

ORACLE

# Transform Oracle Forms Apps into APEX Apps in the Era of AI

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# Safe harbor statement

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# Agenda

- Quick Poll
- Forms to APEX History
- Forms to APEX
- Reports to APEX
- Summary

# Quick Poll

1. Are you an Oracle Forms developer?
2. Are you in the process of modernizing Oracle Forms Apps?

# Oracle Forms Usage Around the World

**3K - 8K\***  
Estimated  
Customers

## Top Countries:

United States  
India  
Brazil  
United Kingdom  
Spain  
France

## Top Industries:

Manufacturing  
Business Services  
Finance  
Retail

*\* Estimated numbers based on GTM companies*

# Forms to APEX History

Introduction of Migration Project  
**APEX 3.2 (2009)**

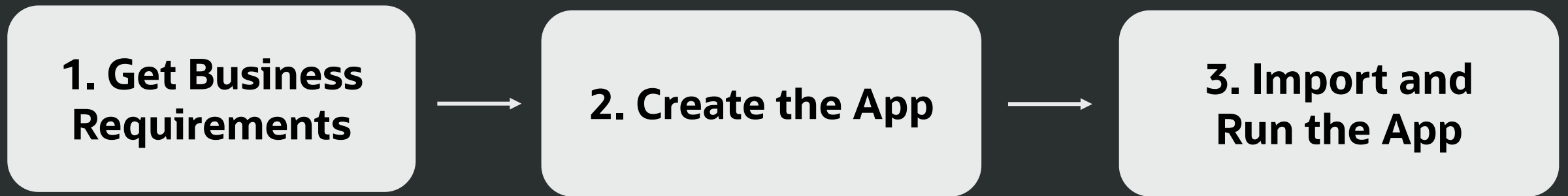
Dessuported Migration Project  
**APEX 21.1 (2021)**

AI way of transforming F&R  
**APEX 26.\* (2026)**

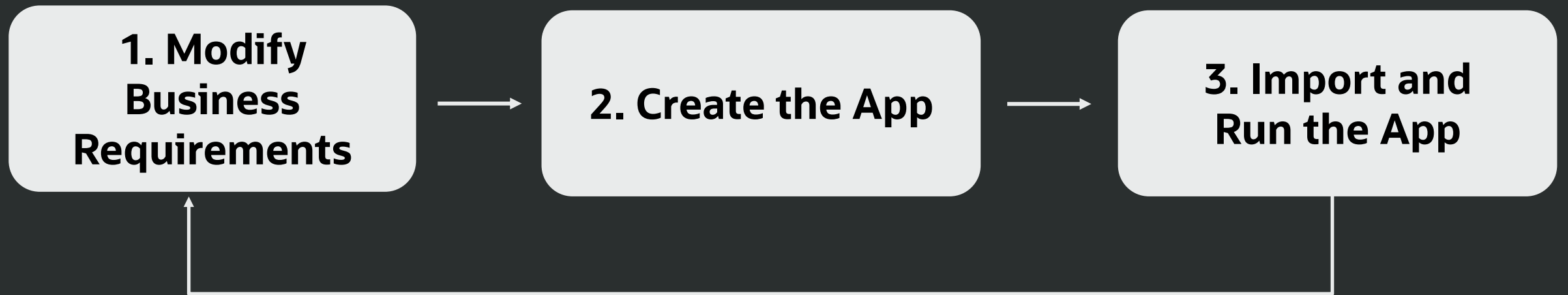


# Forms to APEX

# How about if ...?



# Iterate if needed



# What do you need?

## The Business Investment

- Forms and Reports
- Database Objects

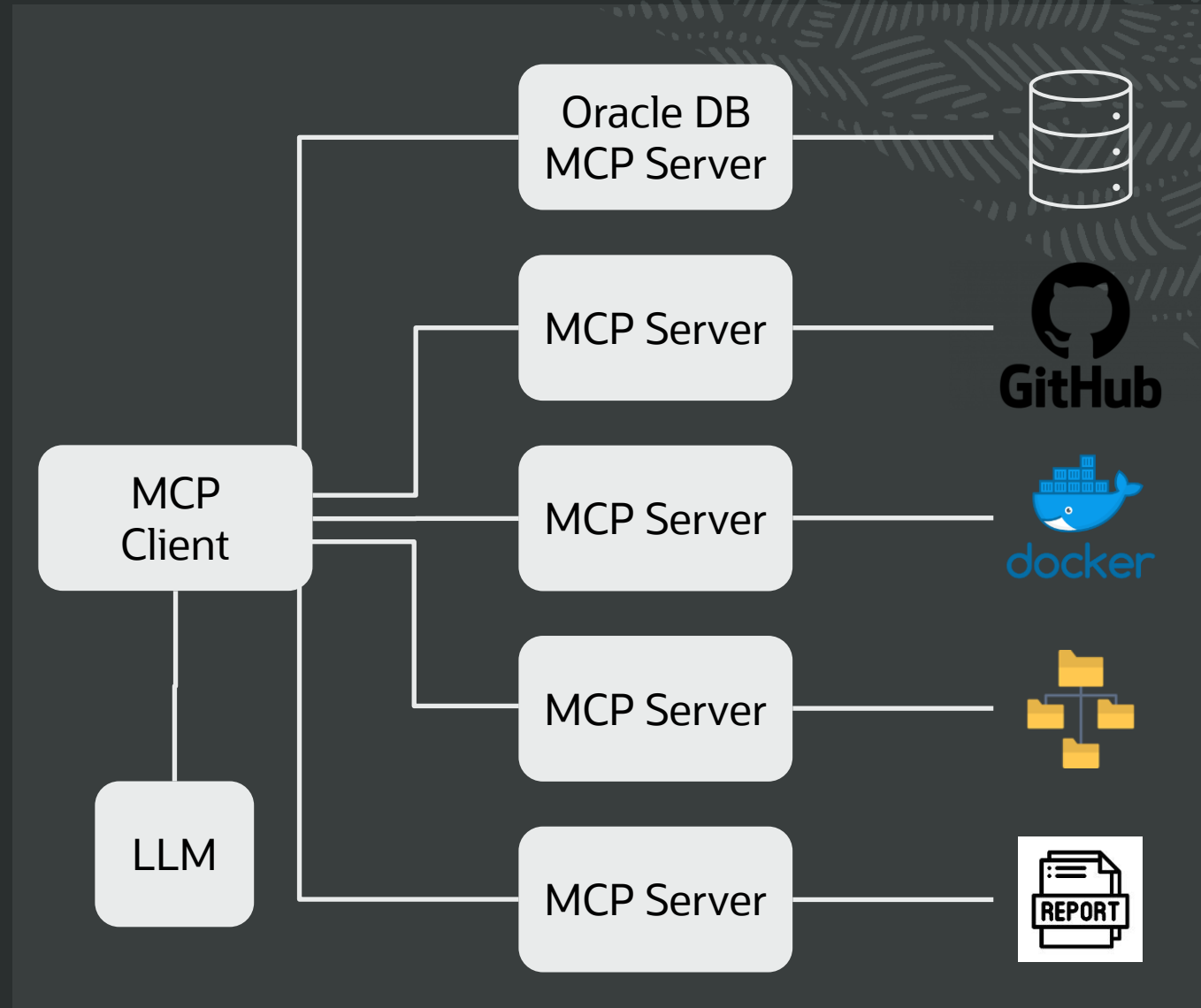
## The New Tools

- AI
- MCP for Oracle Database
- Spec-Driven Development\*

*\* Upcoming feature*

# What is MCP?

- MCP stands for Model Context Protocol
- Singular interface to standard interactions with database, files, business apps, and developer tools



# Oracle SQLcl: MCP Server for Oracle Database

- Provides to any MCP Client:
  - list-connections
  - connect
  - run-sql
  - run-sqlcl
  - schema-information
  - disconnect
- Secure Access
  - Agent doesn't work with database directly
  - Credentials never shared with the agent
  - Passwords/Certificates encrypted in Oracle wallets



# First Demo

## FMB -> Spec

# Sample Forms

The screenshot shows a window titled "Summit Application - Control Panel". On the left, there is a tree view titled "Customer List By Country" with a "View: By Customer" dropdown. The tree lists countries: Brazil (with sub-item Unisport), China (with sub-item Kam's Sporting Go), Czechoslovakia (with sub-item Kuhn's Sports), Dominican Republic (with sub-item Beisbol Si!), Egypt (with sub-item Hamada Sport), and France. On the right, there is a table with columns "Cust. Name", "Cust. Phone", and "Sales Rep Name". The first row is highlighted and contains "Big John's Sports Em", "1-415-555-6281", and "Magee". Below the table is a form with tabs: "Customer Info", "Address", "Billing", and "Comment". The "Customer Info" tab is active, showing fields for "Id" (213), "Name" (Big John's Sports Emporium), and "Phone" (1-415-555-6281). An "Exit" button is located at the top right of the form area.

Customers

The screenshot shows a window titled "Orders and Items". At the top, there are checkboxes for "Immediate" and "Auto Query", and buttons for "Stock", "Image On", "Help", and "Exit". The "Order Id" field contains "3855". Below this is the "Order Information" section with fields for "Date Ordered" (15-APR-1996), "Customer Id" (210), "Customer Name" (Futbol Sonora), "Sales Rep Id" (12), and "Sales Rep Name" (Giljum). There is also a "Date Shipped" field (15-MAY-1996) and radio buttons for "Cash", "Credit", and a checked "Order Filled" checkbox. Below this is a table of items:

Item Id	Product Id	Description	Price	Qty	Shipped	Item Total
1	50417	Griffey Glove	80	49	49	3,920.00
2	41010	Prostar 10 Pound Weight	8	12	12	96.00
3	10023					

At the bottom right, the "Order Total" is displayed as 4,016.00.

Orders



# Considerations

- Data Model
- Business Logic
  - Logic residing:
    - Inside the forms
    - In the Database
    - Both
- Screens functionality

# Tasks

1. Check Database Objects Availability
2. Check Business Logic
3. Create Supporting Package
4. Generate a Functional Requirements Specification
5. Generate a Modernization Report for APEX Devs

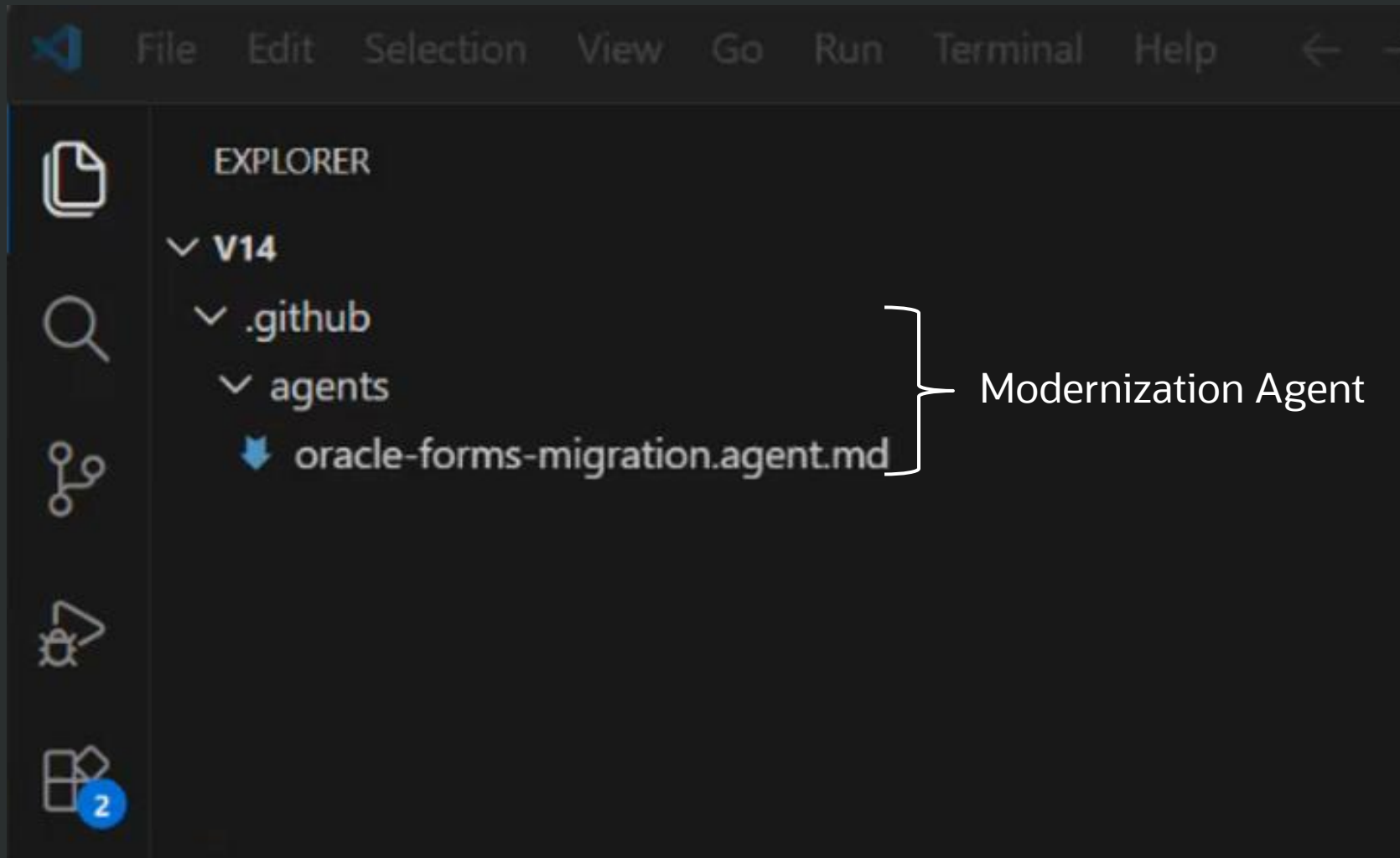
# Tasks

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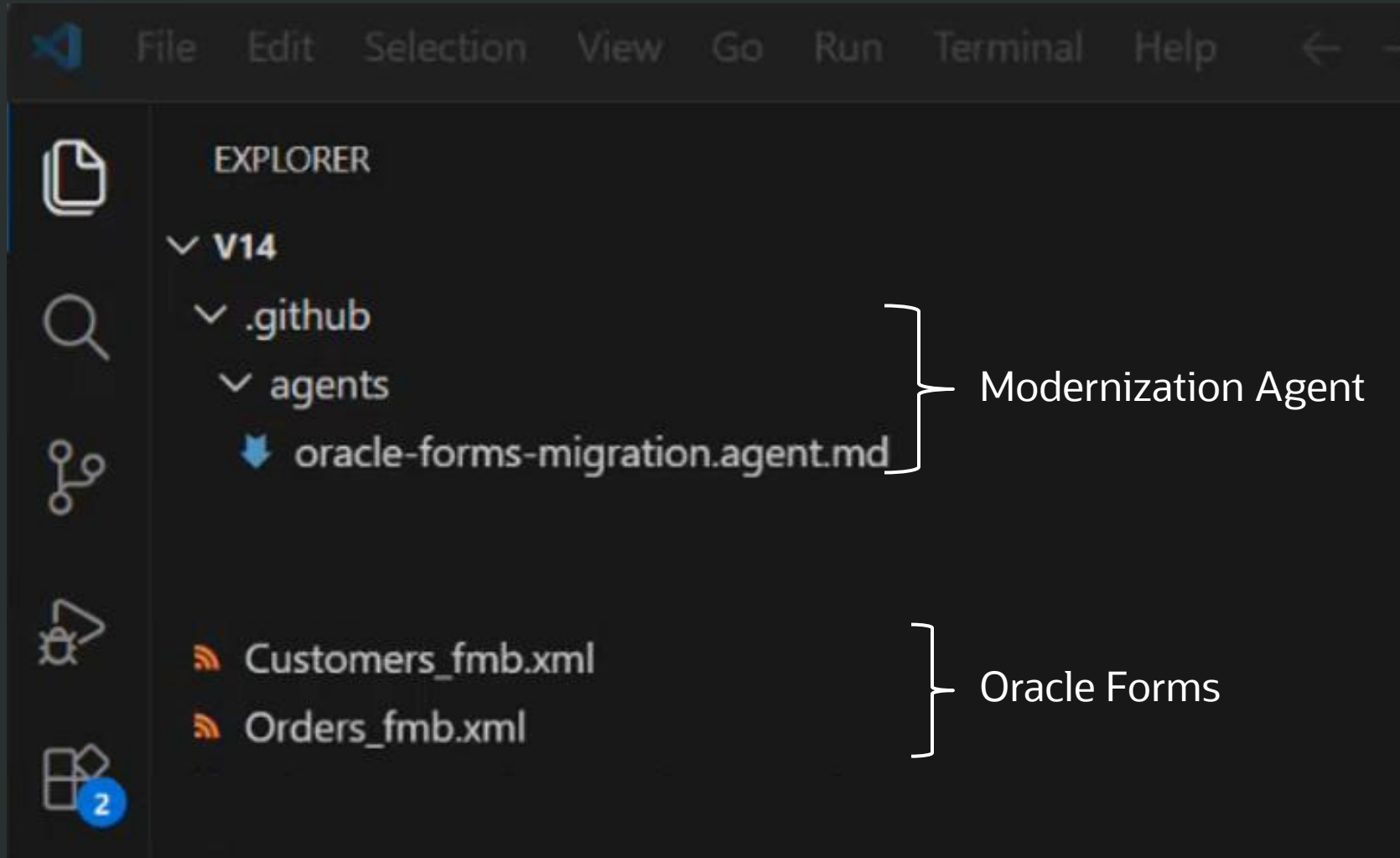


**AI Agent**

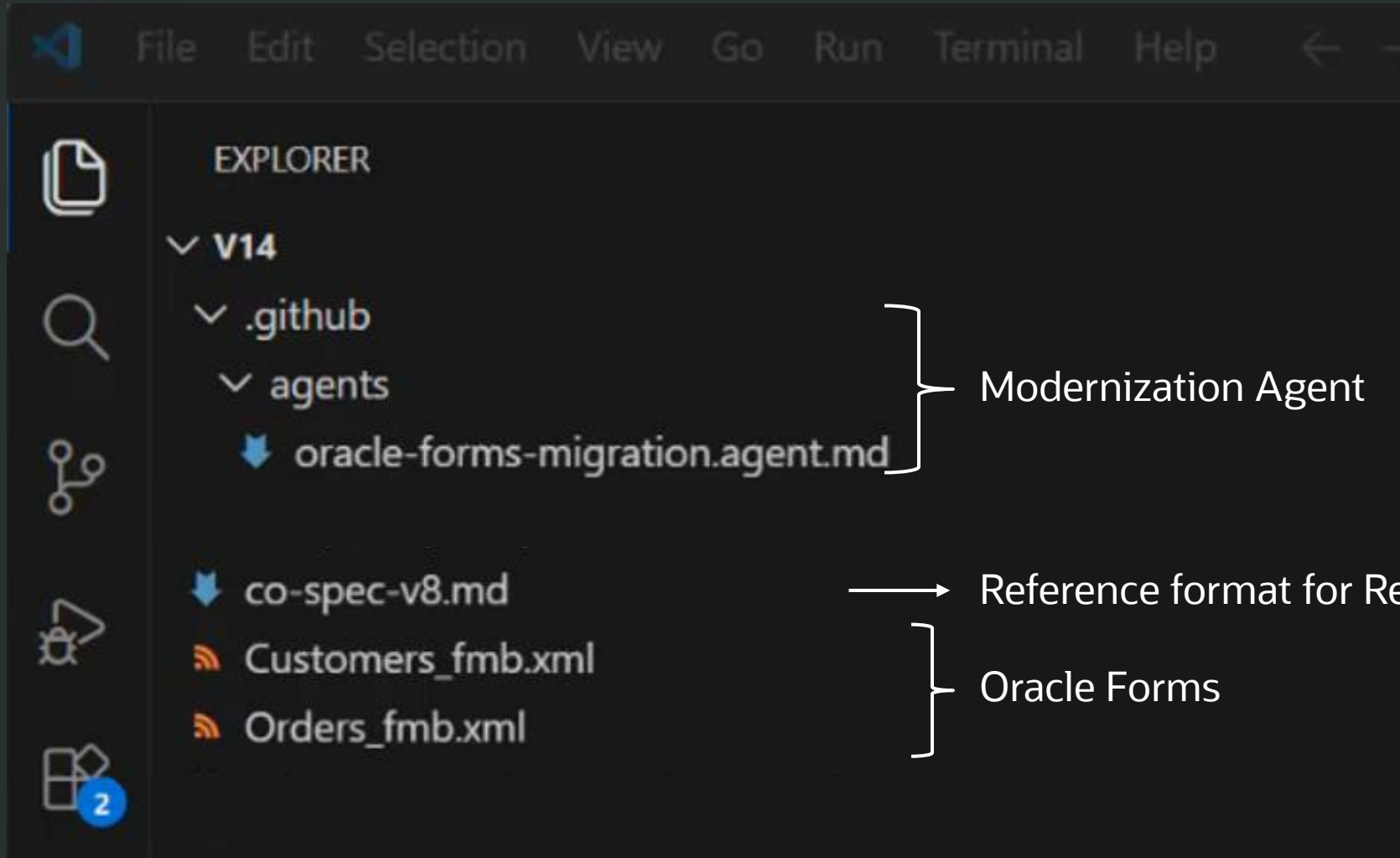
# Input



# Input



# Input



EXPLORER

- ▼ v14
  - ▼ .github
    - ▼ agents
      - oracle-forms-migration.agent.md
    - blueprint-prompt-v26.1.159.md
    - co-spec-v8.md
    - Customers\_fmb.xml
    - Orders\_fmb.xml
    - schema\_metadata\_monica-ws.md

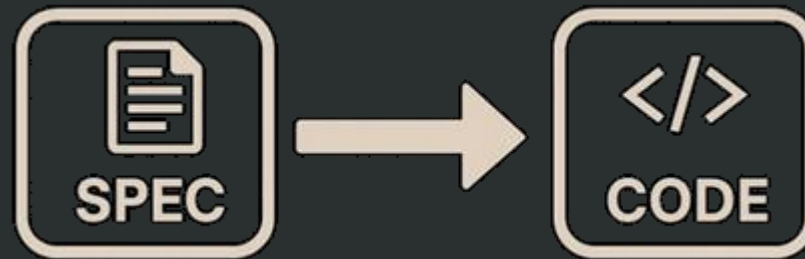
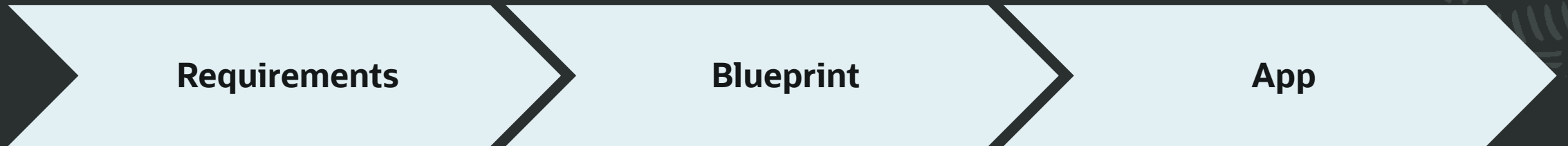


Open Chat Ctrl + Alt + I

Show All Commands Ctrl + Shift + P

Find in Files Ctrl + Shift + F

# Spec-Driven Development



# 1. Document Requirements

```
1 # Functional Specification: Employee and Department views in Oracle APEX
2
3 ## Overview
4 This application enables users to browse, search, analyze, and interact with
5 employee and department data through multiple Oracle APEX region types and
6 search paradigms. Each page offers a unique user experience tailored for
7 specific business needs and preferences.
8
9 ---
10 ## 1. Home Page Dashboard with KPI Charts
11
12 **Purpose:**
13 Provide an at-a-glance summary of key employee metrics, trends, and actionable
14 insights immediately upon login.
15
16 **Region Types:**
17 - KPI Cards/Charts
18 - Chart Regions (Bar, Line, Pie, etc.)
19 - Info Tiles
20
21 **Key Features:**
22 1. **Headcount per Department**
23 - **KPI:** Number of employees in each department.
24 - **Recommended Chart Types:**
25 - **Bar Chart:** Better for comparison across departments.
```

Requirements

Blueprint

App

## 2. Generate Blueprint

The blueprint is generated using AI based on resources that describe:

- The APEX blueprint file format (Oracle provided)
- Your application requirements
- Your application data model.

### Provenance

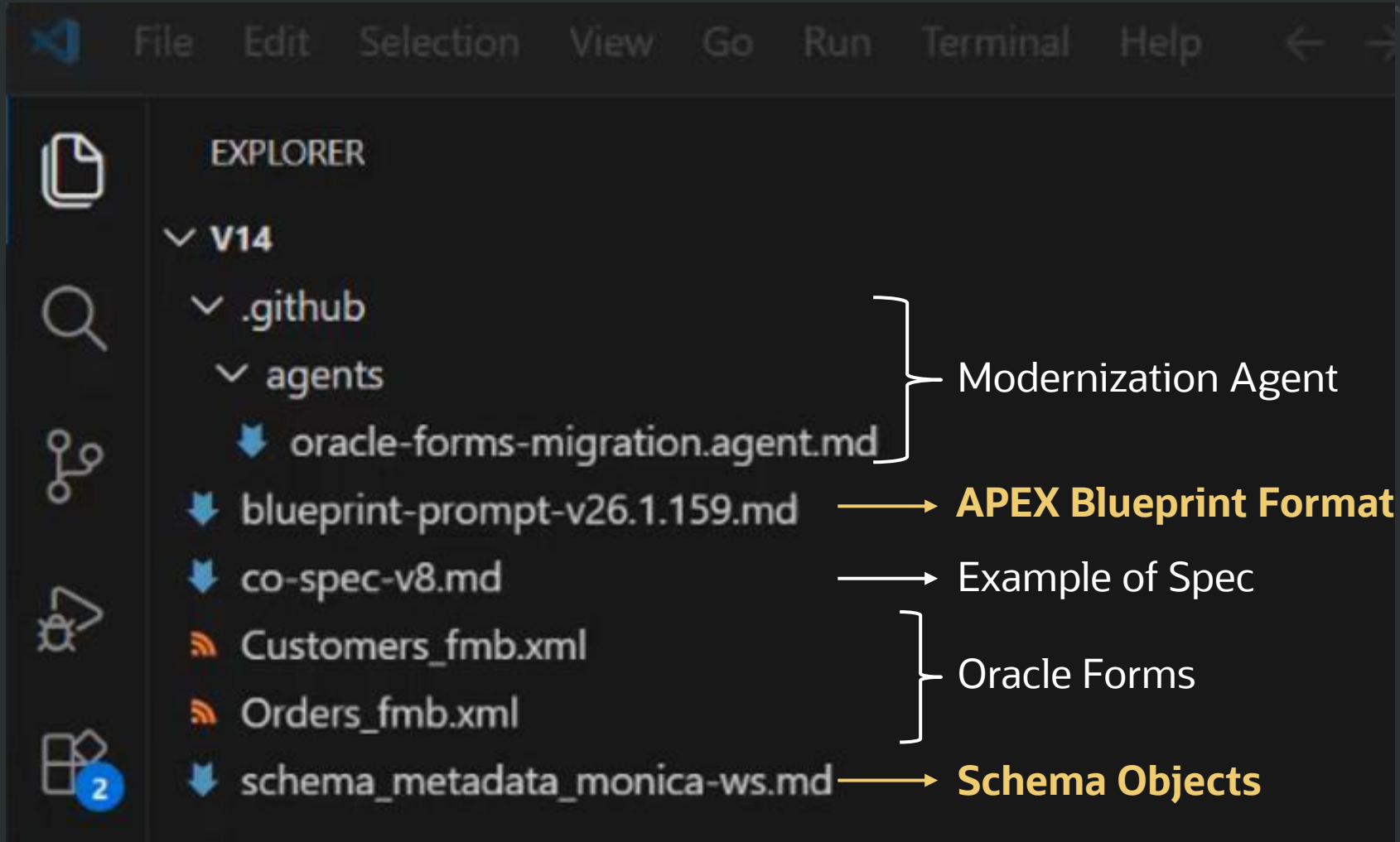
- Source Prompt: .clinerules\blueprint-prompt-v4.3.19.md
- Functional Requirements: demo\_functional\_requirement.md
- Schema Metadata: employees-schema-metadata.md
- UX Patterns: Built-in

### Application Definition

- Name: Employee and Department Demo App
- Description: Oracle APEX demo showcasing employee and department analytics with reports, forms, charts, and a hire calendar.
- Access Controls:
  - Roles:
    - Role: Admin
      - Description: Full access to all pages, CRUD actions, and administration.
    - Role: Analyst
      - Description: Read and analyze data with permissions to create and edit records.
    - Role: User
      - Description: Read-only access to reports, charts, and calendar.
- Data Access: Table
- List of Values:

# Second Demo

# Input



The image shows a screenshot of the Visual Studio Code Explorer window. The Explorer sidebar is on the left, showing a file tree structure. The main area displays the contents of the selected folder. The file tree is as follows:

- EXPLORER
  - ✓ V14
    - ✓ .github
      - ✓ agents
        - oracle-forms-migration.agent.md
      - blueprint-prompt-v26.1.159.md
      - co-spec-v8.md
      - Customers\_fmb.xml
      - Orders\_fmb.xml
      - schema\_metadata\_monica-ws.md

Annotations on the right side of the Explorer window point to specific files:

- A bracket groups `oracle-forms-migration.agent.md` and `blueprint-prompt-v26.1.159.md`, labeled "Modernization Agent".
- An arrow points from `blueprint-prompt-v26.1.159.md` to "APEX Blueprint Format".
- An arrow points from `co-spec-v8.md` to "Example of Spec".
- A bracket groups `Customers_fmb.xml` and `Orders_fmb.xml`, labeled "Oracle Forms".
- An arrow points from `schema_metadata_monica-ws.md` to "Schema Objects".

modernization\_report.md +110 -0 ●

pkg\_f2a.sql +142 -0 ●

traceability\_matrix.md +22 -0 ●

Using the rules defined in the prompt file:

- blueprint-prompt-v26.1.159

Generate an application blueprint named:

- f2a-blueprint.md

Based on the requirements document:

- customers-orders-spec.md

And schema metadata document:

- schema\_metadata\_monica-ws.md

Dont read any other files unless directed by the prompt

Important! Also provide the complete elapsed time to generate the blueprint from start to finish



IDE context



Local ▾

Default permissions ▾



Requirements

Blueprint

App

## 4. Load Application

- Load the APEXlang file-based artifacts.
- Run the App.

### Import

+ **Drag and Drop**  
Select a file or drop one here.

\* File Type:  Application, Page or Component Export ?  
 Plug-in  
 Theme Export  
 UI Defaults  
 Team Development Feedback  
 REST Source Catalog  
 **Application Blueprint**

File Character Set:  ?

Generated application at runtime

# Third Demo

# Best Practices

- Define clear tasks, clear prompts, clear requirements.
- Focus on business intent.
- Don't try to mimic Oracle Forms functionality and behavior.
- **Simplify, enhance, modernize!**

# Make AI work for you!

- Create your AI modernization agent
- Integrate it with Agentic Memory
- Explore Skills

**Learn More:  
AI4U - Build Your First AI Agent**



# Reports to APEX

# Oracle Reports

## Simple Plain Reports

- AI Interactive Reports
- Faceted Search
- Smart Filters

## Pixel-Perfect Reports

- Document Generator pre-built Function
- Oracle Analytics Publisher
- APEX Office Print
- JasperReportsIntegration

# Oracle Reports

## Simple Plain Reports

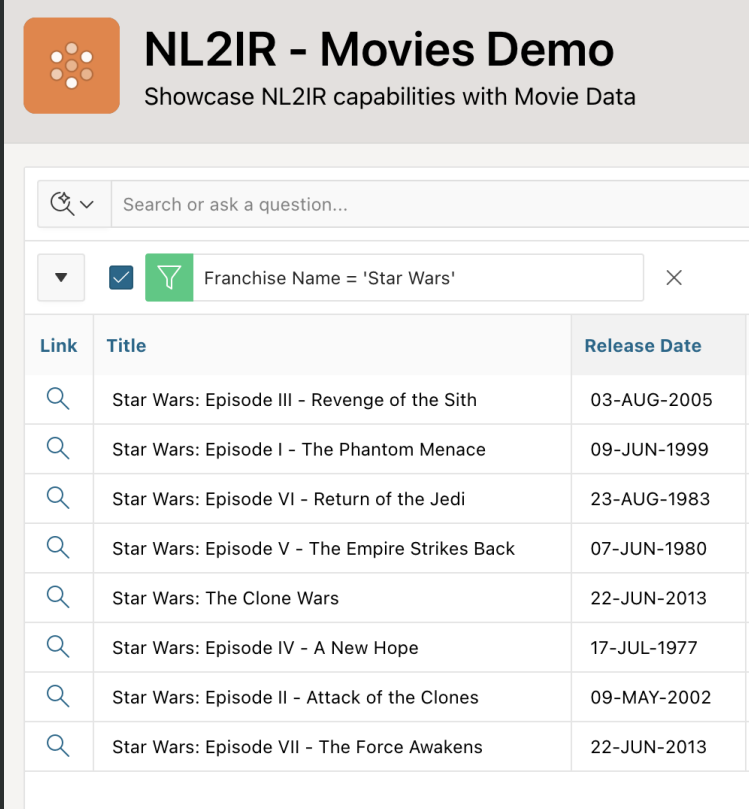
- **AI Interactive Reports**
- Faceted Search
- Smart Filters

## Pixel-Perfect Reports

- Document Generator pre-built Function
- Oracle Analytics Publisher
- APEX Office Print
- JasperReportsIntegration

# Natural Language Reporting & Insights

- Brings AI directly into APEX's most popular feature: **Interactive Reports**
- Apply formatting, filters, and visualizations using **natural language** instead of menus



**NL2IR - Movies Demo**  
Showcase NL2IR capabilities with Movie Data

Search or ask a question...

Franchise Name = 'Star Wars'

Link	Title	Release Date
<a href="#">🔍</a>	Star Wars: Episode III - Revenge of the Sith	03-AUG-2005
<a href="#">🔍</a>	Star Wars: Episode I - The Phantom Menace	09-JUN-1999
<a href="#">🔍</a>	Star Wars: Episode VI - Return of the Jedi	23-AUG-1983
<a href="#">🔍</a>	Star Wars: Episode V - The Empire Strikes Back	07-JUN-1980
<a href="#">🔍</a>	Star Wars: The Clone Wars	22-JUN-2013
<a href="#">🔍</a>	Star Wars: Episode IV - A New Hope	17-JUL-1977
<a href="#">🔍</a>	Star Wars: Episode II - Attack of the Clones	09-MAY-2002
<a href="#">🔍</a>	Star Wars: Episode VII - The Force Awakens	22-JUN-2013



# Fourth Demo

Departments Report					
<b>Country Name Canada</b>					
City	First Name	Last Name	Salary	Hire Date	Department Name
Toronto	Michael	Hartstein	13000	17-FEB-96	Marketing
<b>Country Name Germany</b>					
City	First Name	Last Name	Salary	Hire Date	Department Name
Munich	Hermann	Baer	10000	07-JUN-94	Public Relations
<b>Country Name United Kingdom</b>					
City	First Name	Last Name	Salary	Hire Date	Department Name
London	Susan	Mavris	6500	07-JUN-94	Human Resources
Oxford	John	Russell	14000	01-OCT-96	Sales
<b>Country Name United States of America</b>					
City	First Name	Last Name	Salary	Hire Date	Department Name
Seattle	Shelley	Higgins	12000	07-JUN-94	
Seattle	Nancy	Greenberg	12000	17-AUG-94	
Southlake	Alexander	Hunold	9000	03-JAN-90	
Seattle	Den	Raphaely	11000	07-DEC-94	
South San Francisco	Adam	Fripp	8200	10-APR-97	

**Data Wizard**

Select the data that you will use in your report.

Data Source definition:

```

SELECT ALL DEPARTMENTS.DEPARTMENT_NAME,
EMPLOYEES.FIRST_NAME, EMPLOYEES.LAST_NAME, EMPLOYEES.SALARY,
LOCATIONS.CITY, COUNTRIES.COUNTRY_NAME, EMPLOYEES.HIRE_DATE
FROM EMPLOYEES, DEPARTMENTS, LOCATIONS, COUNTRIES
WHERE EMPLOYEES.HIRE_DATE > '01-JAN-90'
AND ((EMPLOYEES.DEPARTMENT_ID = DEPARTMENTS.DEPARTMENT_ID)
AND (DEPARTMENTS.MANAGER_ID = EMPLOYEES.EMPLOYEE_ID)
AND (DEPARTMENTS.LOCATION_ID = LOCATIONS.LOCATION_ID)
AND (LOCATIONS.COUNTRY_ID = COUNTRIES.COUNTRY_ID))
ORDER BY DEPARTMENTS.DEPARTMENT_NAME ASC

```

Query Builder... Import Query... Connect...

Cancel Help < Back Next > Finish



# Stay Tuned!

Forms to APEX Blogs

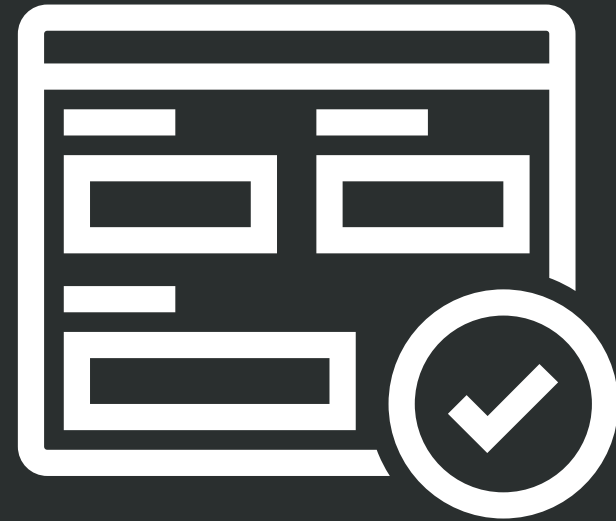
[apex.oracle.com/go/f2a-blogs](https://apex.oracle.com/go/f2a-blogs)



# A small request for you!

Share non-confidential Oracle F&R apps.

[Monica.godoy@oracle.com](mailto:Monica.godoy@oracle.com)





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ORACLE

Our mission is to help people see  
data in new ways, discover insights,  
unlock endless possibilities.

