

BRANCH

git branch - list of branch

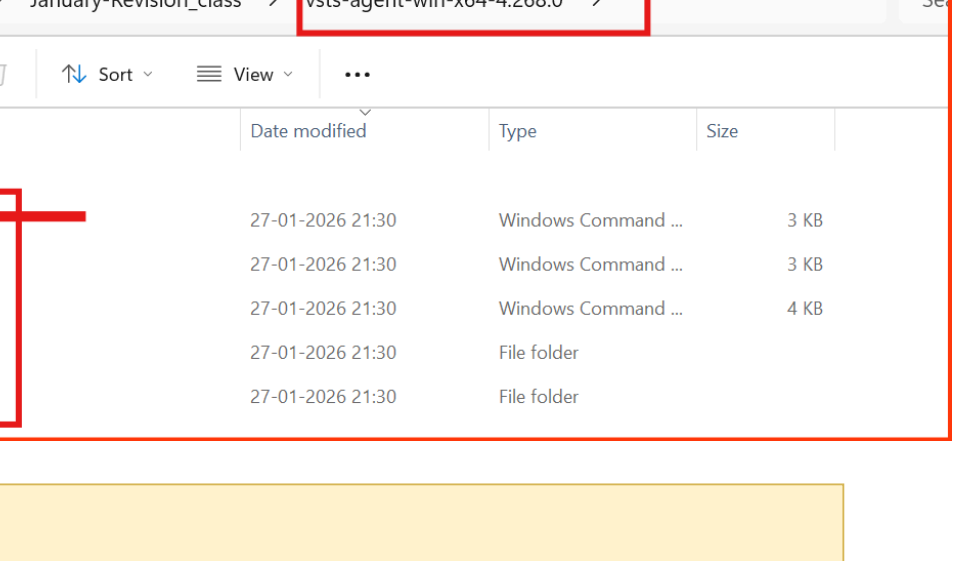
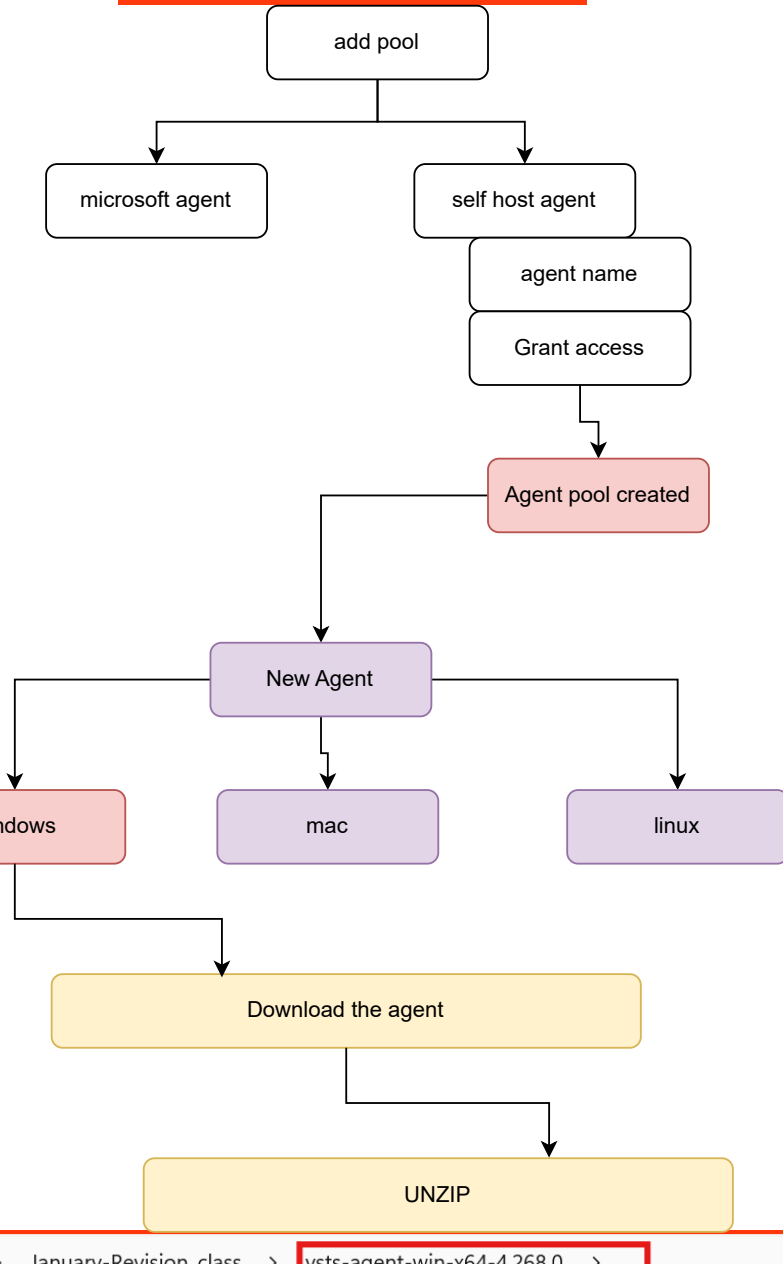
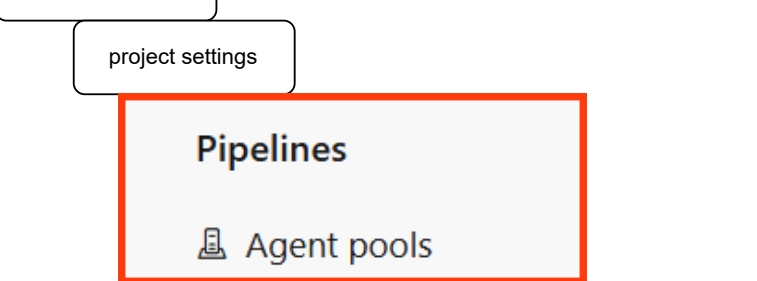
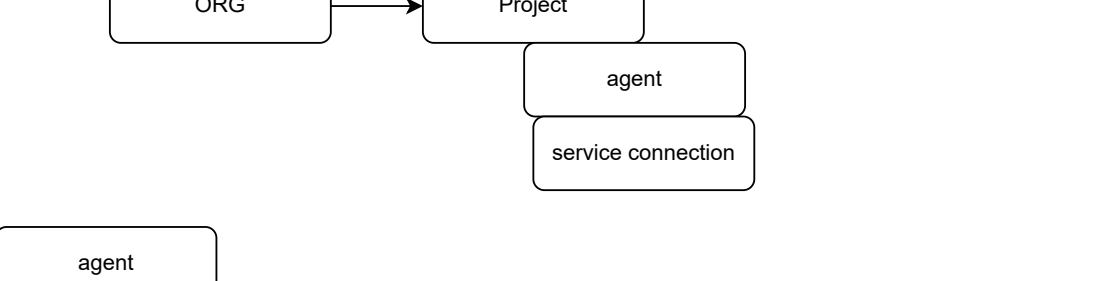
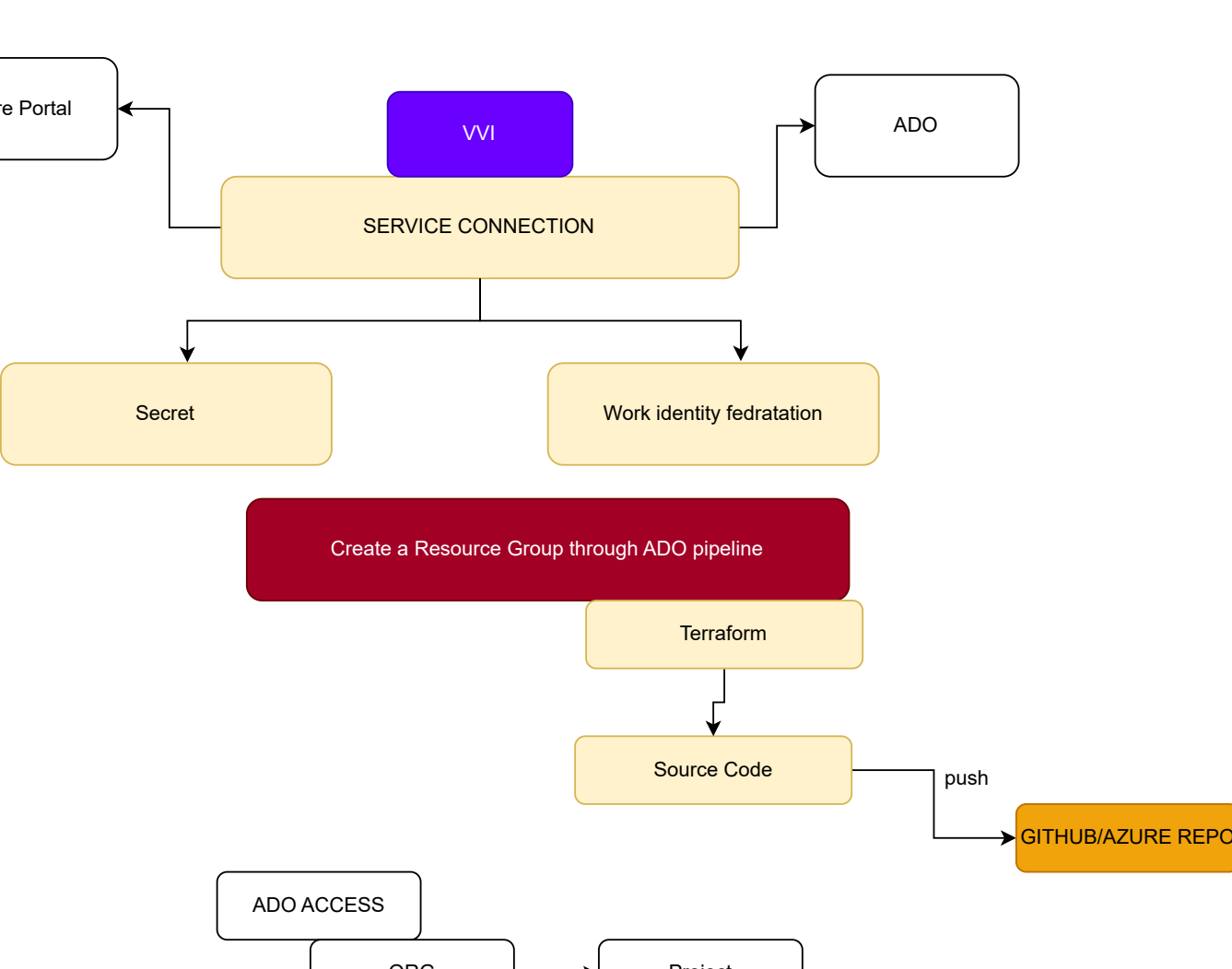
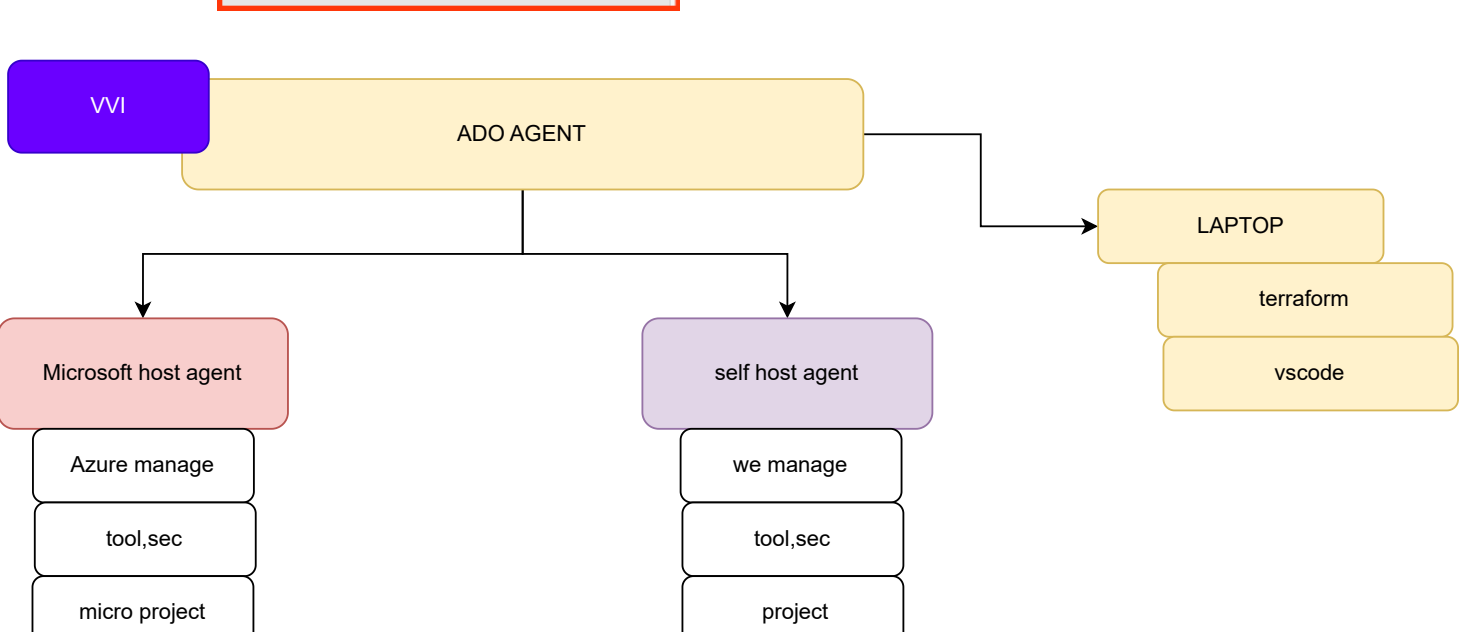
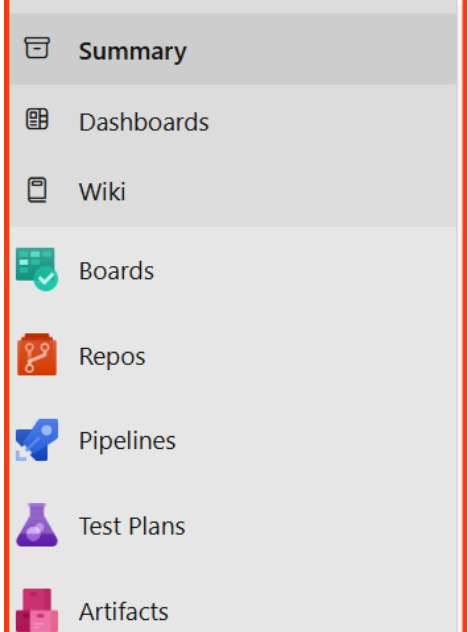
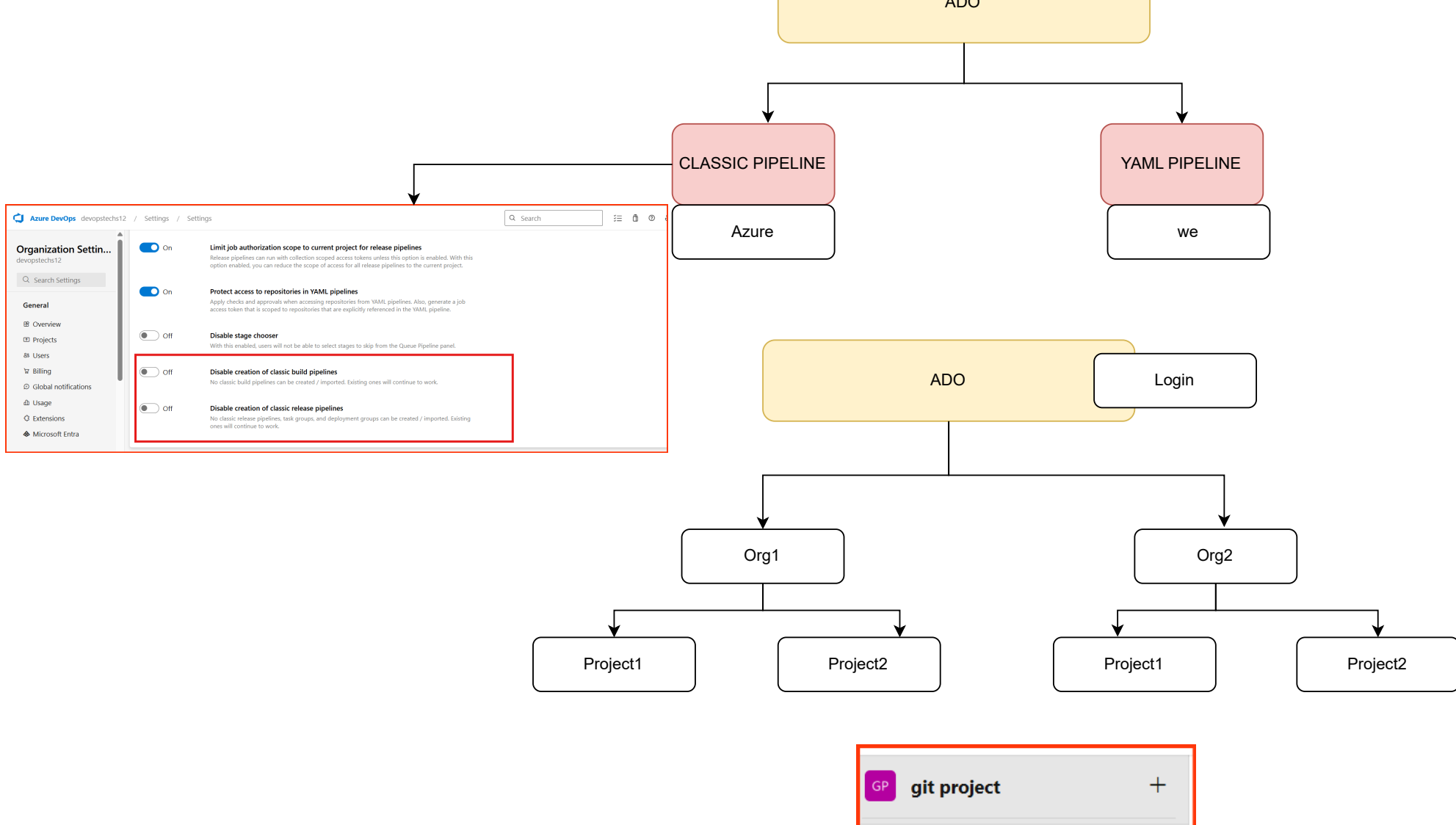
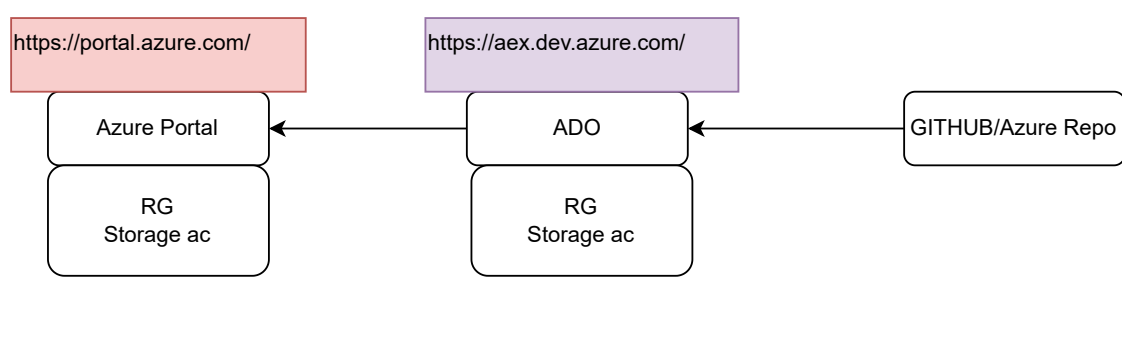
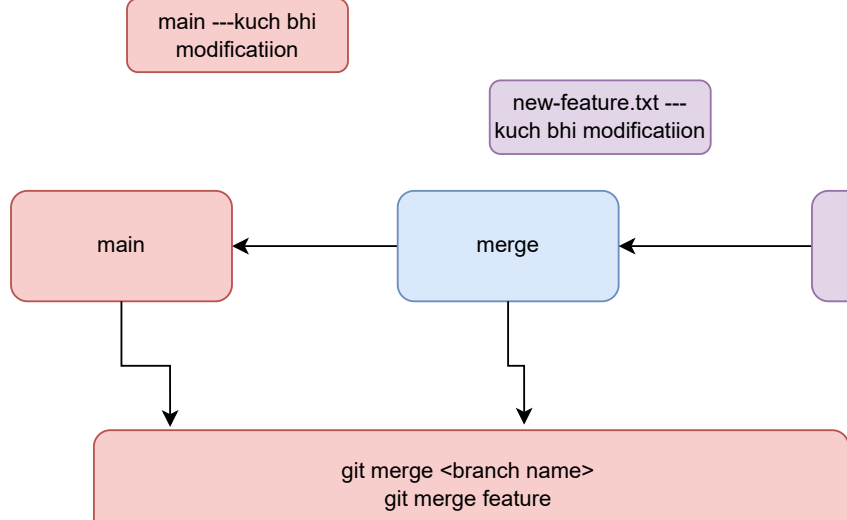
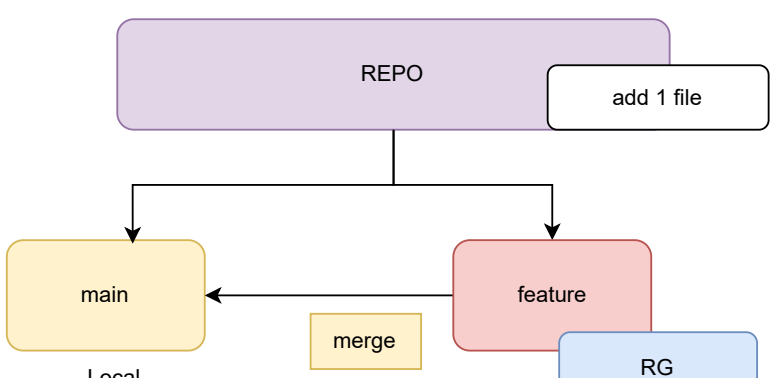
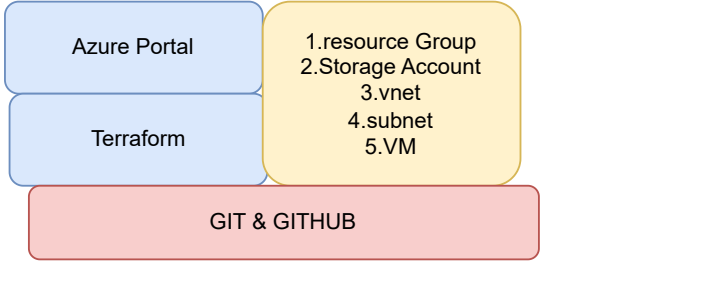
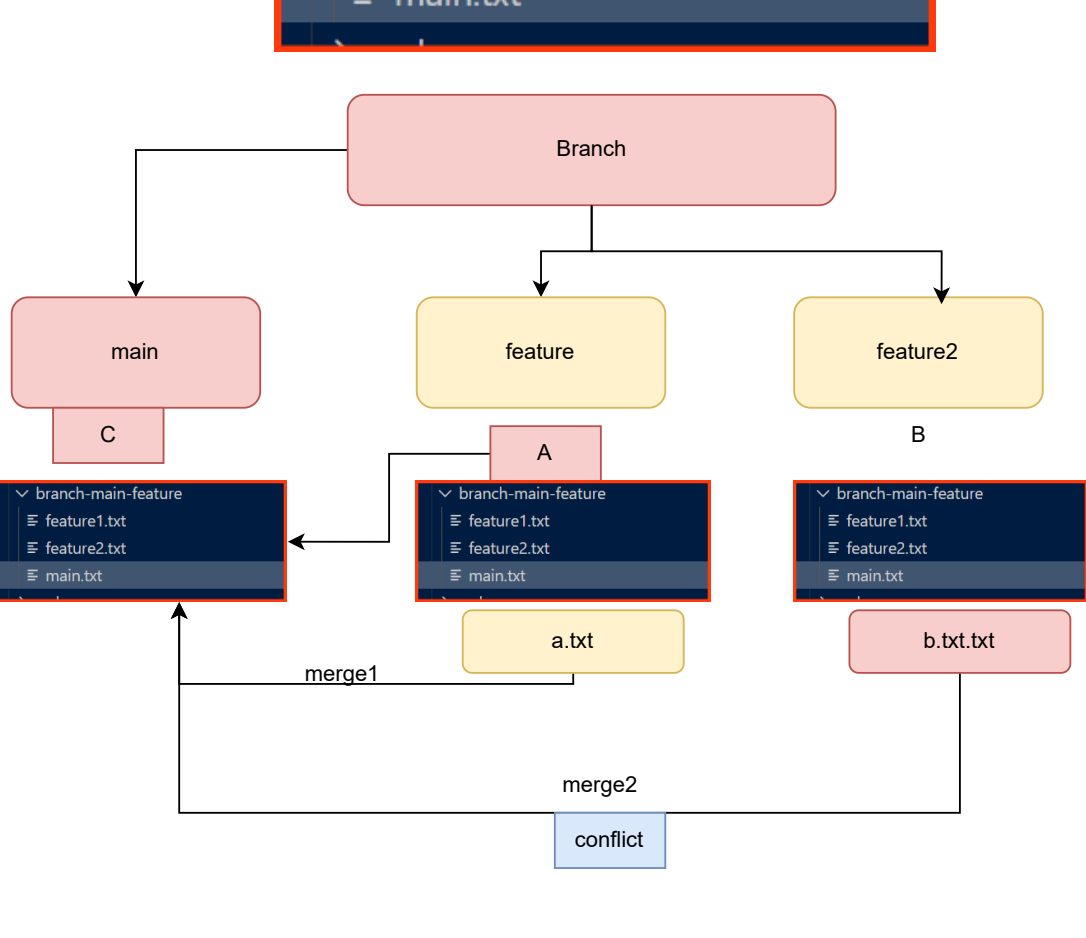
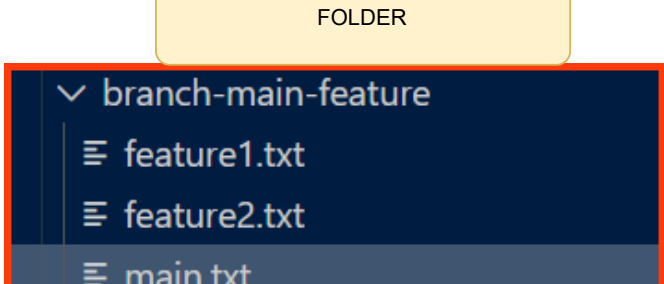
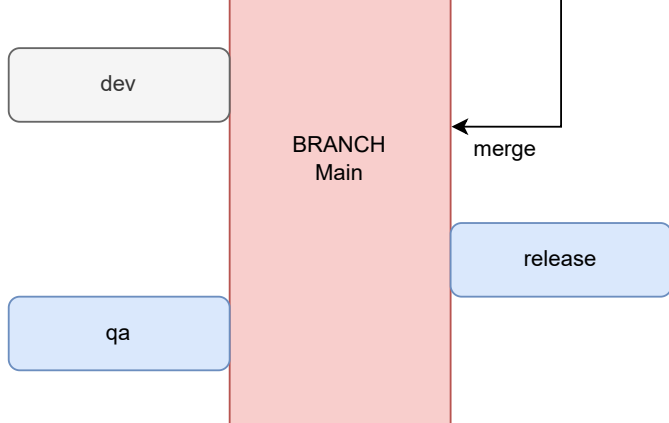
✅ Create new branch

git branch <branch name>

git checkout -b feature

git checkout -b feature2

Trunk based branching Strategy



Pipeline

A pipeline is an automated process that builds, tests, and deploys application code. It ensures consistent, repeatable, and faster software delivery.

Azure DevOps (ADO) Pipeline

Azure DevOps Pipeline is a CI/CD service used to automate build and deployment workflows. It supports both YAML-based and Classic pipelines.

Classic Pipeline vs YAML Pipeline

Classic Pipeline: Uses UI-based configuration with minimal code. Easy to start but hard to version and scale.

YAML Pipeline: Defined as code in a YAML file and stored in the repo. More flexible, version-controlled, and preferred for modern DevOps.

Azure Boards

Azure Boards is a project management tool used to track work items like epics, user stories, tasks, and bugs. It supports Agile, Scrum, and Kanban methodologies.

Azure Repos

Azure Repos provides Git-based source code management. It supports version control, pull requests, branching strategies, and code reviews.

Azure Pipelines

Azure Pipelines is a CI/CD tool that builds, tests, and deploys code to any platform or cloud. It integrates easily with Azure Repos, GitHub, and other source control systems.

Azure Artifacts

Azure Artifacts is used to store and manage packages like NuGet, Maven, npm, and Python packages. It enables secure package sharing within teams.

Azure Test Plans

Azure Test Plans provides tools for manual and exploratory testing. It helps track test cases, test results, and quality metrics.

Agent

An agent is a machine that runs pipeline jobs. It executes build, test, and deployment tasks defined in the pipeline.

Microsoft-hosted Agent vs Self-hosted Agent

Microsoft-hosted Agent: Managed by Azure DevOps with pre-installed tools. No maintenance required.

Self-hosted Agent: Managed by the user, offers more control, custom tools, and access to private networks.

Service Connection

A service connection allows Azure DevOps pipelines to securely connect to external services like Azure subscriptions. It defines authentication and authorization for deployments.

Secrets vs Workload Identity Federation

Secrets: Uses stored credentials like client secrets or passwords. Requires rotation and has higher security risk.

Workload Identity Federation: Uses token-based authentication without storing secrets. More secure and recommended for cloud-native pipelines.