WSO2CON 2025

AI-Powered Integration: Do more with less



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WSO2

A few notes

- WSO2 Integrator has many components
- Ballerina Integrator and Micro Integrator (MI) are two main components
- I will be using Ballerina Integrator to explain what we bring to the table

650,000

Source: A Short History of Nearly Everything

0.00000053%

So lets see how you can get some of your time back

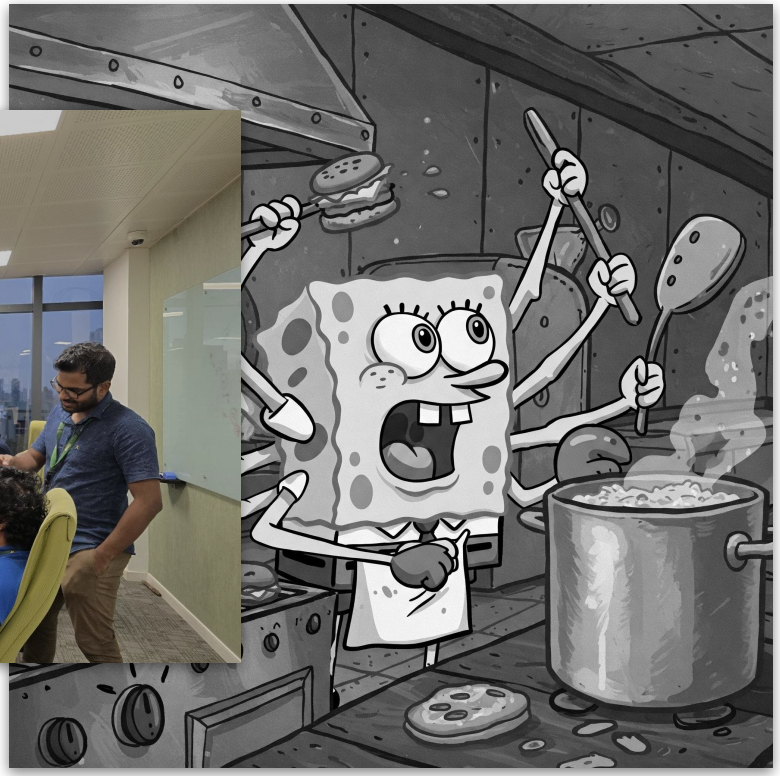
This discussion is broken into three parts. In each part you will learn (hopefully) something new.

- Augment
- Unlock
- Involve

Augment

Our time is very limited but we have a lot of work to do



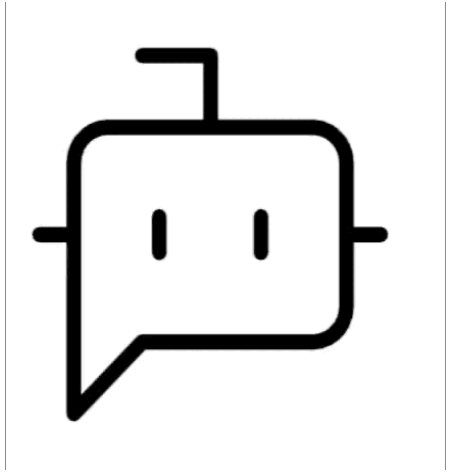


What if we can get some of our time back?

What if we can get help from someone to complete our work?

What if this someone were always available 24/7?

Ballerina Integrator Co-Pilot



They are specialized co-pilots

An expert in Ballerina

An expert in integration domain

Think of it as your pair programmer





Scenario 1

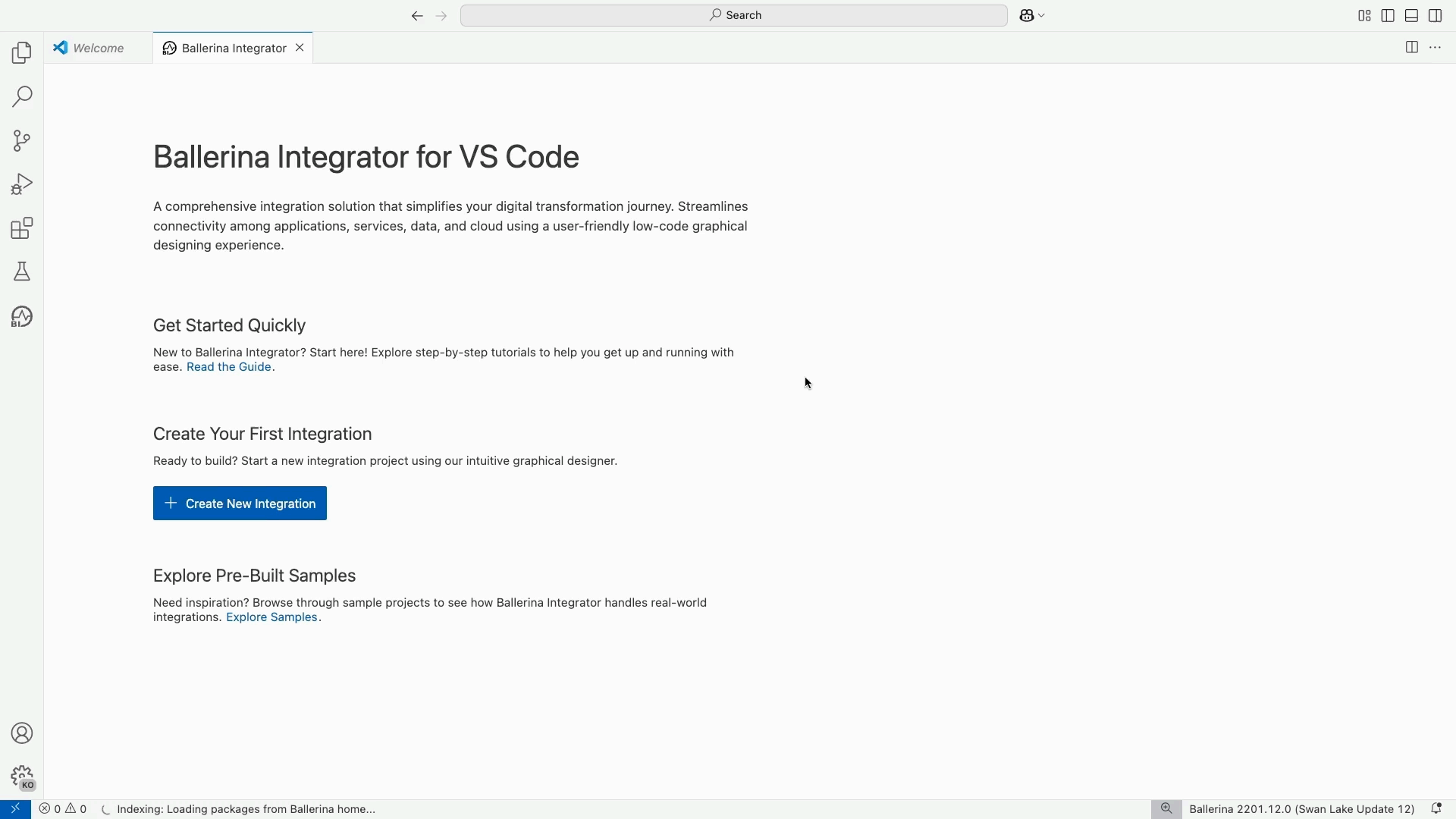
Imaging developing an integration for a pizza shop



Requirements for pizza shop website backend

- Need to be able to get available pizzas
- Need to be able to order pizzas
- Need to be able to get orders
- Need to be able to update orders
- etc…

Let’s write it in Ballerina Integrator


Search
Welcome
Ballerina Integrator
Ballerina Integrator for VS Code
A comprehensive integration solution that simplifies your digital transformation journey. Streamlines connectivity among applications, services, data, and cloud using a user-friendly low-code graphical designing experience.
Get Started Quickly
New to Ballerina Integrator? Start here! Explore step-by-step tutorials to help you get up and running with ease. Read the Guide.
Create Your First Integration
Ready to build? Start a new integration project using our intuitive graphical designer.
Create New Integration
Explore Pre-Built Samples
Need inspiration? Browse through sample projects to see how Ballerina Integrator handles real-world integrations. Explore Samples.
KO
0 0
Indexing: Loading packages from Ballerina home...
Ballerina 2201.12.0 (Swan Lake Update 12)

A few other features of BI Co-Pilot

- Query answer
- Type generator
- Next code block prediction
- Prompt based inline code prediction

You can do advanced data mapping

Student Records System Data Transformation Guide

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Reviewers: @shafreen, @anjana, @azeem

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Version: 2.3.4

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1. Introduction

This document provides a comprehensive guide for migrating student records from the legacy **DetailedPerson** schema to the new **DetailedStudent** schema in our academic management system. The transformation process strictly follows a **direct mapping** approach, ensuring each field in the source system is accurately transferred to the target system without operational changes or complex logic.

The migration is a critical component of our institutional data modernization initiative, designed to improve data accessibility, reporting capabilities, and overall system performance while maintaining complete data integrity.

This document will:

- Outline the input and output record structures in detail
- Provide clear mapping details for direct field transfers
- Explain the rationale behind specific transformation decisions
- Use tables, structured text, and visual aids to simplify the explanation
- Offer guidance for edge cases and data validation requirements

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You can ask questions as you write the code

File Edit Selection View Go Run ··· copilot [WSL: Ubuntu]

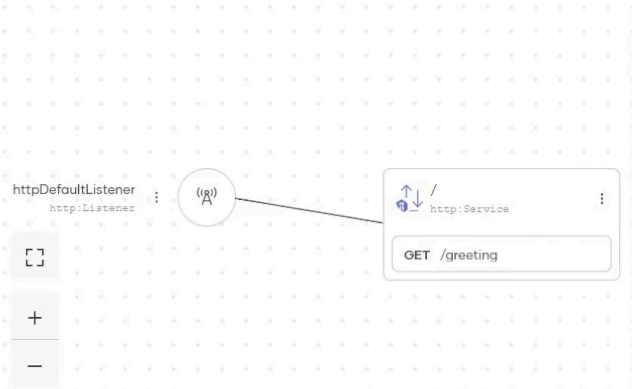
Ballerina Integrator

Copilot

Run Debug

Design

Generate + Add Artifact



Deployment Options

Deploy to Devant

Deploy your integration to the cloud using Devant by WSO2. Learn more

Deploy

Deploy with Docker

README

Edit

Describe your integration and generate your artifacts with AI

WSO2 Copilot

Remaining Free Usage: Unlimited

Clear Settings

WSO2 Copilot Preview

WSO2 Copilot is powered by AI. It can make mistakes. Make sure to review the generated code before adding it to your integration.

Type / to use commands

to attatch context

/generate write a hello world http service
/ask how to write a concurrent application?

Describe your integration...

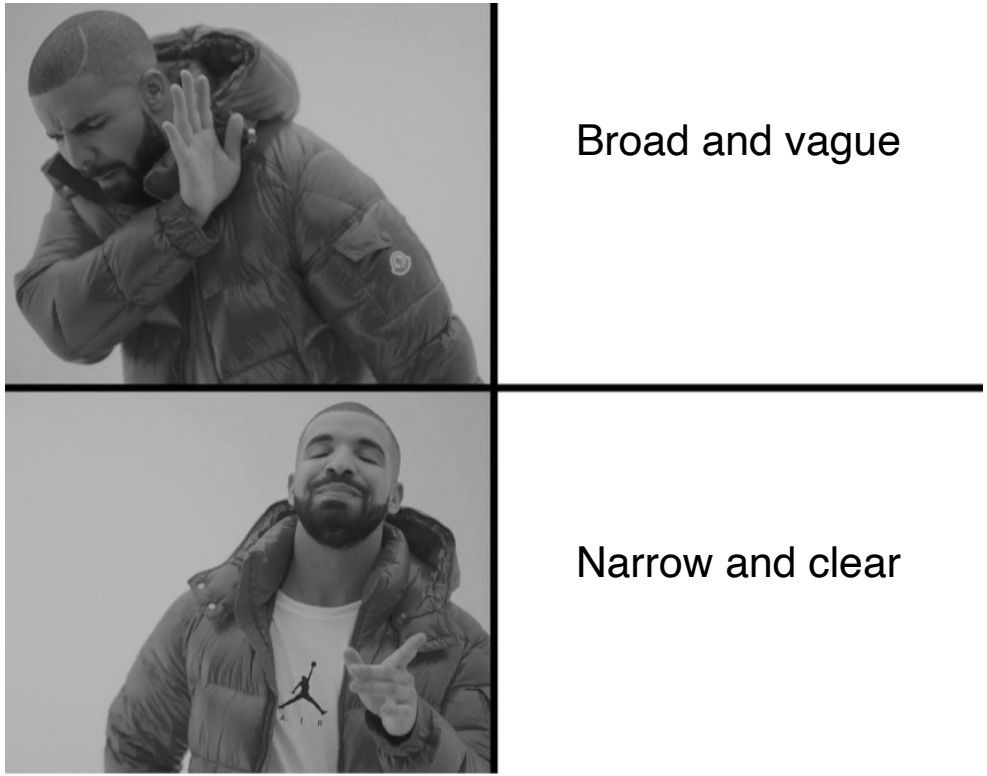
/

WSL: Ubuntu ⊗ 0 ⚠ 0 0

Ballerina 2201.12.0 (Swan Lake Update 12)

Unlock

Fuzzy world



Fuzzy inputs

Fuzzy transformation

Fuzzy outputs

Unlocks the door to a new world





Scenario 2

Going back to pizza shop



Requirements for the pizza shop chatbot

- Need to be able to get available pizzas
- Need to be able to order pizzas
- Need to be able to get orders
- Need to be able to update orders
- etc…

Let’s write an agent for this

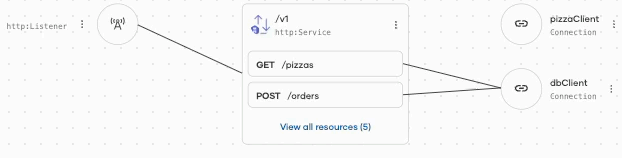
Ballerina Integrator

Pizza Integration

Run Debug

Design

Generate Add Artifact



Deployment Options

Deploy to Devant

Deploy your integration to the cloud using WSO2 Devant. Learn more

Deploy to Cloud

Deploy with Docker

Deploy on a VM

Integration Control Plane

Moniter the deployment runtime using WSO2 Integration Control Plane. Click the Integrate ICP button to enable ICP for the integration.

Enable ICP

README

Edit

Describe your integration and generate your artifacts with AI

Add a README

WSO2 Copilot

Remaining Free Usage: Unlimited

Clear Settings

User

Write functions to consume the /v1 endpoint

Copilot Preview

Based on the provided code and API documentation, I'll help you write functions to consume the /v1 endpoint. Looking at the existing service, we need to create client functions to interact with the following endpoints:

1. GET /v1/pizzas - Retrieve all pizzas
2. POST /v1/orders - Create a new order
3. GET /v1/orders - Get all orders (with optional customerId filter)
4. GET /v1/orders/{orderId} - Get a specific order
5. PATCH /v1/orders/{orderId} - Update order status

We'll use the ballerina/http client to create these functions. Let's create a new file called client.bal to implement these functions.

Here's how the control flow will work:

1. Initialize an http:Client to connect to the /v1 endpoint
2. Create functions that correspond to each endpoint
3. Use proper error handling for the HTTP responses
4. Transform the responses to the appropriate types

Ballerina Integration Add to Integration

The code uses the http:Client from the provided API documentation to create functions that interact with the pizza service endpoints. Each function:

1. Makes the appropriate HTTP request using the client
2. Handles potential errors using the check keyword
3. Returns the response in the correct type as defined in types.bal

The functions are marked as isolated since they don't share mutable state and can be executed concurrently. They're also marked as public since they're meant to be used by other modules.

User

make those method agent tool

Copilot Preview

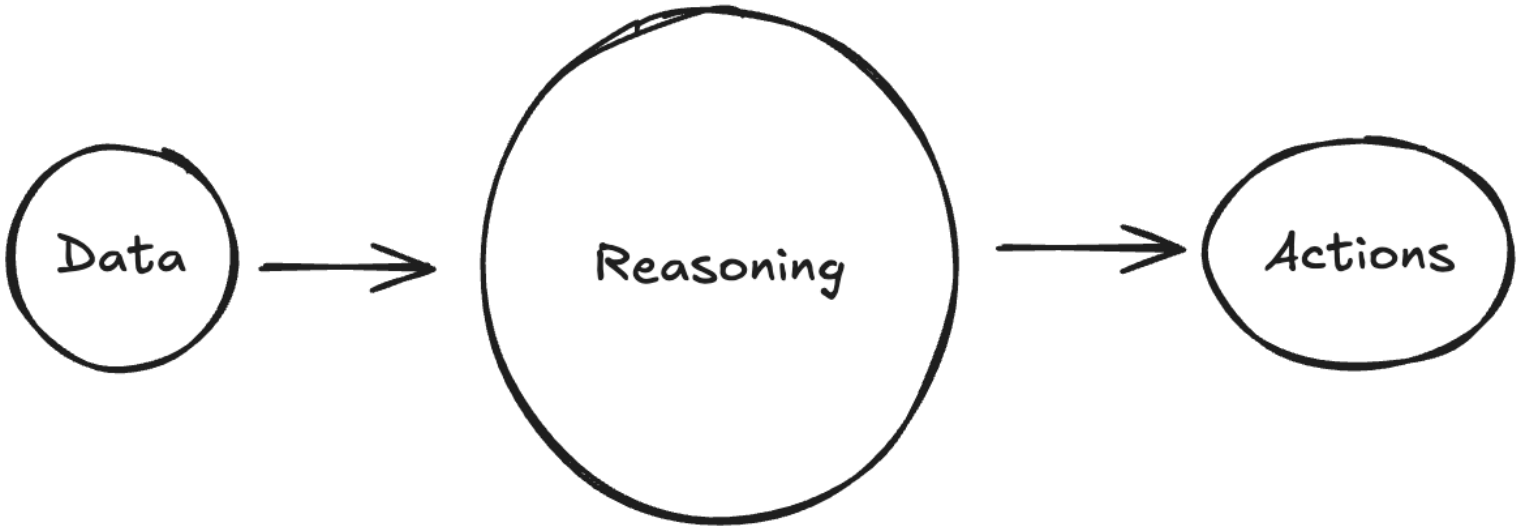
I'll help you convert the client functions into agent tools that can be used with the AI agent. We'll need to:

1. Create tool functions that wrap the existing client functions

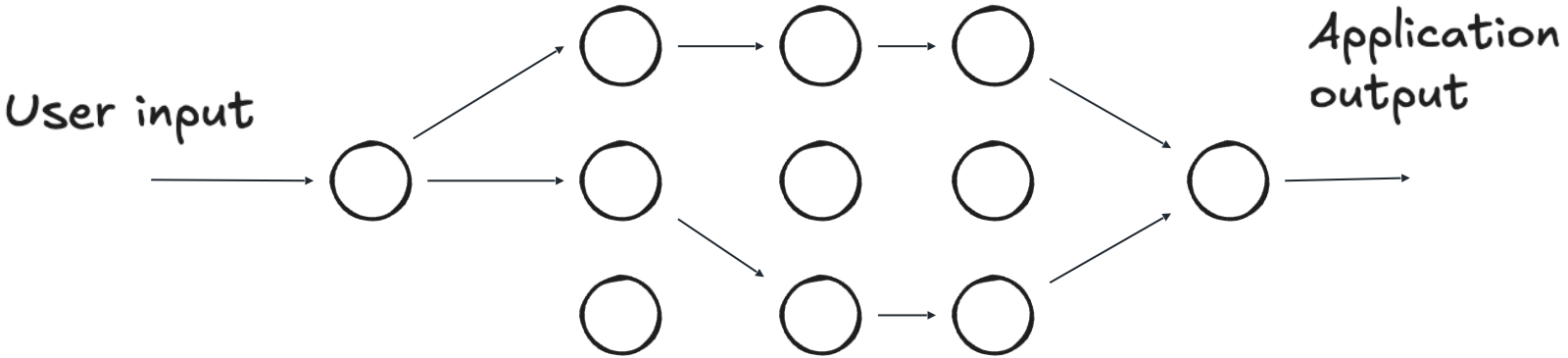
Describe your integration...

/

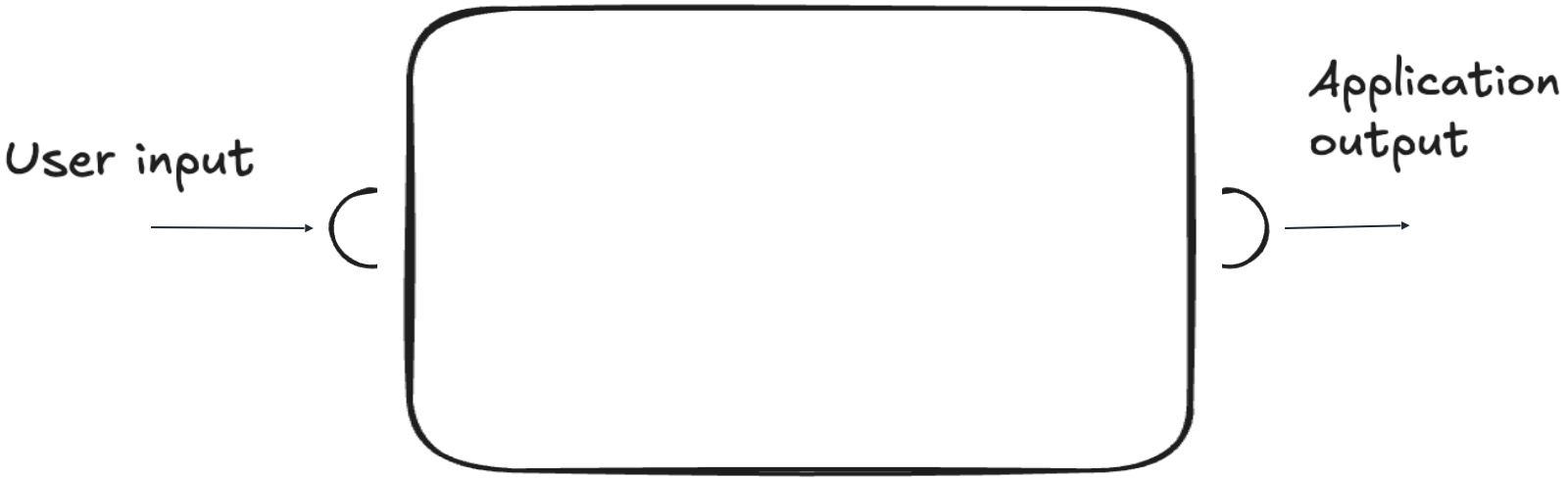
Agent behaviour



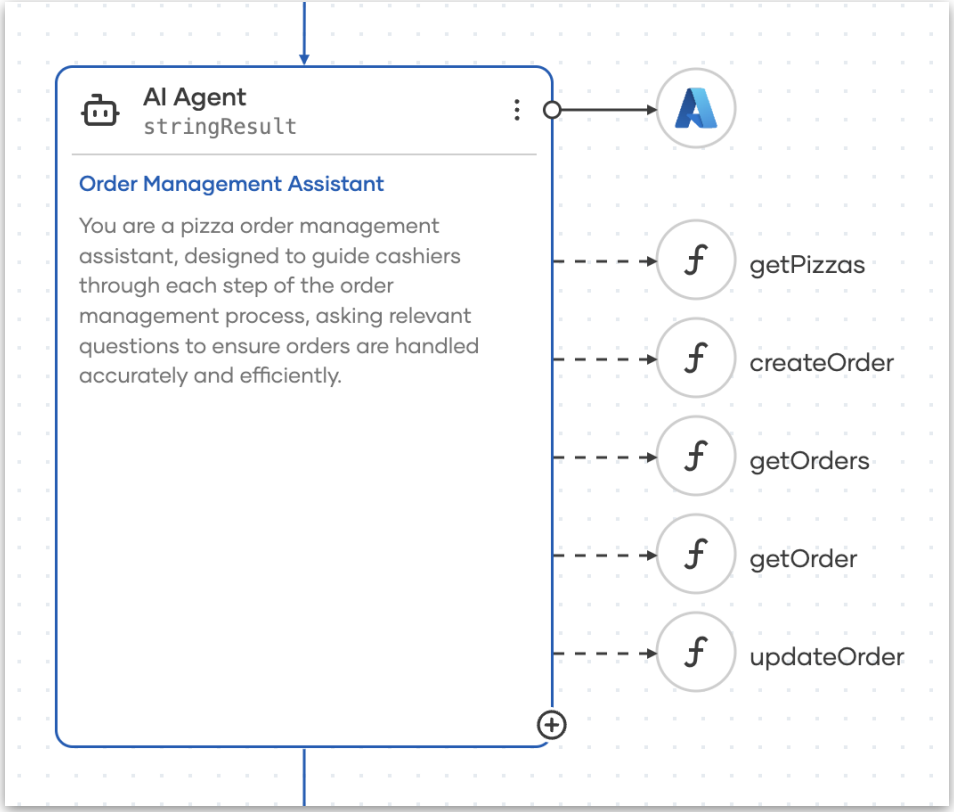
Why is it possible now?



Why is it possible now?



Agent building blocks





Scenario 3

Updated requirements for the pizza shop chatbot

- Need to be able to get recipe details
- Need to be able to get return policies
- etc…

Provide pizza shop recipe and policy information

Overview
Develop
Build
Deploy
Test
Insights
Observability
Admin
Databases
Vector Databases
RAG Ingestion
Message Brokers
Third Party Services
GenAI services
Data Planes
Environments
Audit Logs
Settings
Collapse

1 STEP 1
Initialize Vector Store

2 STEP 2
Configure Embedding Model

3 STEP 3
Configure Chunking

4 STEP 4
Upload Files

5 STEP 5
Verify

Setup RAG Ingestion

Initialize Vector Store

Pinecone
Chroma
Weaviate
PostgreSQL
Devant Managed

Back
Next

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GenAI applications (Code for AI)

- They don’t necessarily have to be agents
- They can be a simple RAG system
- They can even be simple call to LLMs

Involve

Natural Programming

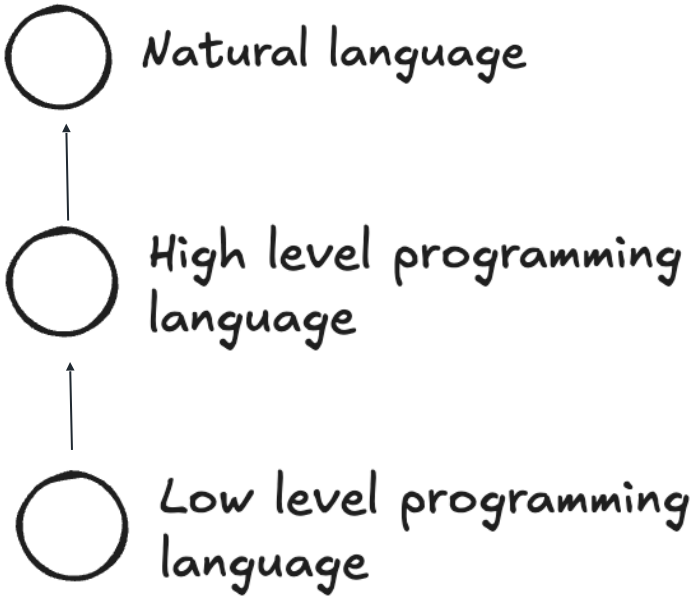


Person who implements it

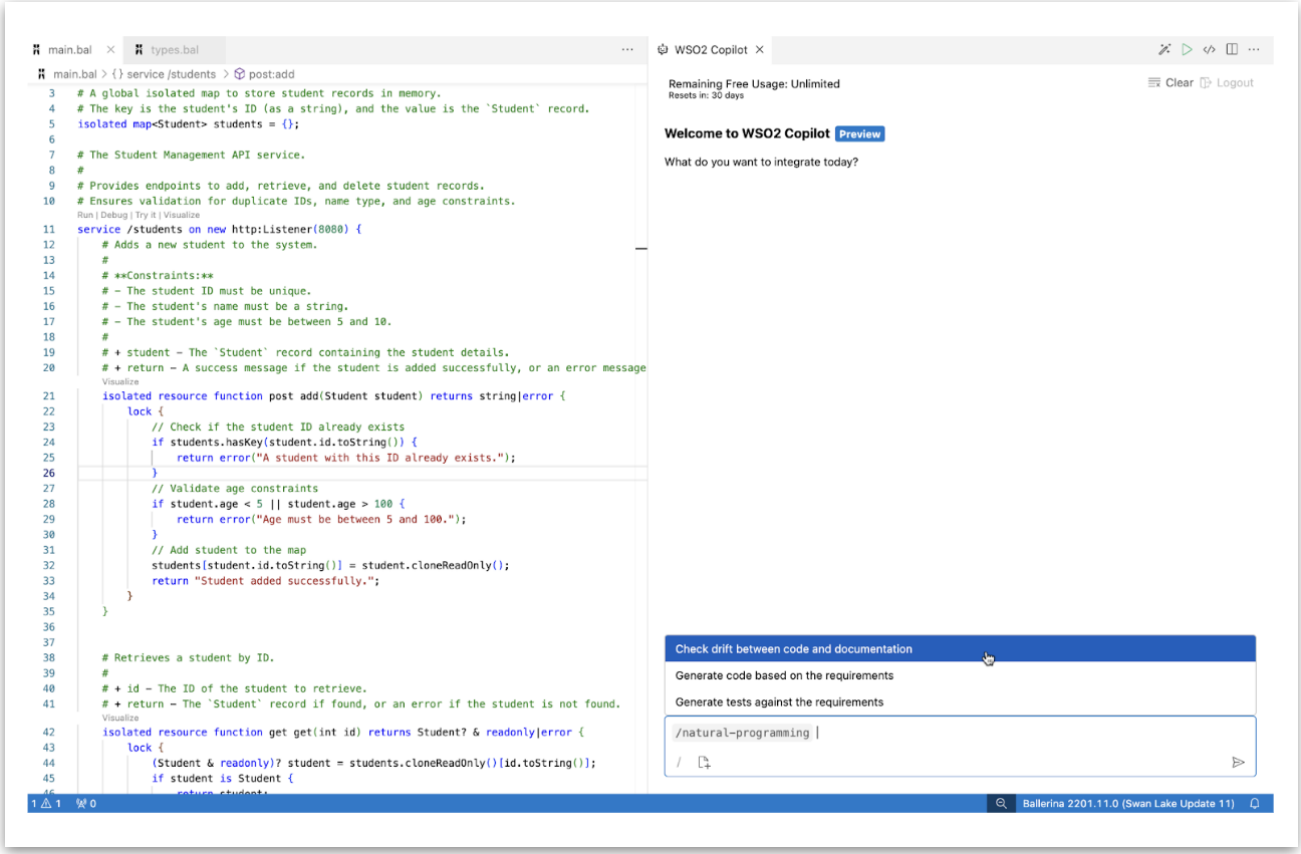


Person with the business requirements

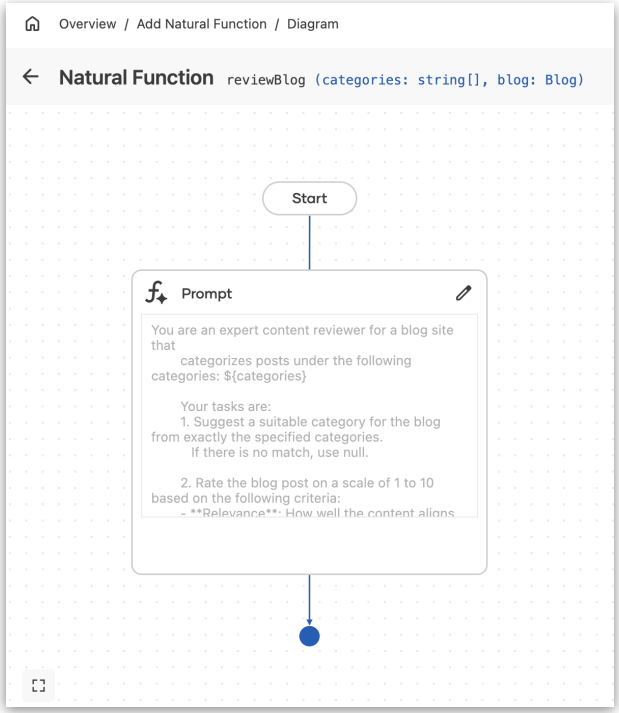
Natural Programming



Natural Programming



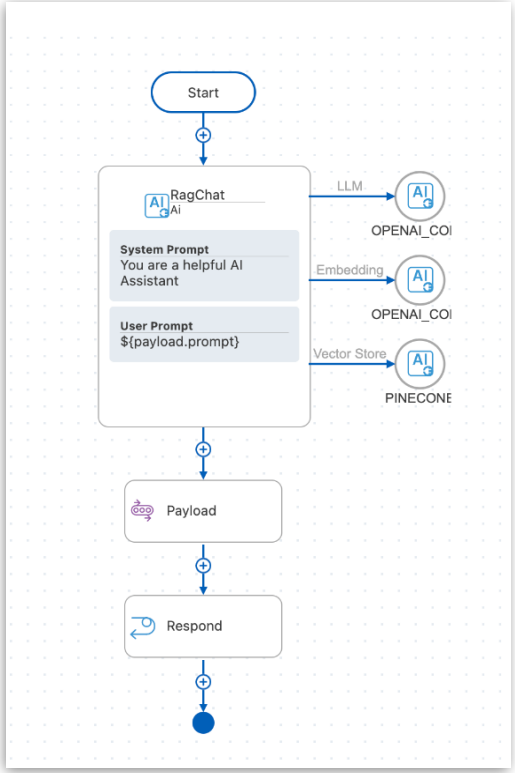
Natural Programming

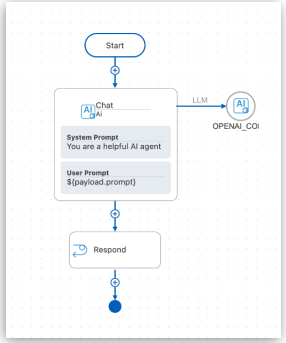


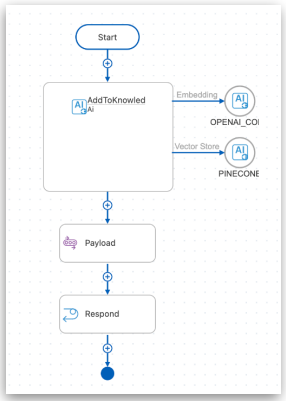


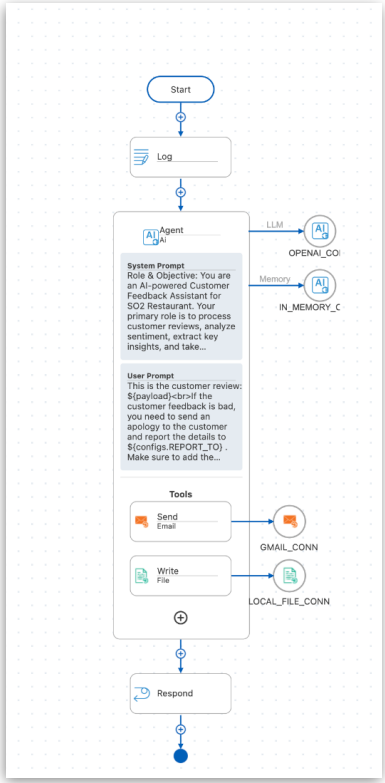
Micro Integrator

Micro Integrator (MI) supports all these too









The end

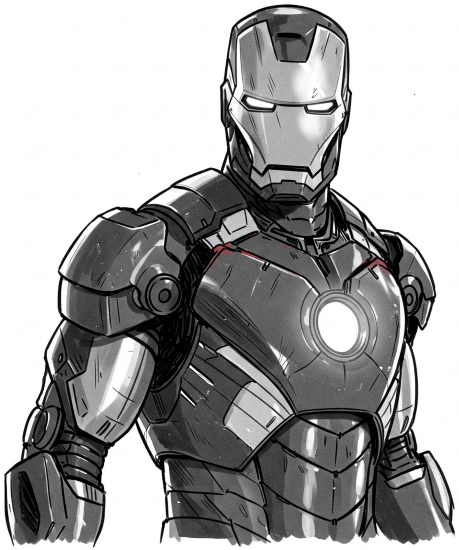
Augmented



Unlocked

Involved

The end





AI won't replace humans but humans using AI will

- human -



Question Time!




Thank you!
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