

ORACLE



# Building Powerful and Compelling Reports using Oracle APEX

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Oracle APEX | Database Tools

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# Speaker

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**Chaitanya Koratamaddi**  
Director of Product Management /  
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Oracle

# Agenda

- Oracle APEX
- **Data and Reporting**
  - Classic Reports
  - Interactive Reports
  - Interactive Grids
  - Faceted Search
  - Smart Filters
  - Cards
- Reports on data from disparate data sources
- Charting
- Learning Resources



[apex.oracle.com](https://apex.oracle.com)

# What is Oracle APEX?

## Oracle's Strategic Low-Code Application Development Platform

Oracle APEX is the world's most popular enterprise low-code application platform that enables you to build scalable, secure web and mobile apps, with world-class features, that can be deployed anywhere – cloud or on-premises.

Using APEX, developers can quickly develop and deploy compelling apps that solve real problems and provide immediate value.

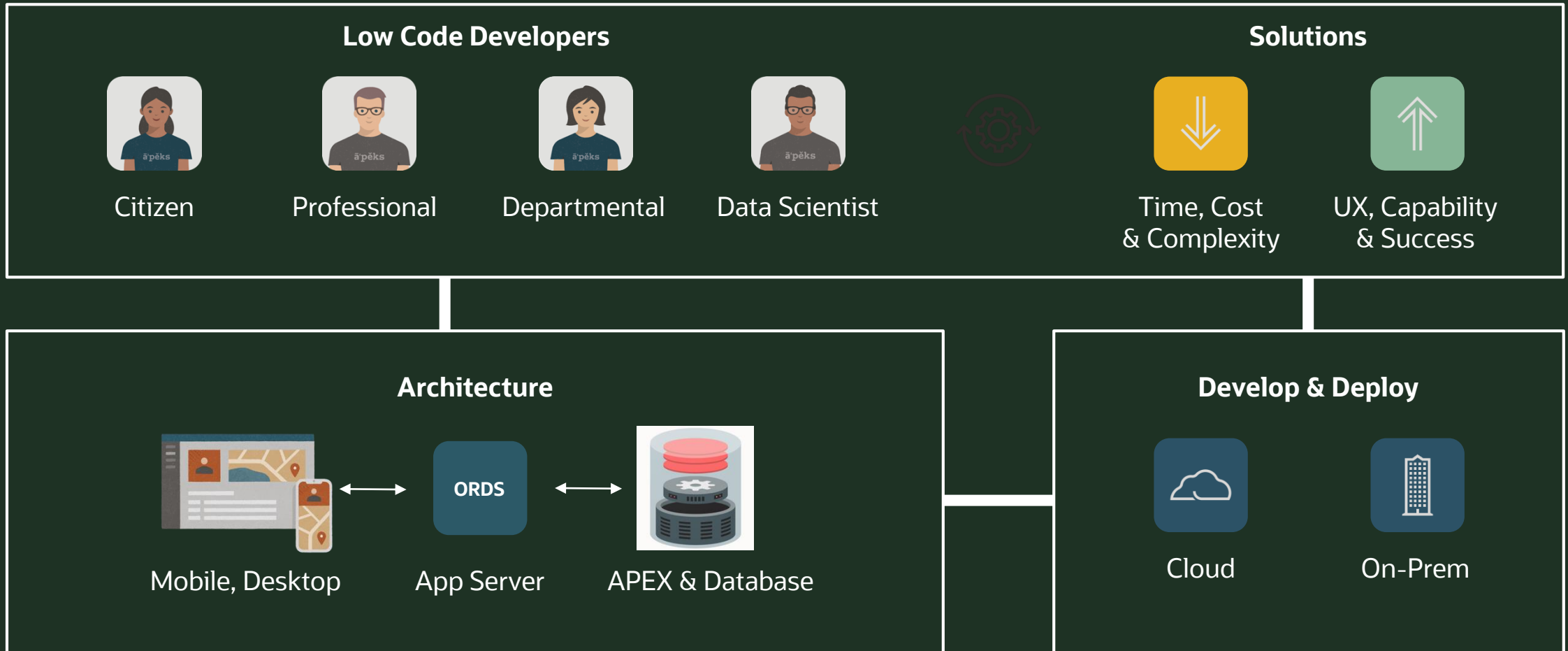
You won't need to be an expert in a vast array of technologies to deliver sophisticated solutions.

Focus on solving the problem and let APEX take care of the rest.



# Oracle APEX Low-Code Application Platform

**Build enterprise apps 20x faster with 100x less code**



# Native Low-Code Platform of Oracle Database

## Enterprise Ready. From Day One.



Develop Responsive  
Web Apps



Visualize and manage data



Apply SQL and  
database capabilities

Oracle APEX is a **fully supported no-cost feature** of Oracle Autonomous Database and all Oracle Database Distributions and Editions.

# Oracle APEX

## Low-Code for the Enterprise

- Most Sophisticated Apps
  - One platform to build any app - simple to extremely complex; desktop, mobile, cloud. Easily incorporate any necessary data, machine learning, and analytics.
- Largest Workloads
  - No limits on number and types of workloads. Pricing not based on #workloads or #apps. Simply add more compute or storage to support your needs.
- Enterprise-Scale Users, Data and Throughput
  - Scale from 1 to millions of users, no data ingress/egress charges and no limits on throughputs. Pricing not based on #users, developers or end users.
- Portability to any Cloud or Platform
  - Build once and deploy anywhere – On-Prem, Oracle Cloud or 3<sup>rd</sup> Party Clouds. No need to re-platform or rewrite your APEX apps.



# What Does APEX Do for you?

## Low-Code without Limits

Oracle APEX helps you build beautiful apps by taking care of these eight facets of application development:

- Data and Reporting
- Mobile
- User Interface
- Security
- Accessibility
- Monitoring
- Globalization
- Workflow and Process Automation



# Data and Reporting

## Turn Data into Information

Project	Task Name	Start Date
Bug Tracker	Document quality assurance procedures	16-JUL
Bug Tracker	Review automated testing tools	20-JUL
Bug Tracker	Implement bug tracking software	04-AUG
Discussion Forum	Identify owners	05-AUG
Maintain Support Systems	HR software upgrades	08-AUG
Discussion Forum	Install ACME Web Express application on internet server	11-AUG
Bug Tracker	Train developers on tracking bugs	11-AUG
Maintain Support Systems	Apply Billing System	
Public Website	Check software licenses	

- Default
- ✓ 1. Primary Report
- 2. Budget Review
- 3. Highlighted Over Budget
- 4. Pivot Example

**Migrate from Legacy Server** Pending

Cut over to new database

Assigned: Bob Nile

Started: 17-OCT-23 Ended: 17-OCT-23  
Budget: \$1,500.00 Cost:\$0.00

**Migrate from Legacy Server** Pending

Decommission Legacy Server

Assigned: Al Bines

Started: 31-OCT-23 Ended: 31-OCT-23  
Budget: \$500.00 Cost:\$0.00

**Public Website** Closed

Determine host server

Assigned: Tiger Scott

Started: 15-AUG-23 Ended: 15-AUG-23  
Budget: \$200.00 Cost:\$200.00

**Public Website** Closed

Check software licenses

Assigned: Tom Suess

Started: 15-AUG-23 Ended: 15-AUG-23  
Budget: \$100.00 Cost:\$100.00

**Public Website** On-Hold

Purchase additional software licenses, if needed

Assigned: Al Bines

Started: 16-AUG-23 Ended: 17-AUG-23  
Budget: \$1,000.00 Cost:\$300.00

**Public Website** Open

Develop web pages

Assigned: Tiger Scott

Started: 11-SEP-23 Ended: 12-SEP-23  
Budget: \$2,000.00 Cost:\$0.00

Search...

- Project
  - Migrate from Legacy Server (10)
  - Client Server Conversion (9)
  - ACME Web Express Configuration (7)
  - Migrate Desktop Application (7)
  - Bug Tracker (5)
- Assigned To
  - Bob Nile (14)
  - John Watson (14)
  - Pam King (12)
  - Myra Sutcliffe (6)
  - James Cassidy (5)

**Total Row Count 73** Reset

Project	Task Name	Start Date	End Date	Status	Assigned To	Cost	Budget
ACME Web Express Configuration	Identify server requirements	30-AUG-23	31-AUG-23	Closed	John Watson	\$200.00	\$500.00
ACME Web Express Configuration	Determine Web listener configuration(s)	01-SEP-23	01-SEP-23	Closed	James Cassidy	\$600.00	\$500.00
ACME Web Express Configuration	Run installation	04-SEP-23	04-SEP-23	Closed	James Cassidy	\$200.00	\$200.00
ACME Web Express Configuration	Create pilot workspace	06-SEP-23	06-SEP-23	Closed	John Watson	\$100.00	\$100.00
ACME Web Express Configuration	Specify security authentication scheme(s)	11-SEP-23	11-SEP-23	Open	John Watson	\$200.00	\$300.00
ACME Web Express Configuration	Configure Workspace provisioning	12-SEP-23	12-SEP-23	Open	John Watson	\$200.00	\$100.00
ACME Web Express Configuration	Select servers for Development, Test, Production	15-SEP-23	17-SEP-23	Open	James Cassidy	\$200.00	\$600.00
Bug Tracker	Document quality assurance procedures	16-JUL-23	19-JUL-23	Closed	Myra Sutcliffe	\$3,000.00	\$2,000.00
Bug Tracker	Review automated testing tools	20-JUL-23	22-JUL-23	Closed	Myra Sutcliffe	\$750.00	\$1,500.00
Bug Tracker	Implement bug tracking software	04-AUG-23	04-AUG-23	Closed	Myra Sutcliffe	\$100.00	\$100.00
Bug Tracker	Train developers on tracking bugs	11-AUG-23	16-AUG-23	On-Hold	Myra Sutcliffe	\$1,000.00	\$2,000.00
Bug Tracker	Measure effectiveness of improved QA	23-AUG-23	23-AUG-23	Pending	Myra Sutcliffe	\$0.00	\$500.00
Client Server Conversion	Test migrated applications	15-SEP-23	16-SEP-23	Pending	Russ Saunders	\$0.00	\$6,000.00



# Classic Reports

## Display Data in a Simple Report

- Formatted result of a SQL query
- Most versatile report as it is template-driven
- Sorting and simple filtering
- Download the report as a CSV, HTML, Excel, or PDF.

Project ↑	Task	Start Date	End Date	Status	Assigned To	Cost	Budget
ACME Web Express Configuration	Configure Workspace provisioning	12-SEP-23	12-SEP-23	Open	John Watson	200	100
ACME Web Express Configuration	Create pilot workspace	06-SEP-23	06-SEP-23	Closed	John Watson	100	100
ACME Web Express Configuration	Determine Web listener configuration(s)	01-SEP-23	01-SEP-23	Closed	James Cassidy	600	500
ACME Web Express Configuration	Identify server requirements	30-AUG-23	31-AUG-23	Closed	John Watson	200	500
ACME Web Express Configuration	Run installation	04-SEP-23	04-SEP-23	Closed	James Cassidy	200	200
ACME Web Express Configuration	Select servers for Development, Test, Production	15-SEP-23	17-SEP-23	Open	James Cassidy	200	600
ACME Web Express Configuration	Specify security authentication scheme(s)	11-SEP-23	11-SEP-23	Open	John Watson	200	300
Bug Tracker	Document quality assurance procedures	16-JUL-23	19-JUL-23	Closed	Myra Sutcliffe	3,000	2,000
Bug Tracker	Implement bug tracking software	04-AUG-23	04-AUG-23	Closed	Myra Sutcliffe	100	100
Bug Tracker	Measure effectiveness of improved QA	23-AUG-23	23-AUG-23	Pending	Myra Sutcliffe	0	500
Bug Tracker	Review automated testing tools	20-JUL-23	22-JUL-23	Closed	Myra Sutcliffe	750	1,500
Bug Tracker	Train developers on tracking bugs	11-AUG-23	16-AUG-23	On-Hold	Myra Sutcliffe	1,000	2,000
Client Server Conversion	End-user Training	25-SEP-23	25-SEP-23	Pending	Myra Sutcliffe	0	2,500
Client Server Conversion	Identify pilot Client Server applications	27-AUG-23	27-AUG-23	Closed	Scott Spencer	200	200
Client Server Conversion	Migrate Client Server applications	10-SEP-23	13-SEP-23	Open	Pam King	300	12,000



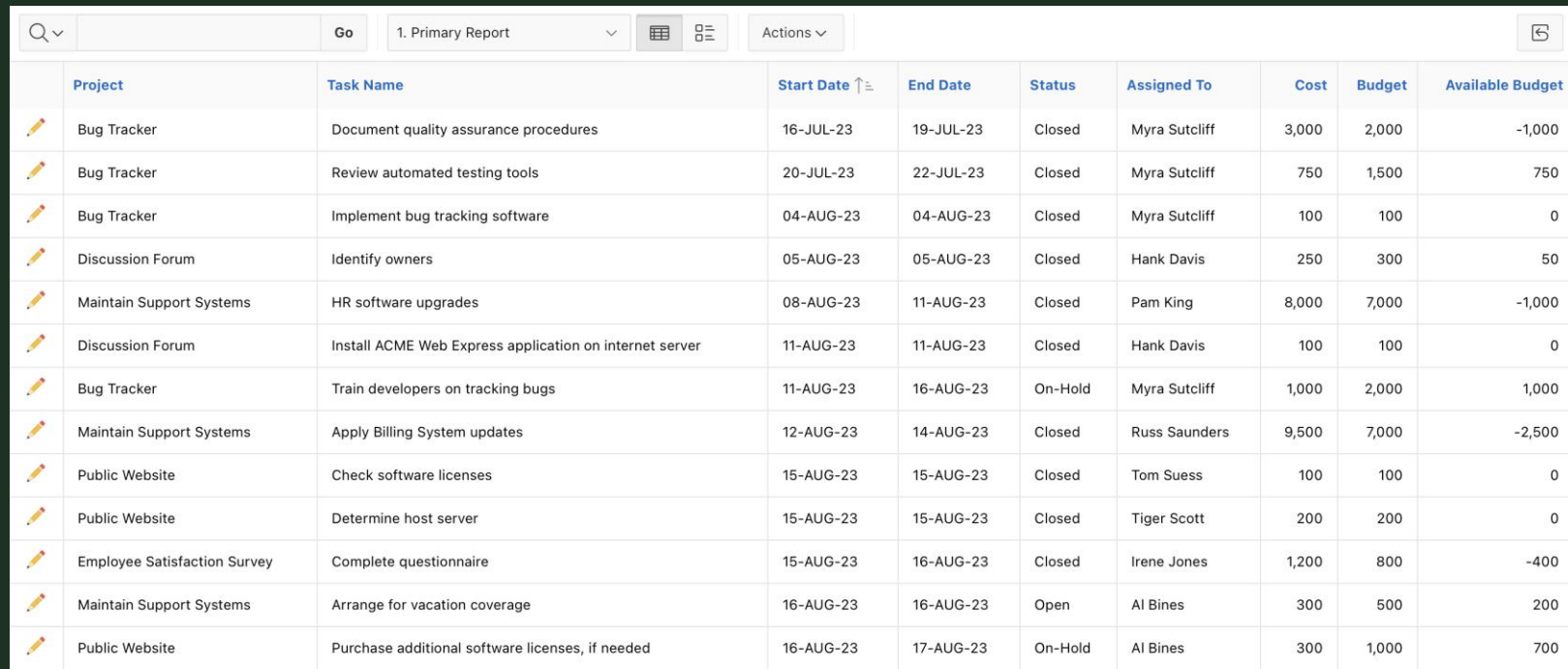
# Demo

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# Interactive Reports

## Empower your users to easily customize the data

- Display data in a **searchable, customizable** report.
- Enable end users to create **highly customized reports**.
- Save customizations and report layout by saving a **private report** just for yourself, a **public report**, or as a **default report** that can be viewed by others.
- Download, email, or subscribe to report update subscriptions in CSV, HTML, Excel, or PDF format.



Project	Task Name	Start Date ↑	End Date	Status	Assigned To	Cost	Budget	Available Budget
Bug Tracker	Document quality assurance procedures	16-JUL-23	19-JUL-23	Closed	Myra Sutcliff	3,000	2,000	-1,000
Bug Tracker	Review automated testing tools	20-JUL-23	22-JUL-23	Closed	Myra Sutcliff	750	1,500	750
Bug Tracker	Implement bug tracking software	04-AUG-23	04-AUG-23	Closed	Myra Sutcliff	100	100	0
Discussion Forum	Identify owners	05-AUG-23	05-AUG-23	Closed	Hank Davis	250	300	50
Maintain Support Systems	HR software upgrades	08-AUG-23	11-AUG-23	Closed	Pam King	8,000	7,000	-1,000
Discussion Forum	Install ACME Web Express application on internet server	11-AUG-23	11-AUG-23	Closed	Hank Davis	100	100	0
Bug Tracker	Train developers on tracking bugs	11-AUG-23	16-AUG-23	On-Hold	Myra Sutcliff	1,000	2,000	1,000
Maintain Support Systems	Apply Billing System updates	12-AUG-23	14-AUG-23	Closed	Russ Saunders	9,500	7,000	-2,500
Public Website	Check software licenses	15-AUG-23	15-AUG-23	Closed	Tom Suess	100	100	0
Public Website	Determine host server	15-AUG-23	15-AUG-23	Closed	Tiger Scott	200	200	0
Employee Satisfaction Survey	Complete questionnaire	15-AUG-23	16-AUG-23	Closed	Irene Jones	1,200	800	-400
Maintain Support Systems	Arrange for vacation coverage	16-AUG-23	16-AUG-23	Open	Al Bines	300	500	200
Public Website	Purchase additional software licenses, if needed	16-AUG-23	17-AUG-23	On-Hold	Al Bines	300	1,000	700



# Interactive Grids

## Edit Data. Effortlessly.

- Display data in a searchable, customizable report that supports **inline editing at runtime** using the mouse or keyboard
- Full featured grid
- Flexible editing
- Master Detail. And Detail. And Detail.

		Search: All Text Columns	Go	Primary Report	Actions	Edit	Save	Add Row	Reset	
<input type="checkbox"/>	≡	Project	Task n	Start date ↑	End date	Status	Assigned to	Cost	Budget	Available Budget
<input checked="" type="checkbox"/>	≡	Bug Tracker	Do...	16-JUL-23	19-JUL-23	Closed	Myra Sutcliff	\$3,000.00	\$2,000.00	-\$1,000.00
<input type="checkbox"/>	≡	Bug Tracker	Re...	20-JUL-23	22-JUL-23	Closed	Myra Sutcliff	\$750.00	\$1,500.00	\$750.00
<input type="checkbox"/>	≡	Bug Tracker	Im...	04-AUG-23	04-AUG-23	Closed	Myra Sutcliff	\$100.00	\$100.00	\$0.00
<input type="checkbox"/>	≡	Discussion Forum	Ide...	05-AUG-23	05-AUG-23	Closed	Hank Davis	\$250.00	\$300.00	\$50.00
<input type="checkbox"/>	≡	Maintain Support Systems	HR ...	08-AUG-23	11-AUG-23	Closed	Pam King	\$8,000.00	\$7,000.00	-\$1,000.00
<input type="checkbox"/>	≡	Bug Tracker	Tra...	11-AUG-23	16-AUG-23	On-Hold	Myra Sutcliff	\$1,000.00	\$2,000.00	\$1,000.00
<input type="checkbox"/>	≡	Discussion Forum	Ins...	11-AUG-23	11-AUG-23	Closed	Hank Davis	\$100.00	\$100.00	\$0.00
<input type="checkbox"/>	≡	Maintain Support Systems	Ap...	12-AUG-23	14-AUG-23	Closed	Russ Saunders	\$9,500.00	\$7,000.00	-\$2,500.00
<input type="checkbox"/>	≡	Employee Satisfaction Survey	Co...	15-AUG-23	16-AUG-23	Closed	Irene Jones	\$1,200.00	\$800.00	-\$400.00
<input type="checkbox"/>	≡	Public Website	Ch...	15-AUG-23	15-AUG-23	Closed	Tom Suess	\$100.00	\$100.00	\$0.00
<input type="checkbox"/>	≡	Public Website	Det...	15-AUG-23	15-AUG-23	Closed	Tiger Scott	\$200.00	\$200.00	\$0.00
<input type="checkbox"/>	≡	Public Website	Pur...	16-AUG-23	17-AUG-23	On-Hold	Al Bines	\$300.00	\$1,000.00	\$700.00
<input type="checkbox"/>	≡	Maintain Support Systems	Arr...	16-AUG-23	16-AUG-23	Open	Al Bines	\$300.00	\$500.00	\$200.00
<input type="checkbox"/>	≡	Employee Satisfaction Survey	Re...	17-AUG-23	17-AUG-23	On-Hold	Irene Jones	\$200.00	\$400.00	\$200.00



# Demo

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# Faceted Search

## Empower your users to see data in new ways

- Display and filter data using an intuitive experience users recognize from e-commerce sites
- Show search results as **cards** or a **classic report**.
- Includes built-in search capability.
- Optionally include a **chart** for any facet.

Search...

Total Row Count 73 Reset

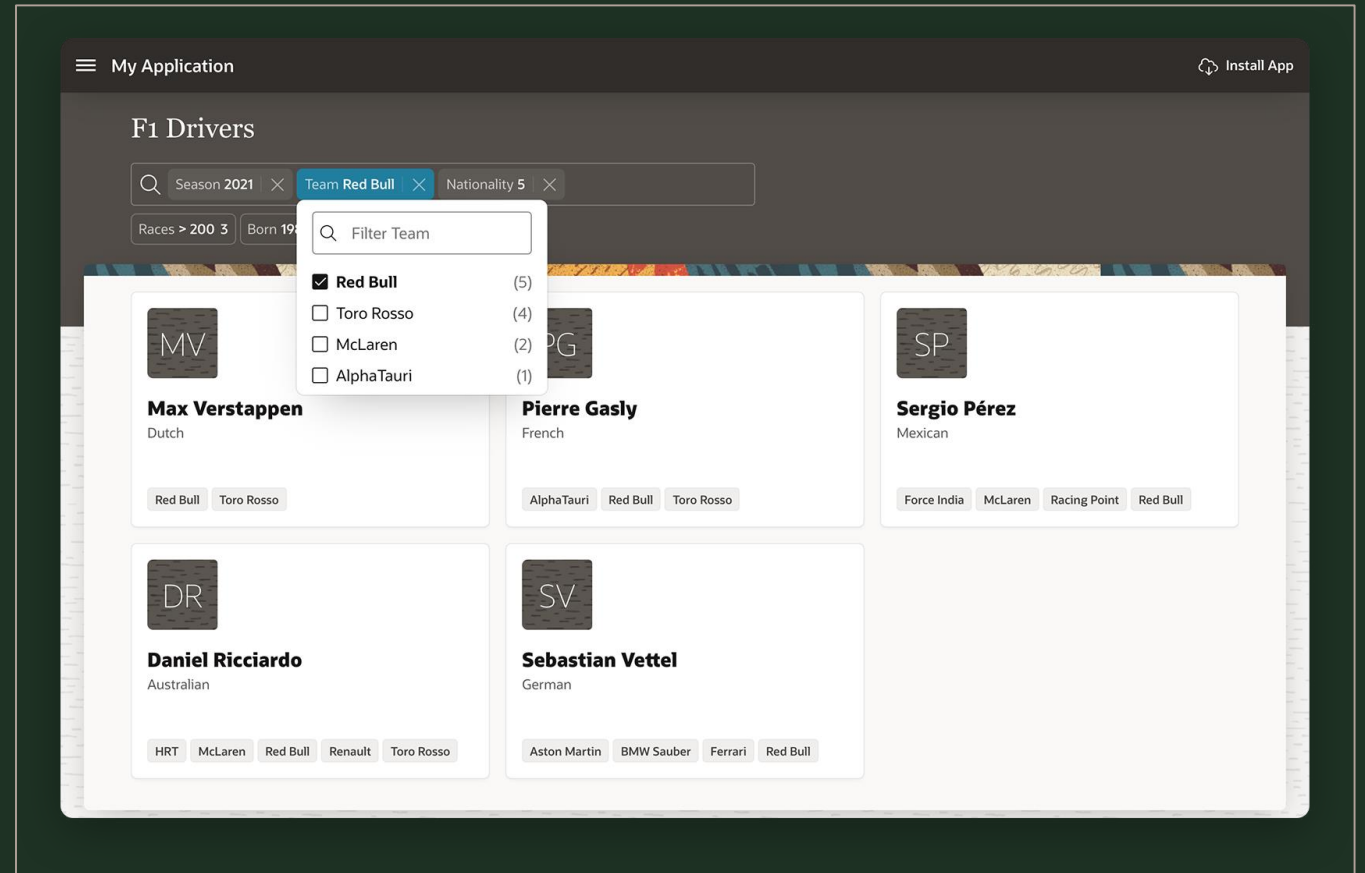
Project ↑	Task Name	Start Date	End Date	Status	Assigned To	Cost	Budget
<input type="checkbox"/> Migrate from Legacy Server (10)	Identify server requirements	30-AUG-23	31-AUG-23	Closed	John Watson	\$200.00	\$500.00
<input type="checkbox"/> Client Server Conversion (9)	Determine Web listener configuration(s)	01-SEP-23	01-SEP-23	Closed	James Cassidy	\$600.00	\$500.00
<input type="checkbox"/> ACME Web Express Configuration (7)	Run installation	04-SEP-23	04-SEP-23	Closed	James Cassidy	\$200.00	\$200.00
<input type="checkbox"/> Migrate Desktop Application (7)	Create pilot workspace	06-SEP-23	06-SEP-23	Closed	John Watson	\$100.00	\$100.00
<input type="checkbox"/> Bug Tracker (5)	Specify security authentication scheme(s)	11-SEP-23	11-SEP-23	Open	John Watson	\$200.00	\$300.00
<a href="#">Show All</a>	Configure Workspace provisioning	12-SEP-23	12-SEP-23	Open	John Watson	\$200.00	\$100.00
<input type="checkbox"/> Bob Nile (14)	Select servers for Development, Test, Production	15-SEP-23	17-SEP-23	Open	James Cassidy	\$200.00	\$600.00
<input type="checkbox"/> John Watson (14)	Document quality assurance procedures	16-JUL-23	19-JUL-23	Closed	Myra Sutcliff	\$3,000.00	\$2,000.00
<input type="checkbox"/> Pam King (12)	Review automated testing tools	20-JUL-23	22-JUL-23	Closed	Myra Sutcliff	\$750.00	\$1,500.00
<input type="checkbox"/> Myra Sutcliff (6)	Implement bug tracking software	04-AUG-23	04-AUG-23	Closed	Myra Sutcliff	\$100.00	\$100.00
<input type="checkbox"/> James Cassidy (5)							
<a href="#">Show All</a>							



# Smart Filters

## Powerful way to filter and display data

- Display data using a single search field region at the top of the page and results report.
- Offers a **more compact UI** when compared to faceted search.
- Search results report can display as a classic report, cards, map, or calendar.
- End users select filters that display as **suggestion chips**.
- Includes built-in search capability.
- **Configurable search suggestions**



# Demo

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# Cards

## Display data in bite-sized blocks

- Display data at a glance using information tiles that can easily include an image.
- Choose between three card page layouts: **Grid**, **Float**, or **Horizontal** (Row).
- Provides summary information from a modern layout with one-click access to more details on another report or form
- **Customize every aspect of a cards region's UI** (including layout, appearance, icon, badge, and media).
- Declaratively create links from a cards page by adding **Actions**.

<b>Migrate from Legacy Server</b> Cut over to new database <b>Pending</b> Assigned: Bob Nile Started: 17-OCT-23 Ended: 17-OCT-23 Budget: \$1,500.00 Cost:\$0.00	<b>Migrate from Legacy Server</b> Decommission Legacy Server <b>Pending</b> Assigned: Al Bines Started: 31-OCT-23 Ended: 31-OCT-23 Budget: \$500.00 Cost:\$0.00	<b>Public Website</b> Determine host server <b>Closed</b> Assigned: Tiger Scott Started: 15-AUG-23 Ended: 15-AUG-23 Budget: \$200.00 Cost:\$200.00	<b>Public Website</b> Check software licenses <b>Closed</b> Assigned: Tom Suess Started: 15-AUG-23 Ended: 15-AUG-23 Budget: \$100.00 Cost:\$100.00
<b>Public Website</b> Purchase additional software licenses, if needed <b>On-Hold</b> Assigned: Al Bines Started: 16-AUG-23 Ended: 17-AUG-23 Budget: \$1,000.00 Cost:\$300.00	<b>Public Website</b> Develop web pages <b>Open</b> Assigned: Tiger Scott Started: 11-SEP-23 Ended: 12-SEP-23 Budget: \$2,000.00 Cost:\$0.00	<b>Public Website</b> Plan rollout schedule <b>Open</b> Assigned: Tom Suess Started: 13-SEP-23 Ended: 13-SEP-23 Budget: \$100.00 Cost:\$0.00	<b>Software Project Tracking</b> Conduct project kickoff meeting <b>Closed</b> Assigned: Pam King Started: 07-SEP-23 Ended: 07-SEP-23 Budget: \$100.00 Cost:\$100.00

# Demo

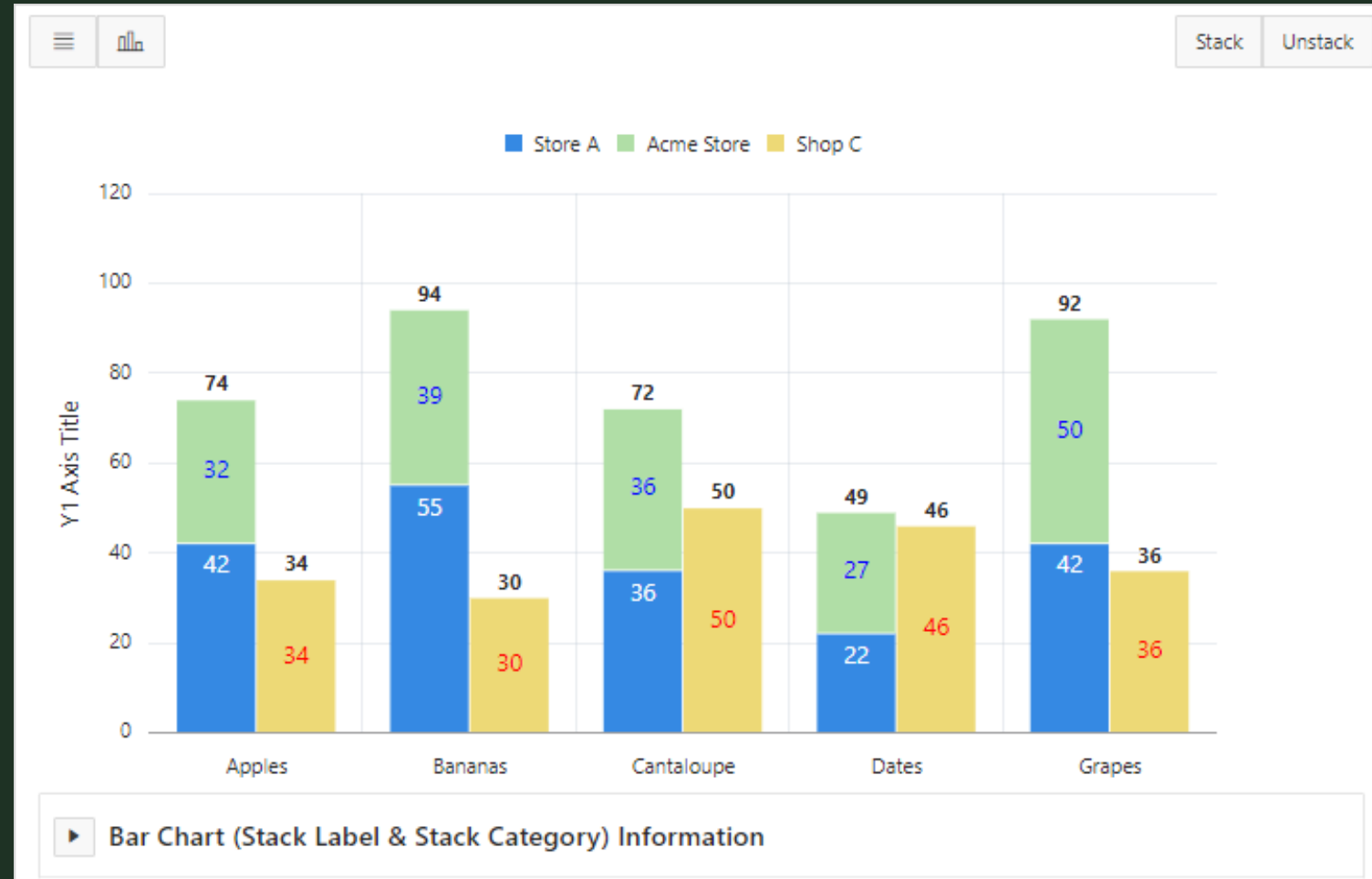
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# Charting

## Powerful data visualization capabilities

- Powered by Oracle JET
- Responsive
- Highly customizable
- Extensive range

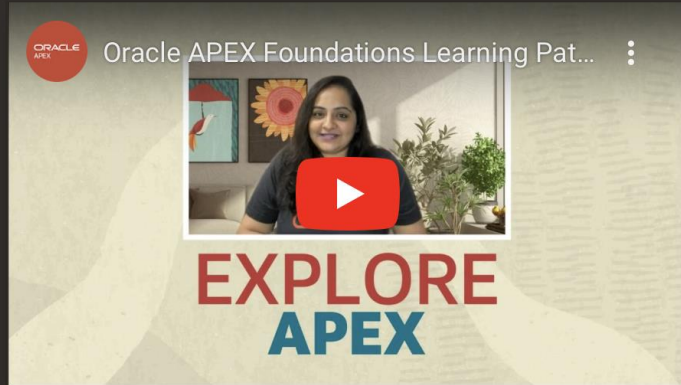


# Oracle APEX Training and Certification

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## Learn Oracle APEX Fundamentals



**Embark on your APEX journey by enrolling in the Oracle APEX Foundations course.**

This 3-hour learning path is ideal for beginners looking for a general overview of APEX. Explore the core functionality of APEX such as the App Builder and SQL Workshop, and build your first cloud application with APEX on OCI.

Upon completion, you will be familiar with the key capabilities and components of APEX.

**Enroll Now**

## Become an Oracle APEX Professional



**Dive deeper into APEX capabilities by enrolling in the Oracle APEX Developer Professional Course**

This 13-hour learning path is targeted for both beginners and seasoned developers that want a deeper understanding of APEX. Dive into detail for each APEX component and try out the step-by-step guided labs for a hands-on experience.


Upon completion, you will have a practical knowledge of APEX concepts and capabilities, and a solid footing on how to build APEX apps.

**Enroll Now**



# Learn the Fundamentals of Oracle APEX

## Oracle APEX Foundations Course

 Learn the fundamentals of low-code app dev with Oracle APEX

 **3.5 +** hour expert training delivered by the APEX Product Team

 **Enroll and learn for FREE Today on Oracle University!!**

**[apex.oracle.com/go/foundations](https://apex.oracle.com/go/foundations)**

**Available on LinkedIn Learning**

**<https://www.linkedin.com/learning/oracle-apex-foundations>**




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# Become an Oracle APEX Professional

## Oracle APEX Developer Professional Course

 **Soup-to-nuts** covering complete low-code app dev with Oracle APEX

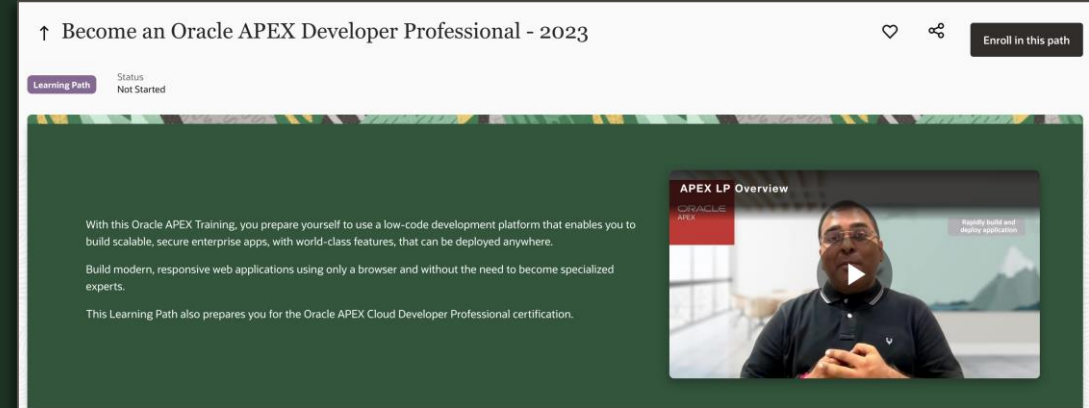
 **13** hours of expert training delivered by the APEX Product Team

 **Hands-on-Labs** to practice along with the training videos



**Enroll and learn for FREE Today on Oracle University!!**

[apex.oracle.com/go/professional](https://apex.oracle.com/go/professional)



# Get Oracle APEX Certified

[apex.oracle.com/go/professional](https://apex.oracle.com/go/professional)

## Become an Oracle APEX Cloud Developer Certified Professional:

1. Complete Oracle APEX Developer Professional course
2. Perform Oracle APEX Developer Professional Hands-on-Labs
3. Prepare for Oracle APEX Cloud Developer Professional Exam
4. Register and pass the Oracle APEX Cloud Developer Professional online certification exam

[apex.oracle.com/go/professional](https://apex.oracle.com/go/professional)



# Thank you

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ORACLE

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

