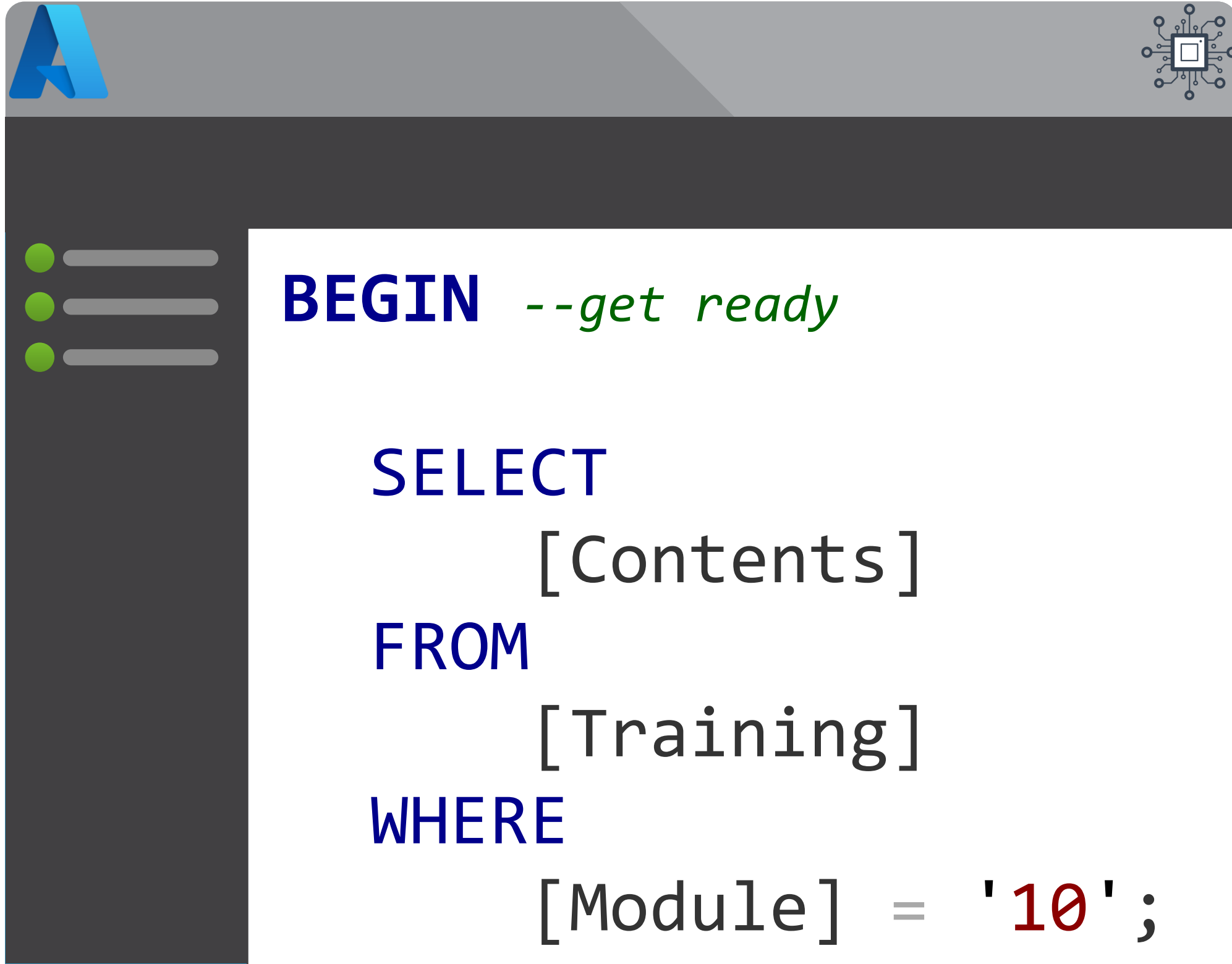


# Module 10

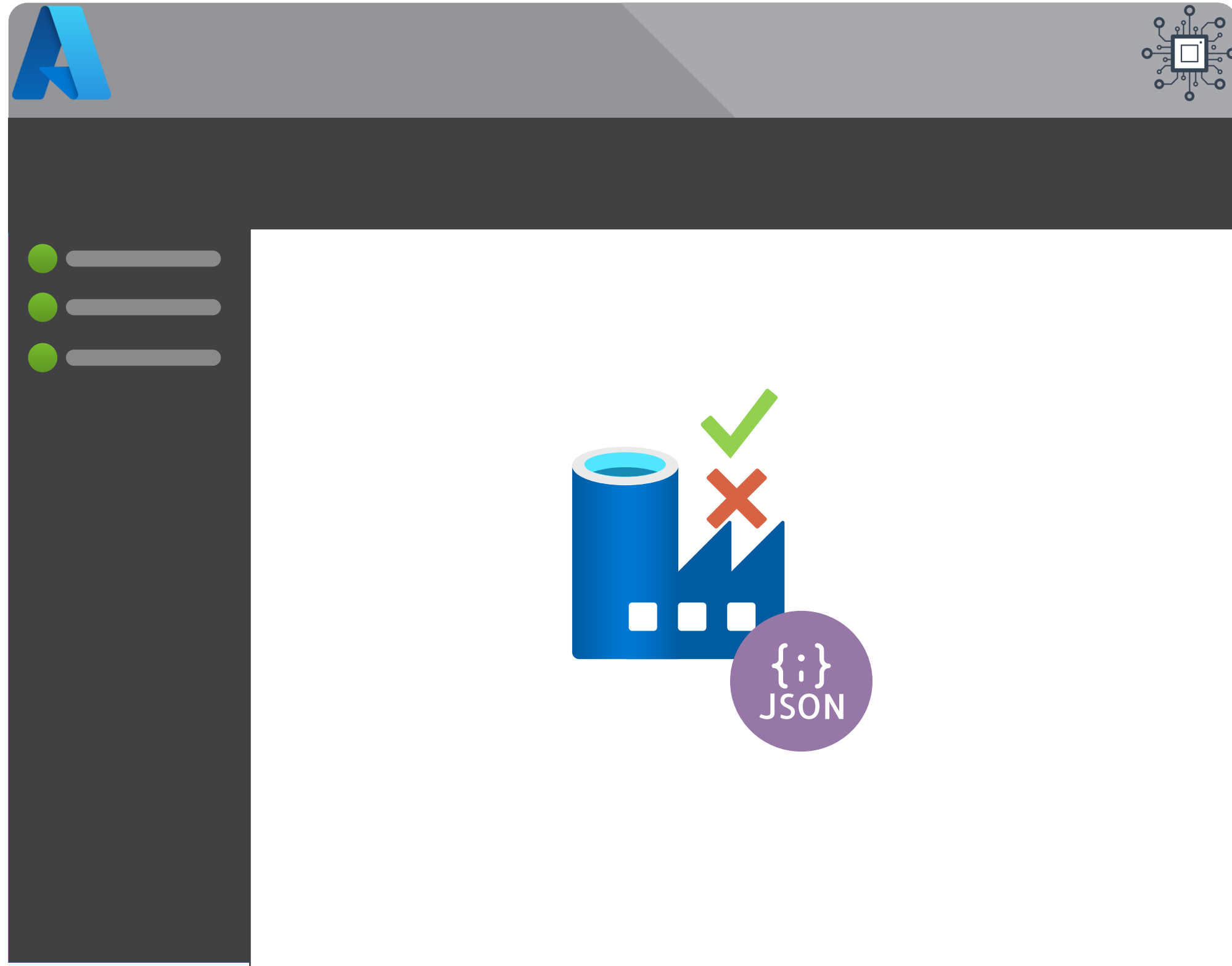
## Testing



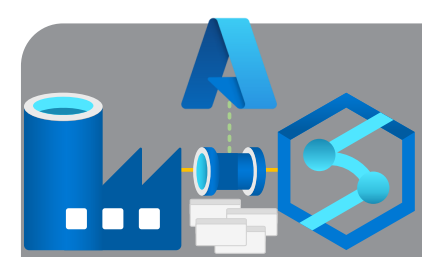
- Development Time Validation
- Test Coverage
- NUnit Tests

# Module 10

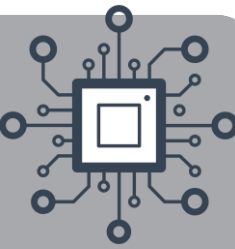
## Testing



- Development Time Validation
- Test Coverage
- NUnit Tests



# Development Time Validation



Microsoft Azure | Data Factory ▶ TrainingFactoryDev

>> / main branch **✓ Validate all** Save all Publish

**Factory Resources**

Filter resources by name

- ▲ Pipeline 15
  - ▲ Demo Pipelines 15
    - pipeline1
  - ▶ Data Flows 1

**Activities**

Search activities

- > Move & transform
- > Azure Data Explorer
- > Azure Function

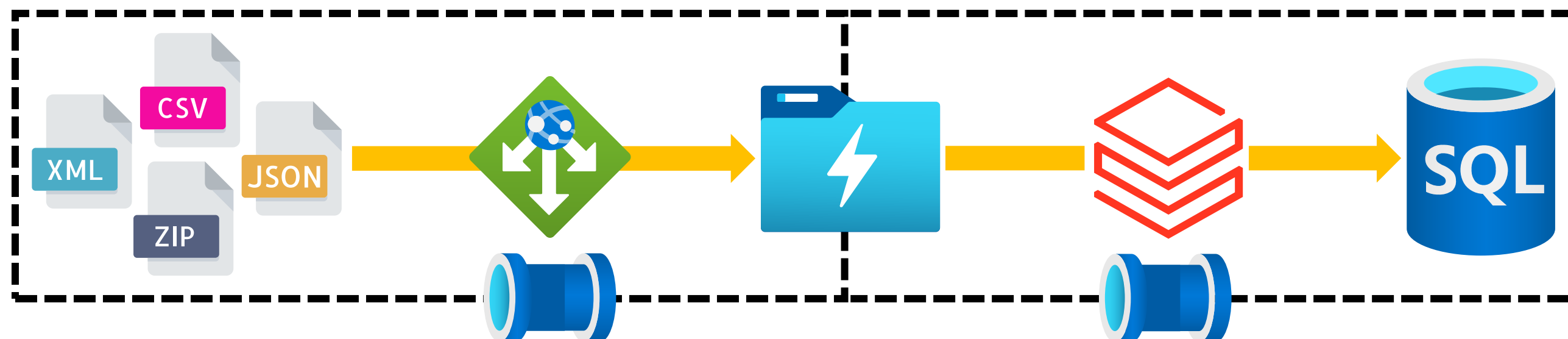
Saved Save as template **✓ Validate** Debug Add trigger



# Integration Pipelines Validation



What is Data Factory actually checking for?



1

Linked Services



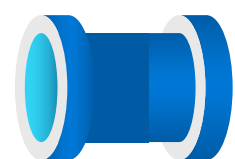
2

Datasets



3

Activities



4

Pipelines



5

Triggers



General<sup>1</sup>

Variables<sup>1</sup>

User properties

Name \*

[Learn more](#)

✖ Activity name is required.

Description

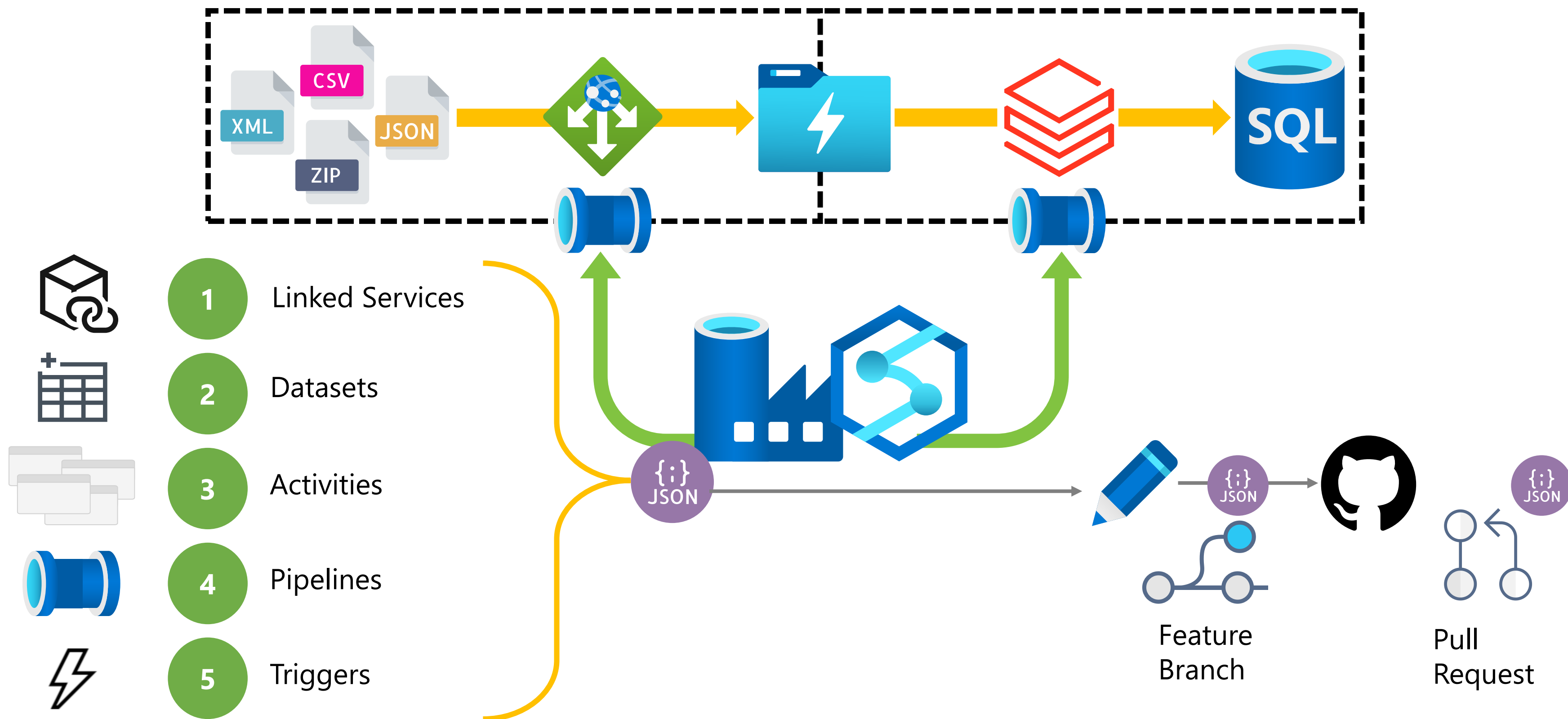
1. Mandatory Values
2. Value Data Types
3. Value Context

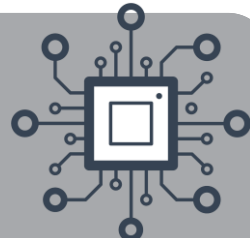


# Integration Pipelines Validation



What is Data Factory actually checking for?



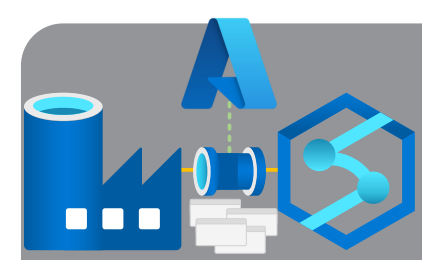


# Module 10

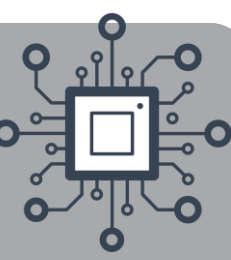
## Testing



- Development Time Validation
- Test Coverage
- NUnit Tests



# Types of Testing



🔊 **Integration Tests** - A test of a pipeline as-is, without eliminating any effects of external dependencies.

🔊 **Functional Tests** - An isolated test of whether the pipeline is doing things right – is the pipeline producing the desired result?

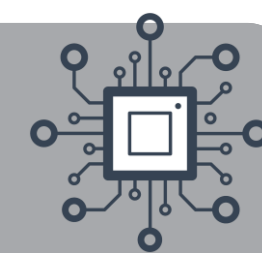
🔊 **Unit Tests** - An isolated test of whether the pipeline is doing the right things – do the pipeline's activities get executed in the way you expect?

Source: Richard Swinbank [richardswinbank.net](http://richardswinbank.net)





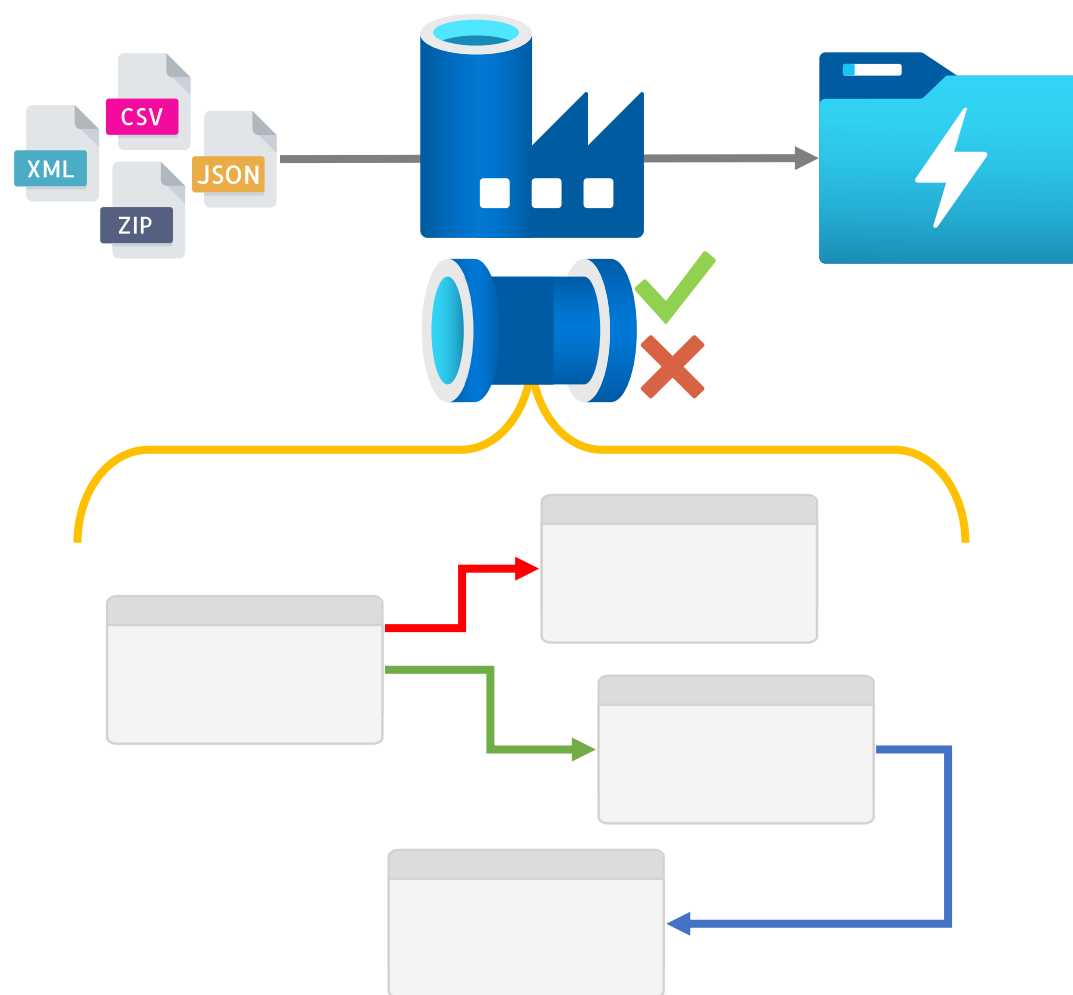
# Types of Testing



What do they mean in our pipelines?

## Integration Tests

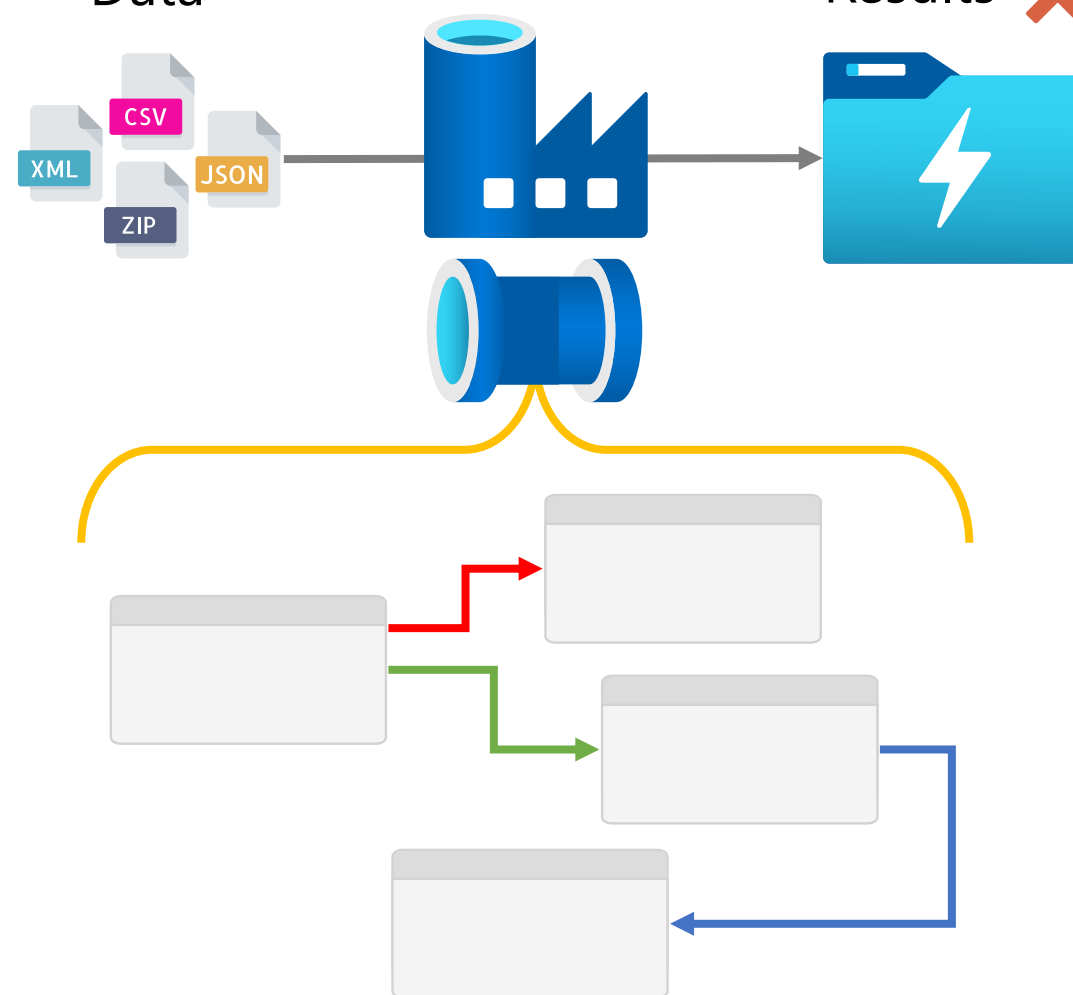
Simple Run Outcome



## Functional Tests

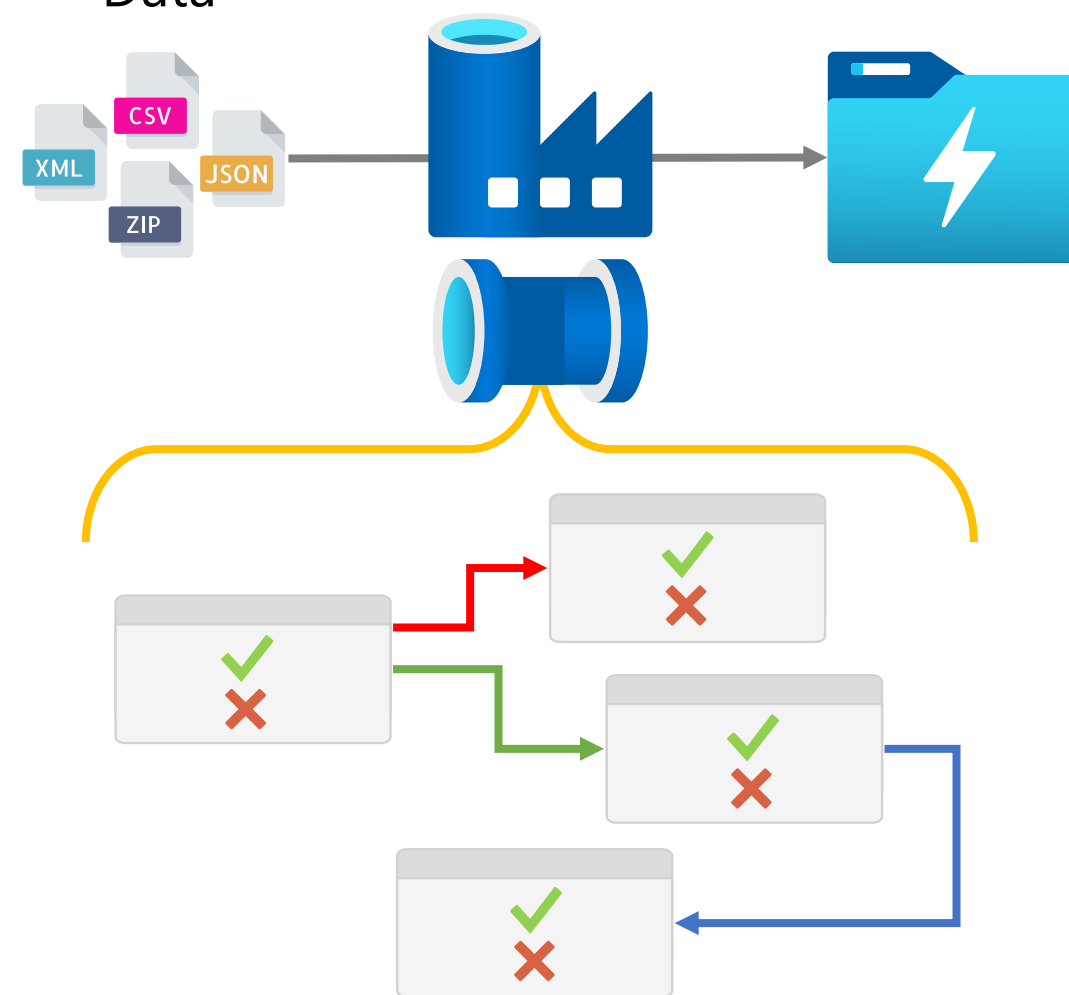
Sample Data

Specific Results ✓  
✗

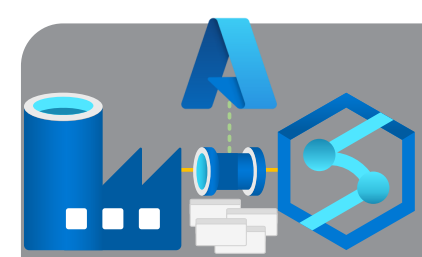


## Unit Tests

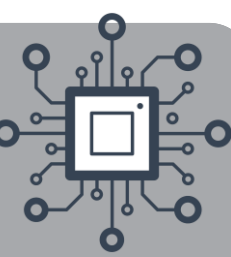
Sample Data



Specific Activity Inputs &  
Outputs

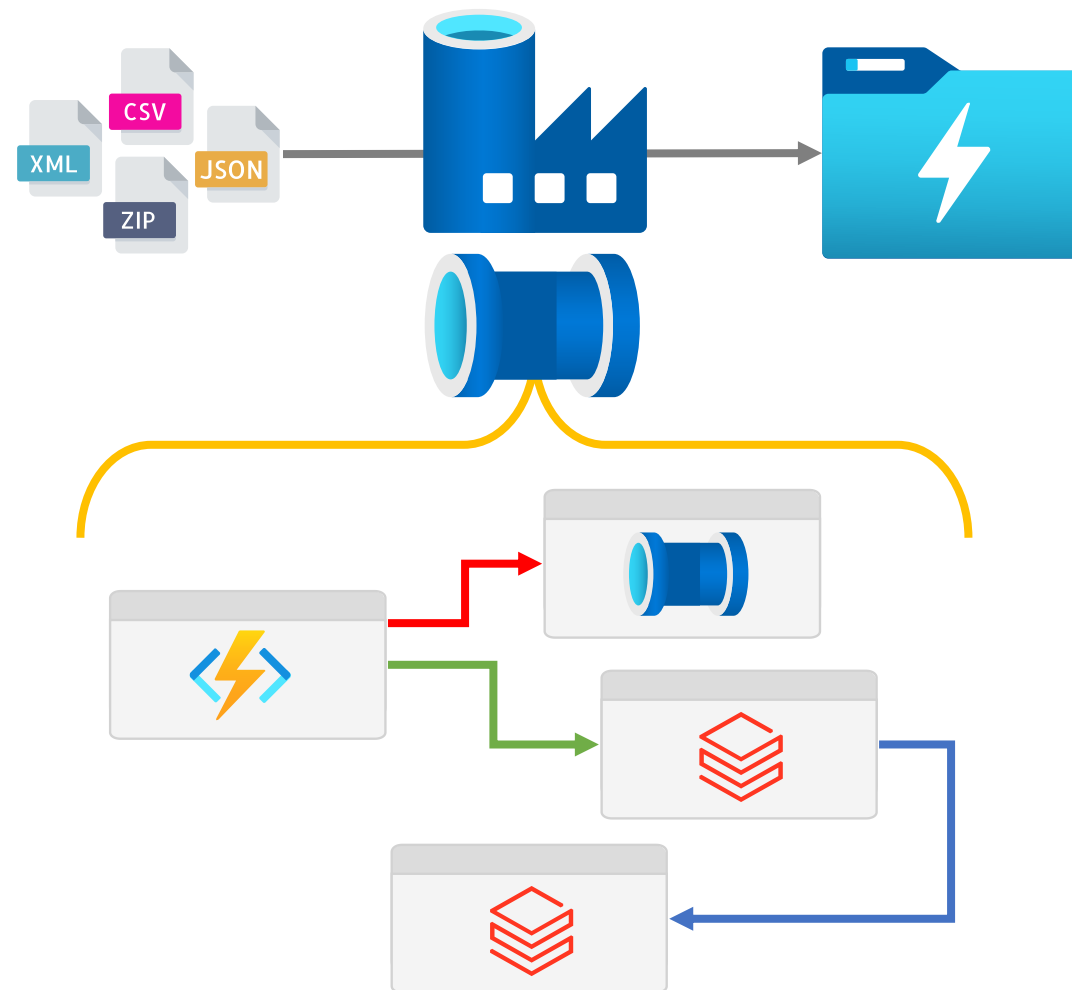


# Types of Testing

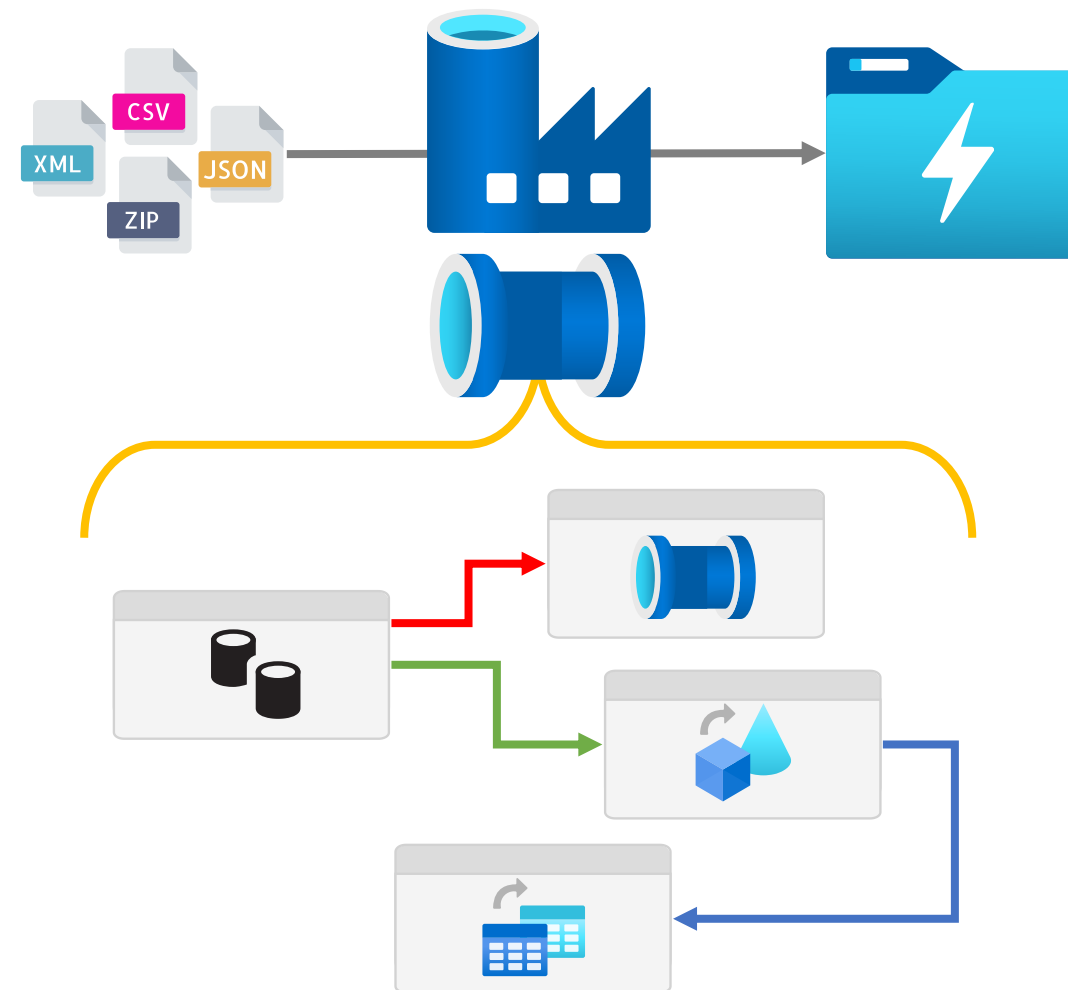


Does it depend on external resources?

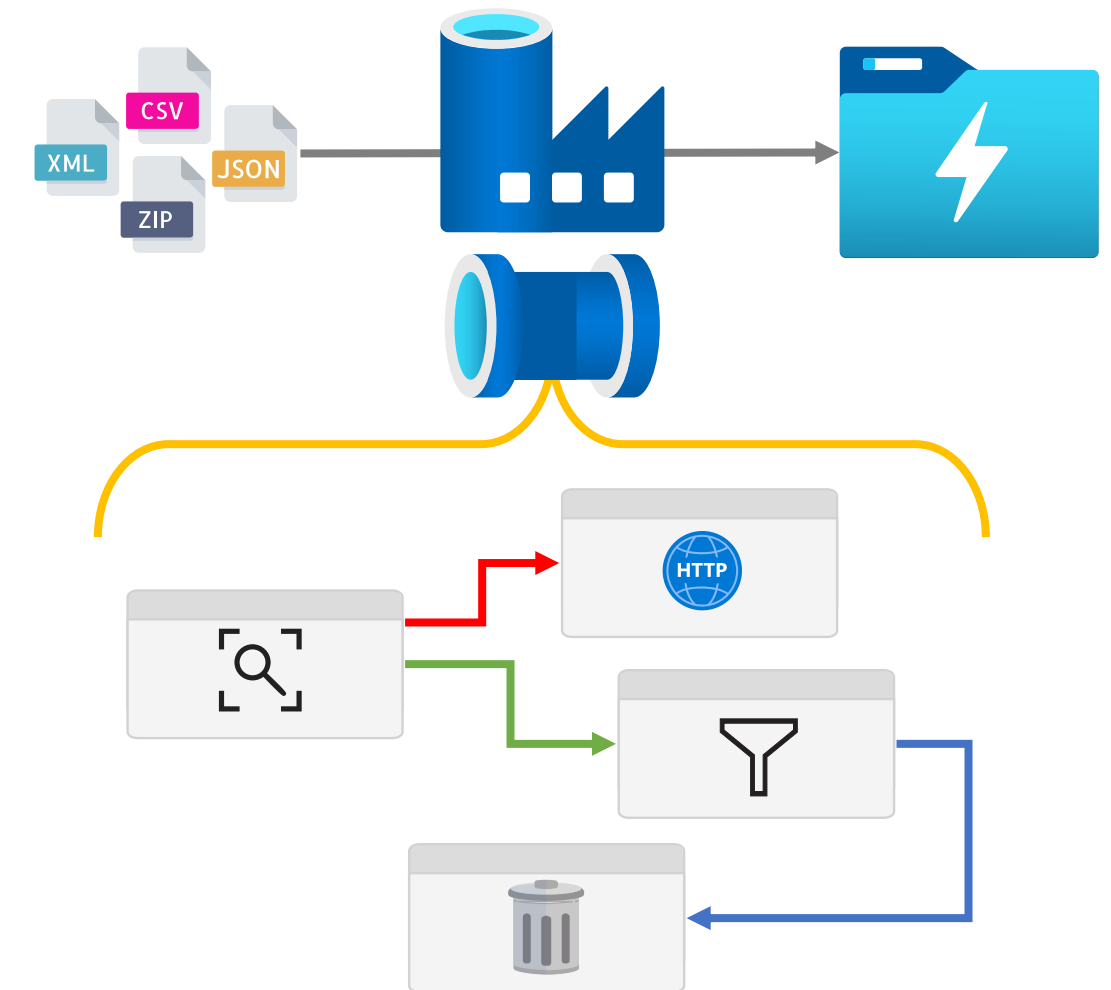
## Integration Tests



## Functional Tests



## Unit Tests



# Module 10

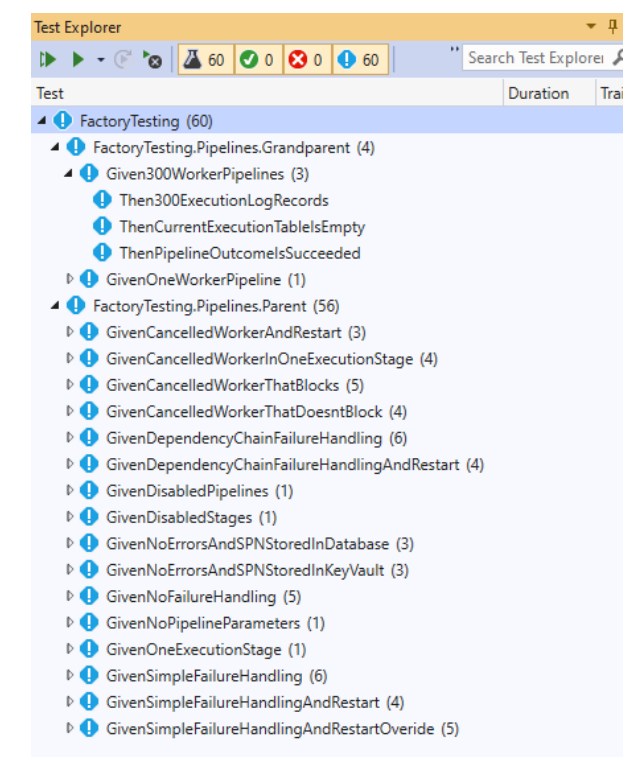
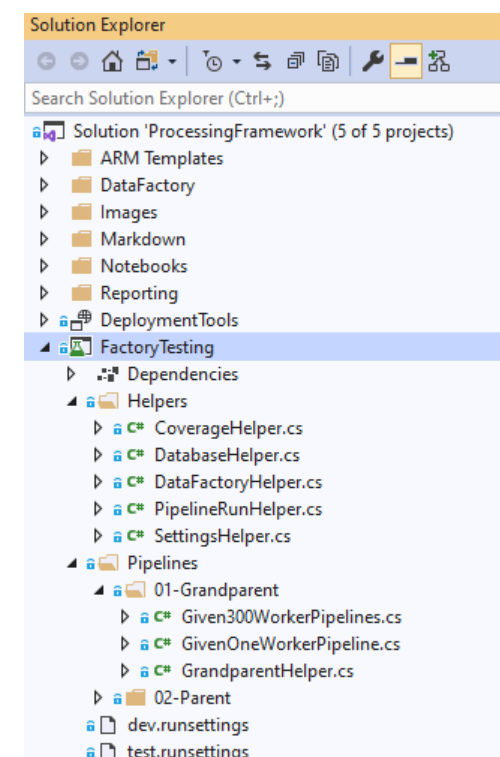
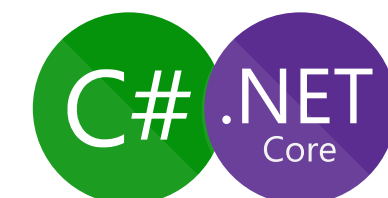
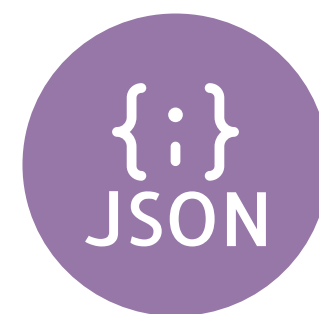
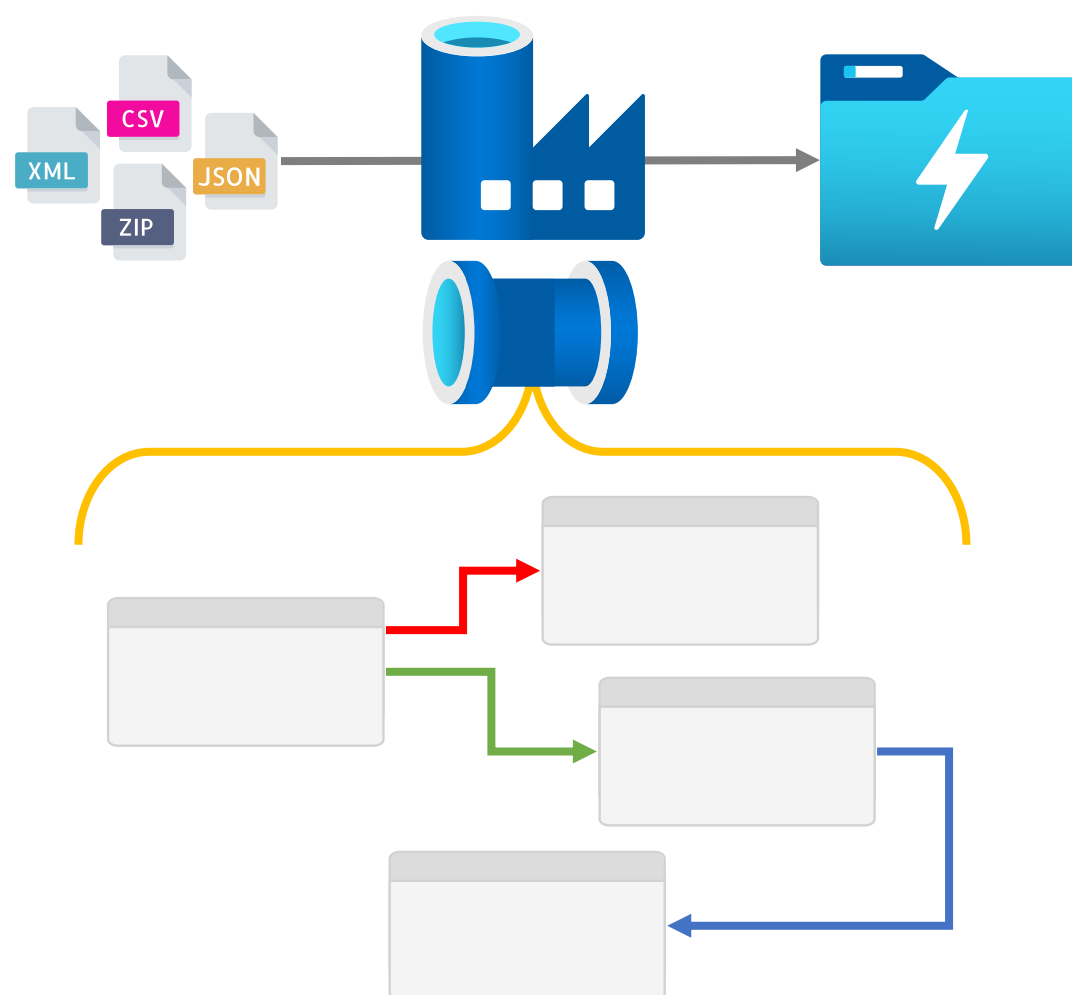
## Testing



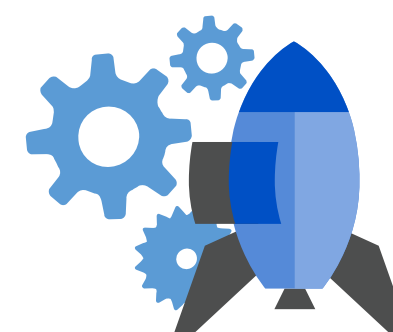
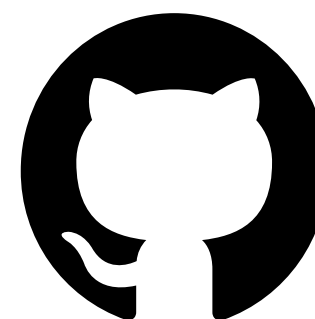
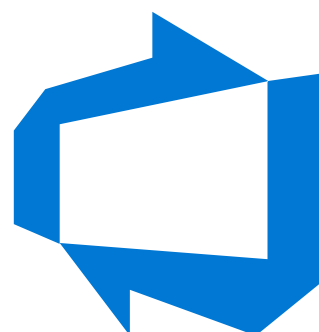
- Development Time Validation
- Test Coverage
- NUnit Tests



# How To Run & Automate Tests



[github.com/richardswinbank/community/tree/main/adf-testing-series](https://github.com/richardswinbank/community/tree/main/adf-testing-series)

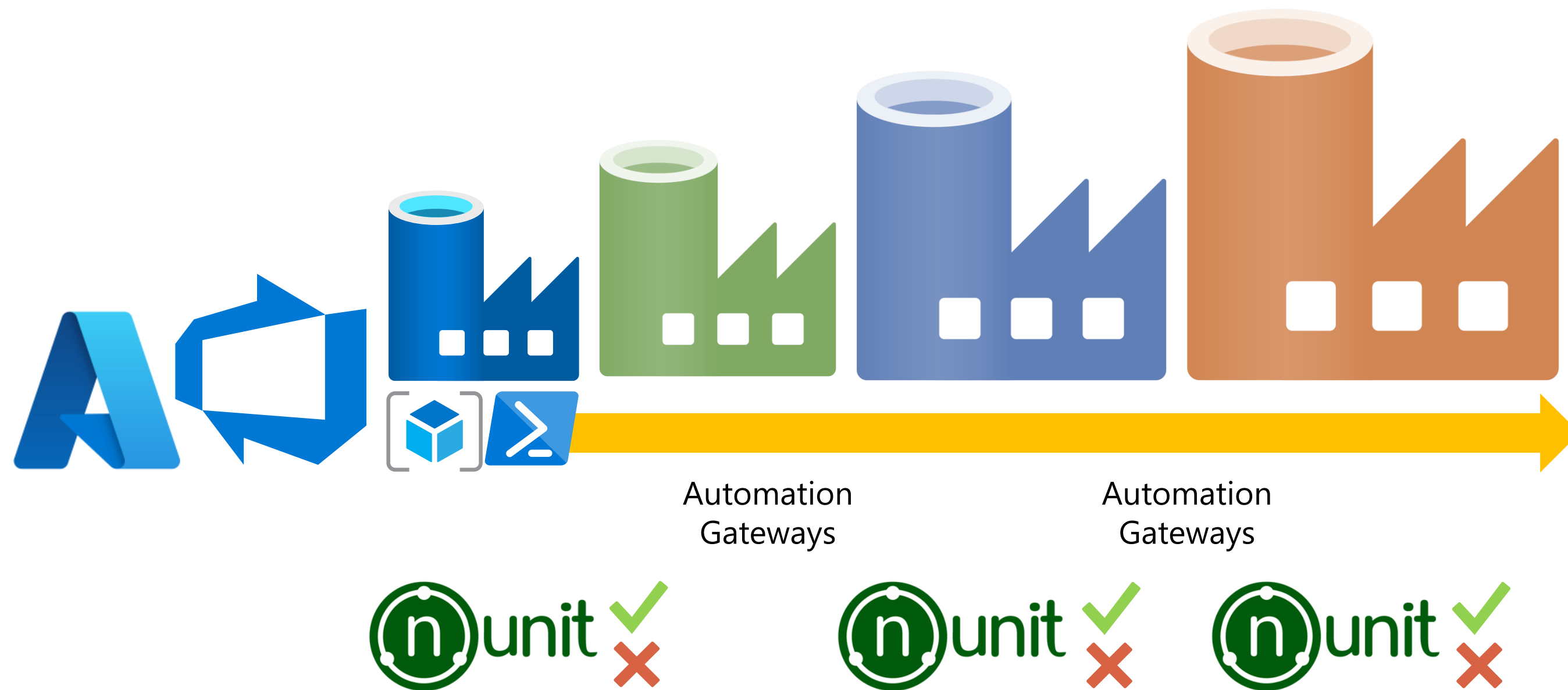




# Testing Code vs Actual Code



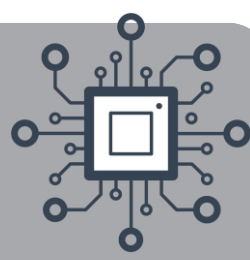
Data Factory – Chicken vs Egg



Should automate this?

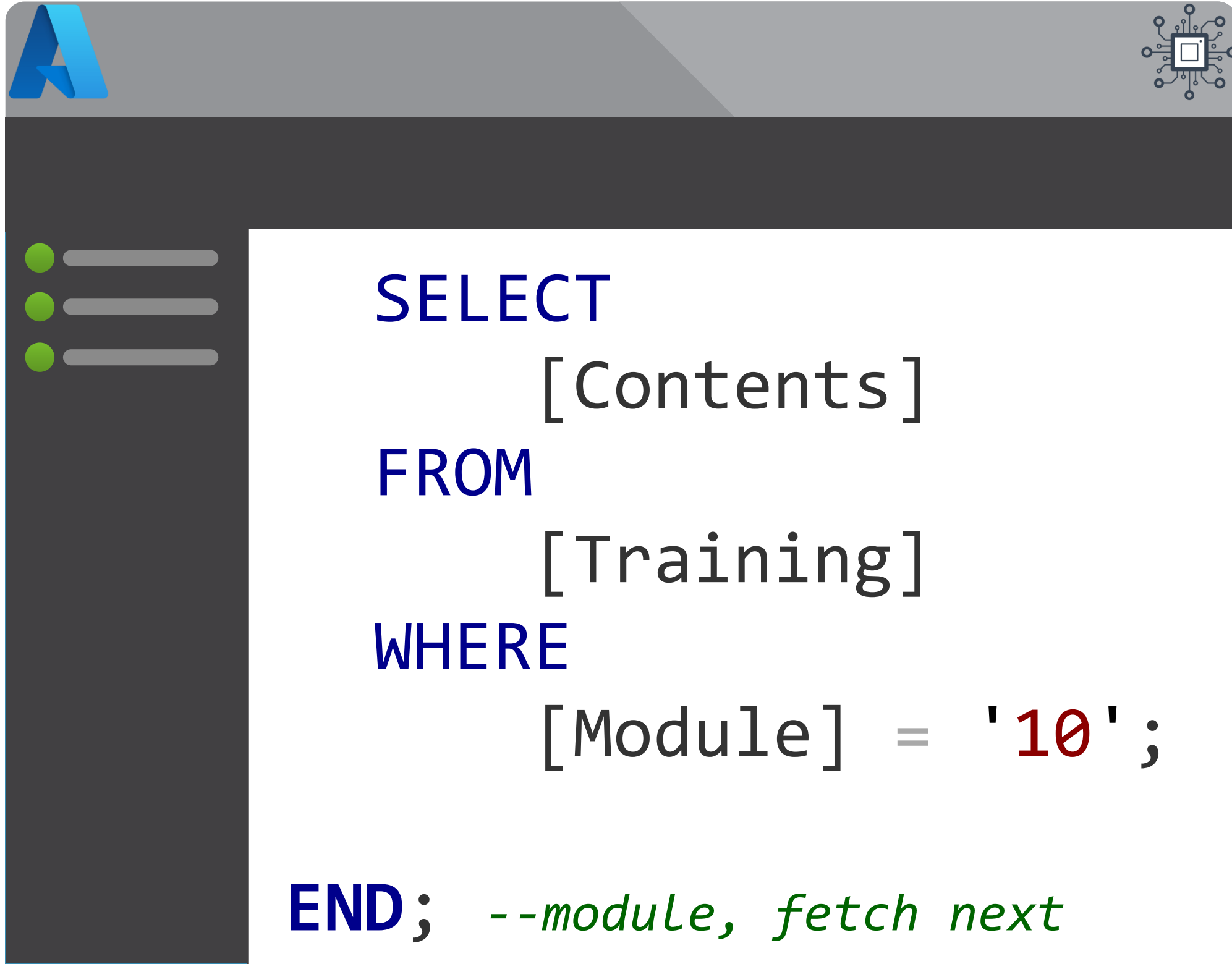
When should testing scripts run?

What if a test case fails?



# Module 10

## Testing



- Development Time Validation
- Test Coverage
- NUnit Tests