

Day 2: Google ADK Project Structure

EXPLORING THE ARCHITECTURE AND
COMPONENTS OVERVIEW



UNDERSTANDING ADK PROJECT STRUCTURE



Goal of the Session

Project Structure Understanding

Learn the key files and folder organization in a Google ADK project for better project management.

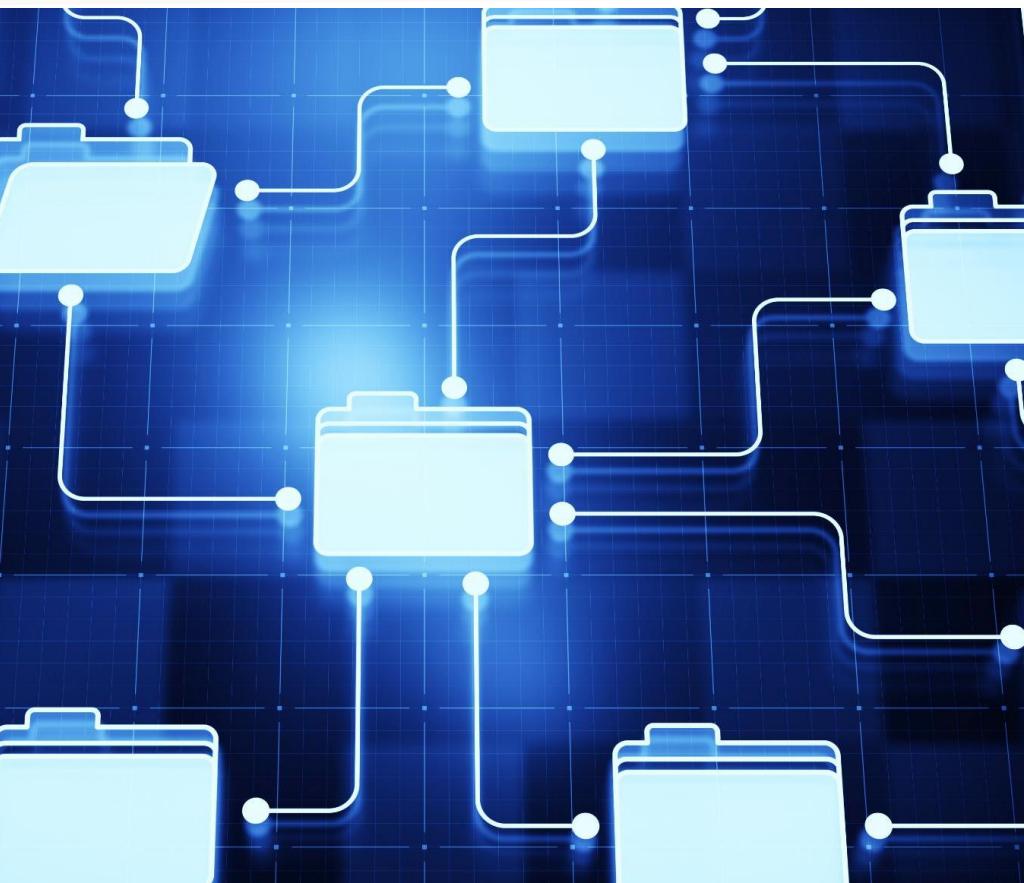
Command-Line Interface Basics

Master basic CLI commands to manage and run agents efficiently within the ADK environment.

Preparation for Advanced Topics

Build a strong foundation to handle scalability, multi-agent workflows, and deployment confidently.

What is an ADK Project?



Project Structure

An ADK project contains a structured folder with all essential components for AI agent development.

Core Components

Includes agent logic, configuration files, and optional UI components for web interaction.

Consistency and Collaboration

This structure ensures consistent environments and simplifies teamwork and integration.

Simplified Deployment

Organized layout helps developers manage workflows and deploy AI agents seamlessly.

Folder Layout and Key Files

FILE/FOLDER	PURPOSE
<code>agent.py</code>	Defines agent logic, instructions, and tools
<code>agent.json</code>	Stores metadata and model configurations
<code>.env</code>	Contains API keys and environment variables
<code>tools/</code>	Holds custom tools for extended functionality
<code>workflows/</code>	Organizes multi-agent orchestration
<code>requirements.txt</code>	Lists Python dependencies



CLI Basics

Agent Execution

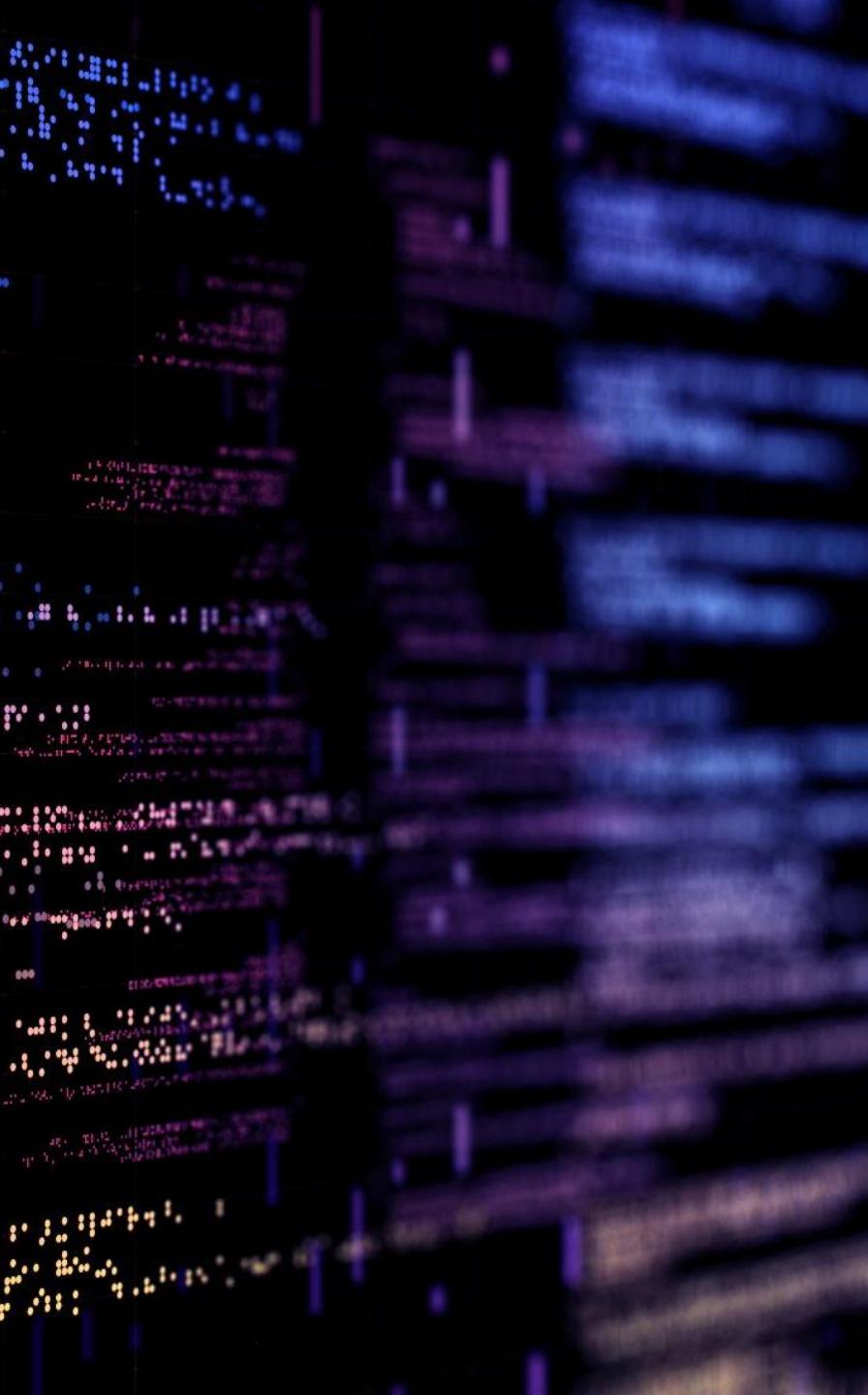
The 'adk run' command executes the agent quickly within the CLI environment for immediate testing.

Interactive Debugging

The 'adk web' command launches a browser-based interface for interactive debugging and visualization.

Version Checking

The 'adk --version' command displays the installed ADK version to ensure compatibility and proper setup.



Hands-On Demo

Project Folder Creation

Participants create a new project folder to organize their work environment for the ADK project.

ADK Package Installation

Installing the ADK package via pip prepares the environment for developing with the ADK framework.

Project Initialization

Initializing the project generates starter files necessary for building functional agents and configurations.

Exploring Project Files

Exploring generated files helps participants understand the project's structure and file roles.

Why This Matters and Next Steps



Importance of Project Structure

A clear ADK project structure ensures scalability, maintainability, and smooth deployment processes.

Facilitates Collaboration

Well-structured projects help developers integrate tools and collaborate without configuration conflicts.

Foundation for Advanced Topics

This knowledge prepares participants for multi-agent orchestration and cloud deployment in future sessions.

Next Steps Preview

Next session involves creating and running the first agent locally to observe its behavior in `agent.py`.