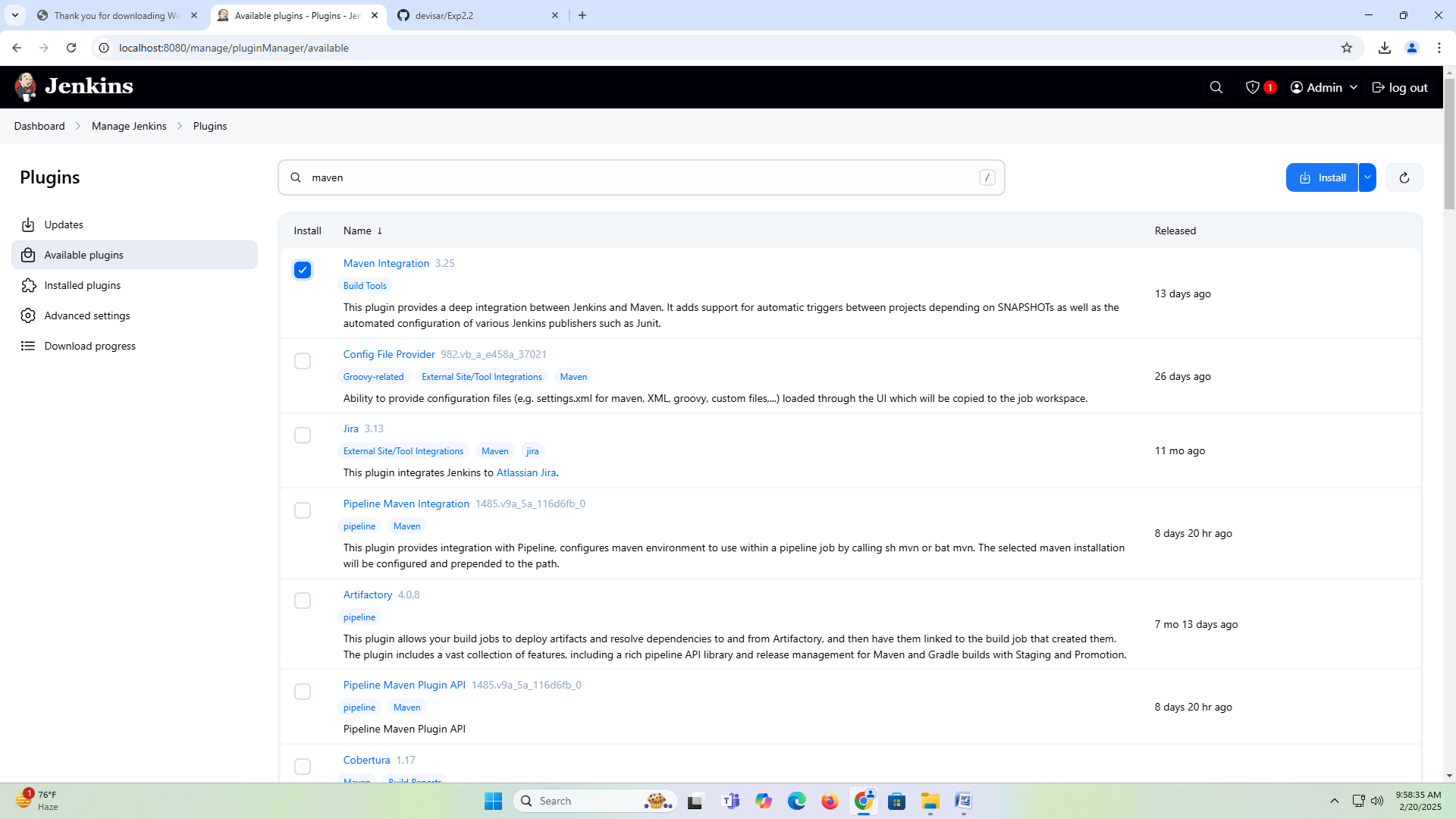
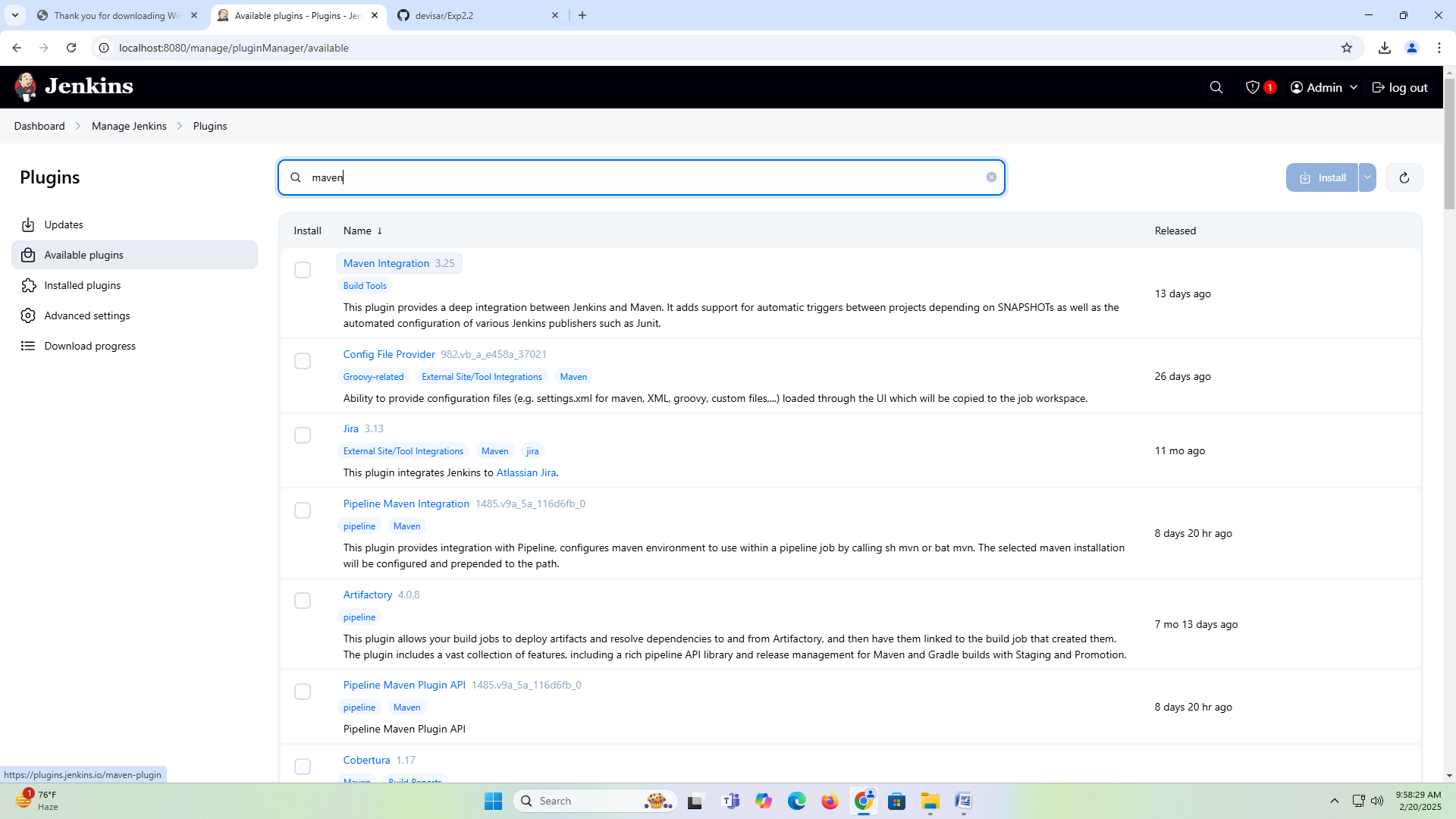
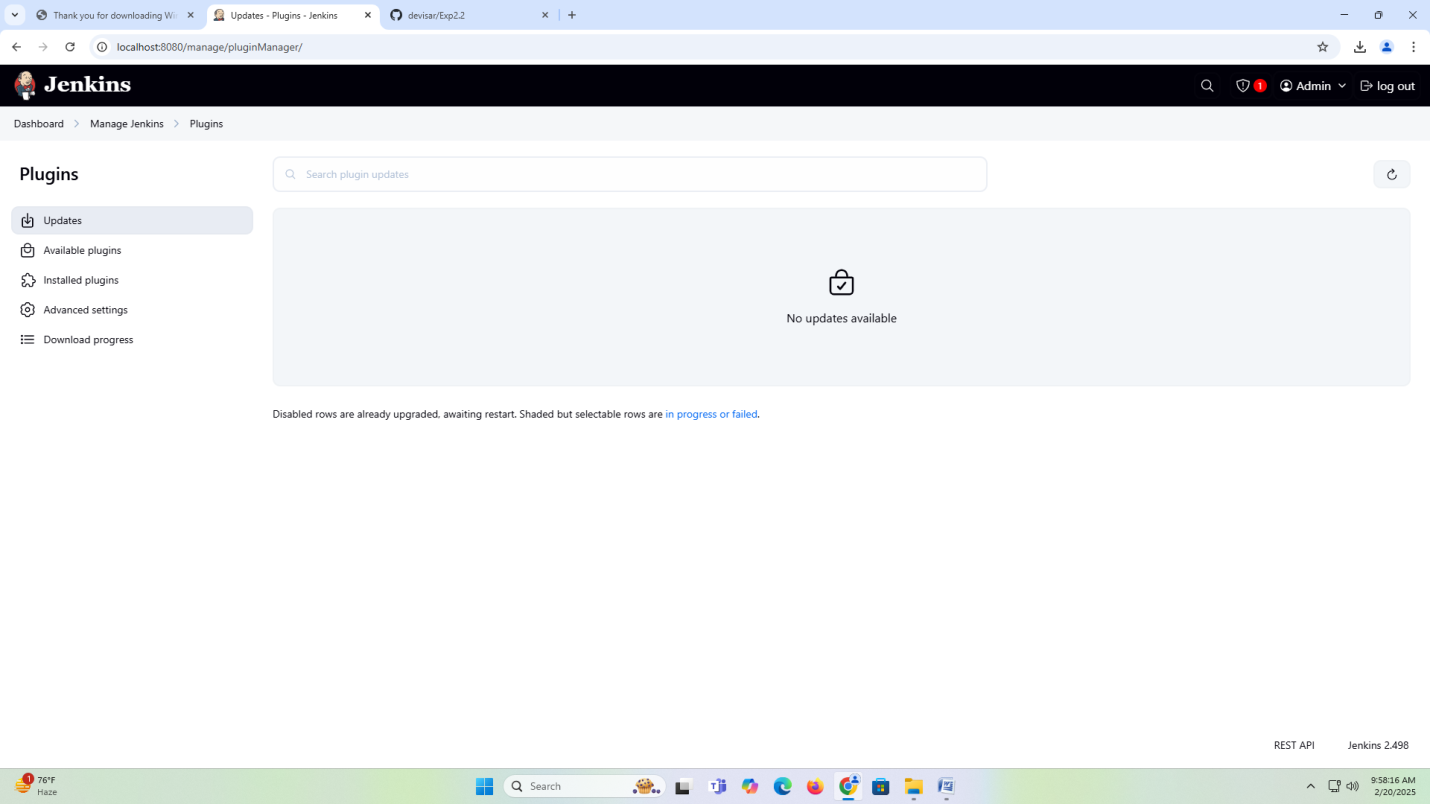
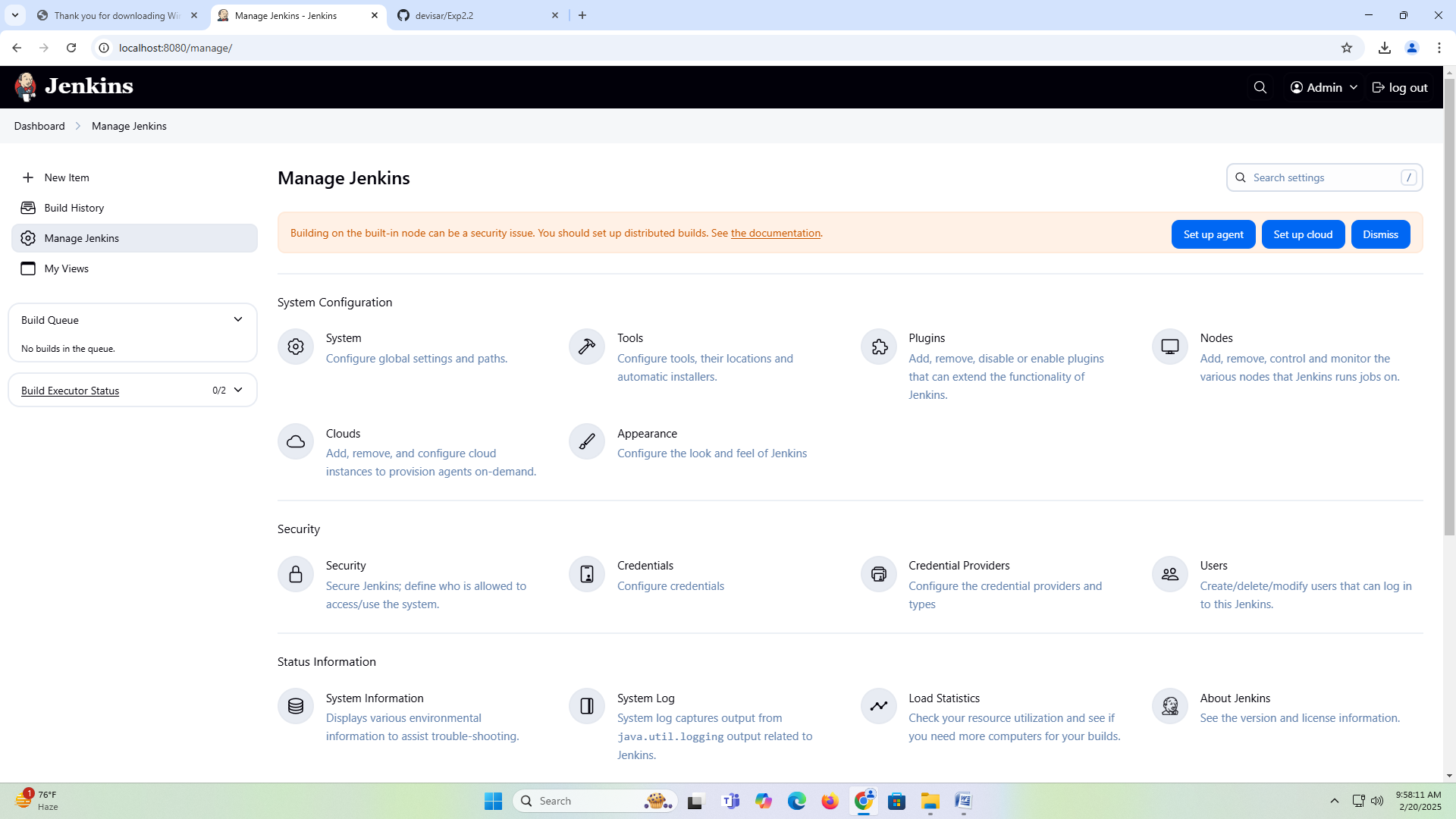
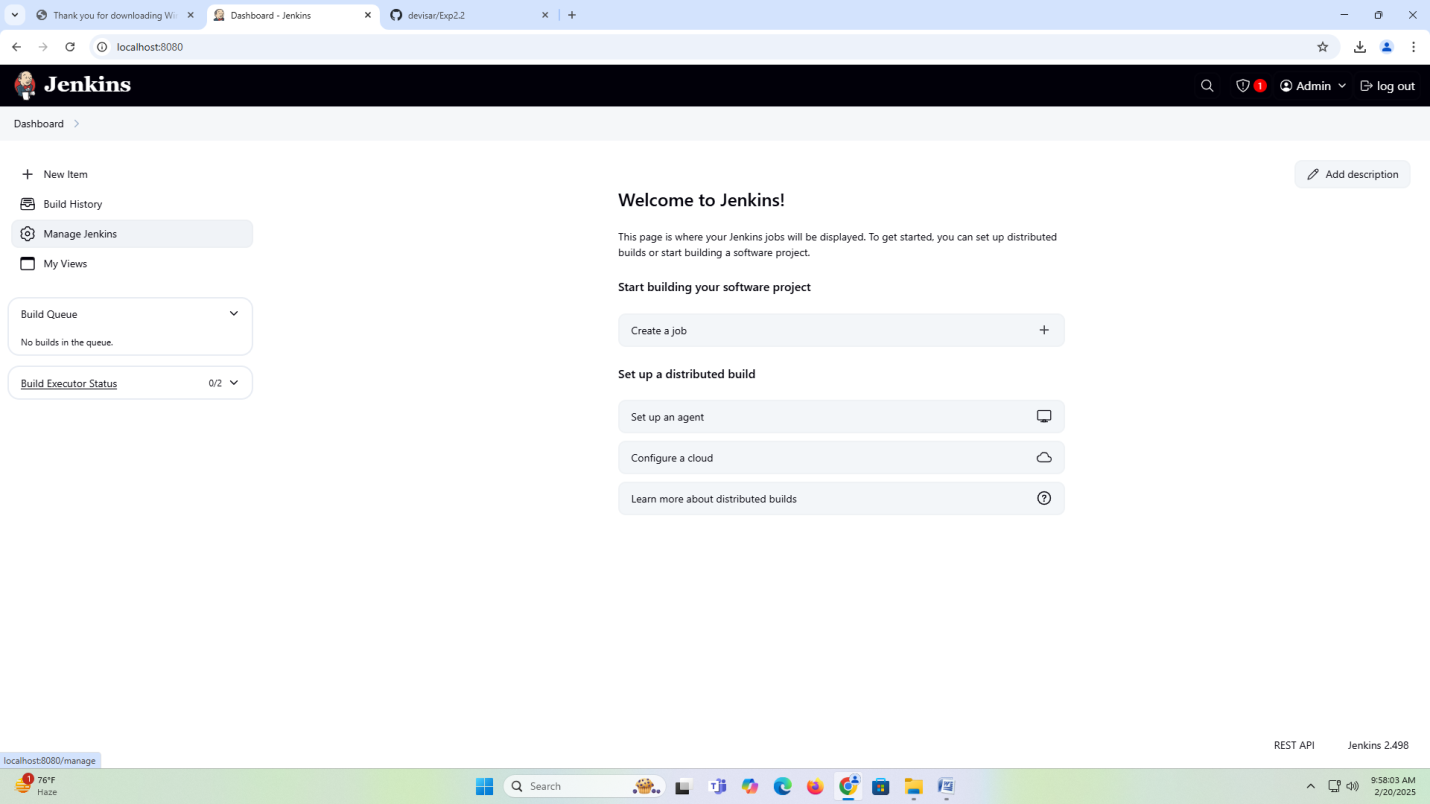
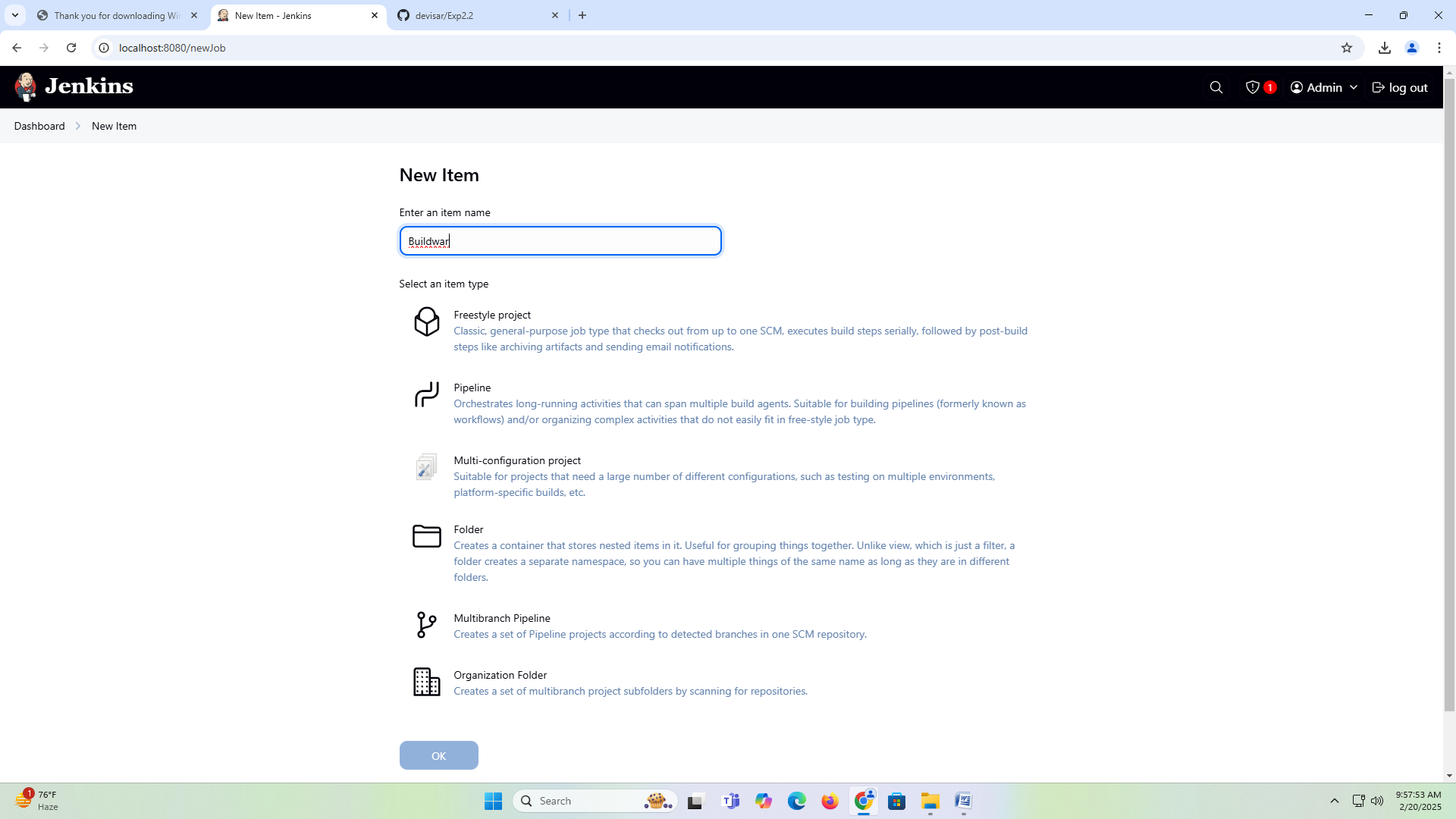
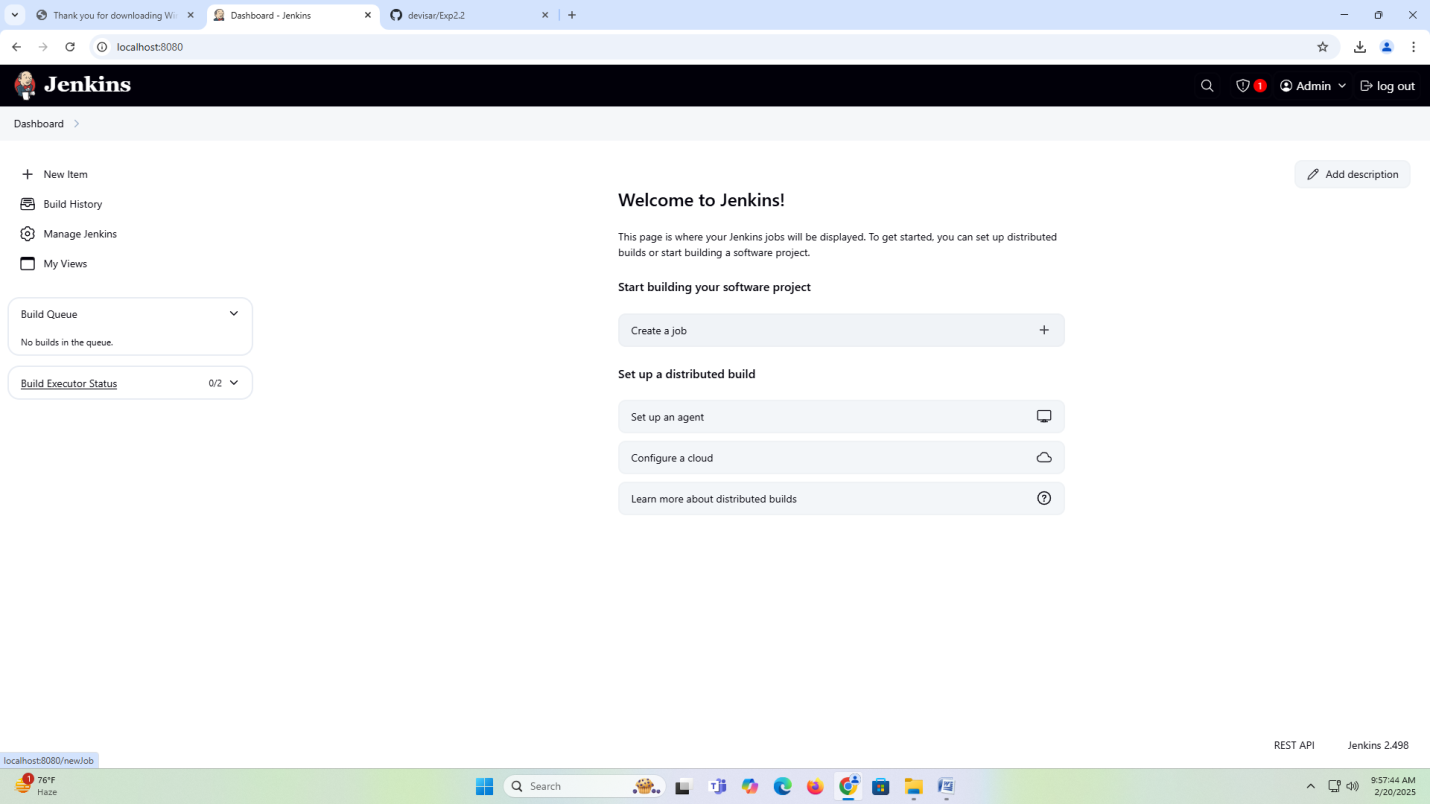
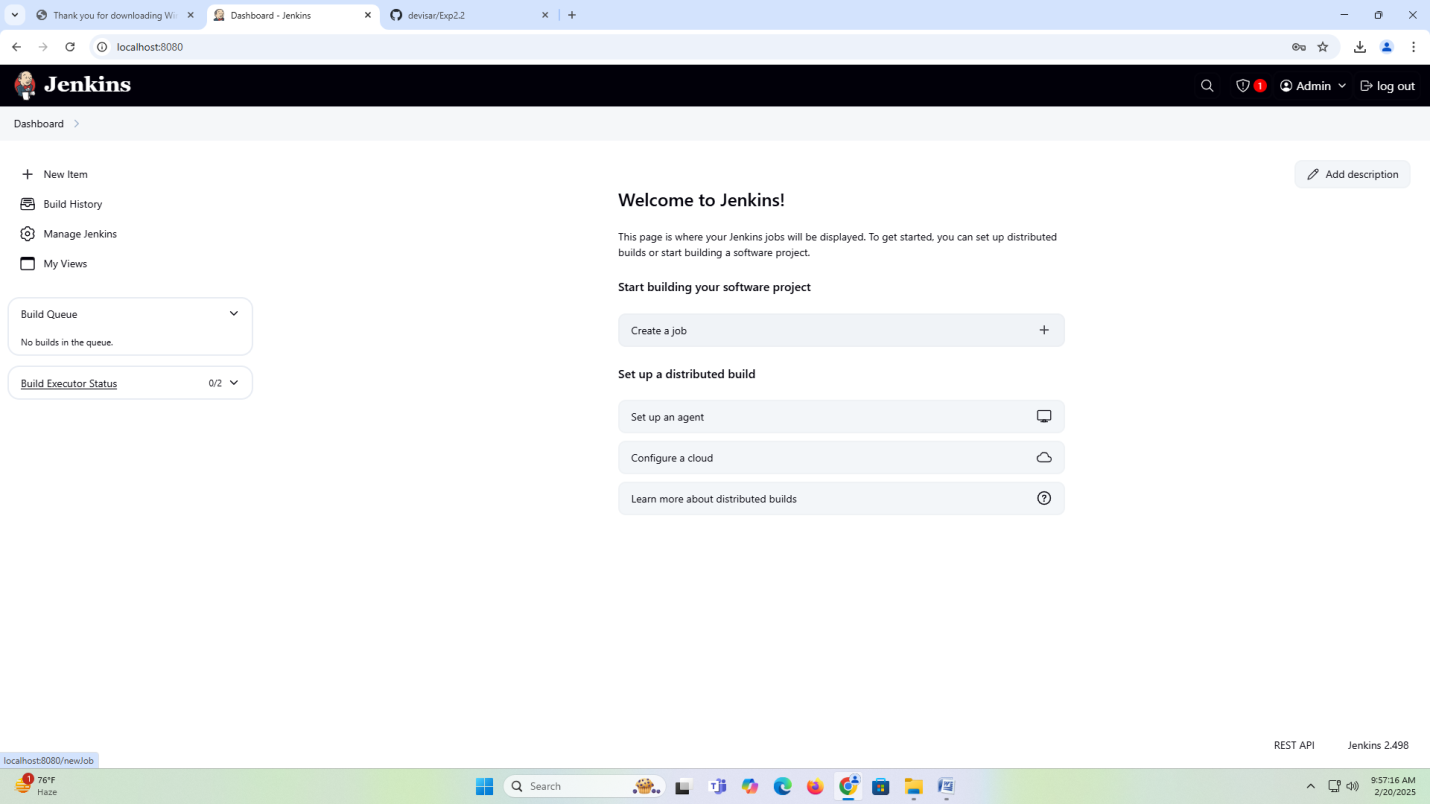
**Git Bash** is a command-line tool for Windows that allows users to run Git commands and Unix-like commands in a Bash environment. It provides a familiar terminal interface for Git operations and offers features like SSH support, making it a useful tool for developers working with Git on Windows.

**Git** is a version control system for managing code, while **Git Bash** is a terminal that allows you to run Git and Unix commands on Windows.

Step 1:-Install Java JDK 17, Git Bash and Jenkins software install in Windows or You can Create Jenkins server through AWS Also.

Below Images use for Understanding Purpose How to install

1. If you want create Jenkins server through AWS follow Experiment 3 steps.

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