

The Oracle logo is displayed in a red, sans-serif font. The background of the slide features a colorful, abstract pattern with organic shapes and lines in shades of blue, orange, and brown.

# Beginner's Guide to Oracle APEX

---

## Name

Marc Sewtz

Director of Software Development

Oracle Application Express

March 2, 2021



## Marc Sewtz

---

Director of Software Development  
Oracle Application Express

Twitter: @msewtz

LinkedIn: <http://www.linkedin.com/in/msewtz>

## Safe harbor statement

---

The following is intended to outline our general product direction. It is intended for information purposes only, and may not be incorporated into any contract. It is not a commitment to deliver any material, code, or functionality, and should not be relied upon in making purchasing decisions. The development, release, timing, and pricing of any features or functionality described for Oracle's products may change and remains at the sole discretion of Oracle Corporation.

# What is Oracle APEX?

---

**ā'pěks**  
(#orclapex)

The Oracle Application Express logo is contained within a large red circle. The word "ORACLE" is written in a bold, white, sans-serif font, and "Application Express" is written in a smaller, white, sans-serif font below it.

**ORACLE**  
Application Express

A **low-code** development platform that enables you to build scalable and secure enterprise apps with world-class features that can be deployed anywhere.



# The Benefits of Low Code Frameworks

- Low barrier of entry
- Rich functionality
- High productivity (Less coding)
- Concentrate on business requirements
- Release apps faster with lower cost



# What is Oracle APEX?

- All-inclusive, Low Code Application Development Platform
- Used to build apps that manage and visualize data
- Leverages SQL skills and Oracle Database capabilities
- Easy to learn, develop and deploy

The screenshot displays the Oracle APEX dashboard. At the top, there is a navigation bar with the APEX logo and menu items for App Builder, SQL Workshop, Team Development, and App Gallery. Below the navigation bar, there are four main application tiles: App Builder, SQL Workshop, Team Development, and App Gallery. The main content area is divided into three sections: Top Apps, Top Users, and Messages. The Top Users section shows a user named 'marc' with a profile picture and a score of 1. The Messages section shows a system message about the APEX 20.2 Release Development. On the right side, there is a sidebar with an 'About' section, a 'Dashboard' section with statistics (23 Applications, 122 Tables, 0 Productivity Apps, 0 Issues), and a 'Resources' section with links to the Community Site, apex.world, Blog, Hands-On Labs, and Education.

# Oracle APEX Application Development

Low code framework enables a wider range of “developers” to unleash their creativity



Citizen Developer



LOB Developer



Pro Developer



Data Scientists

- Bespoke App Dev
  - SaaS Extensions
  - Spreadsheet Replacement
  - Legacy Modernization
  - Backoffice Apps
  - Opportunistic AppDev
- LoB App Dev
  - Process Automation
  - SaaS Systems Development
  - External Data Sharing
  - Analytic Apps
  - Personal Productivity Apps
- Digitization
  - Mission Critical App Dev
  - Mobile App Dev
  - SaaS Systems Development
  - Dashboarding
  - Data Visualization

Create better solutions by leveraging a diverse combination of full time and part time developers

# apex.oracle.com/lowcode

The screenshot shows a web browser window with the URL `apex.oracle.com/en/platform/low-code/`. The page features a dark blue header with the APEX logo and navigation links for "Get Started for Free" and "Sign In". The main content area has a dark blue background with the heading "Low Code" and a paragraph: "Oracle APEX empowers developers to build incredible apps and solve real problems. And you won't need to become an expert in a vast array of web technologies. Focus on the problem to be solved, and let Oracle APEX do the heavy lifting for you." Below this is a section titled "Eliminate 98% of Hand Coding with Oracle APEX" with a "Learn More" button. A list of benefits follows: Developer Experience, Accelerate Development, Improve Consistency, Minimize Defects, Reduce Costs, Lower Maintenance, and Simplify Deployment. The footer includes the heading "Developer Experience".

Low Code - Oracle APEX

apex.oracle.com/en/platform/low-code/

APEX

Get Started for Free Sign In

## Low Code

Oracle APEX empowers developers to build incredible apps and solve real problems. And you won't need to become an expert in a vast array of web technologies. Focus on the problem to be solved, and let Oracle APEX do the heavy lifting for you.

Eliminate 98% of Hand Coding with Oracle APEX [Learn More](#)

- ▶ Developer Experience
- ▶ Accelerate Development
- ▶ Improve Consistency
- ▶ Minimize Defects
- ▶ Reduce Costs
- ▶ Lower Maintenance
- ▶ Simplify Deployment

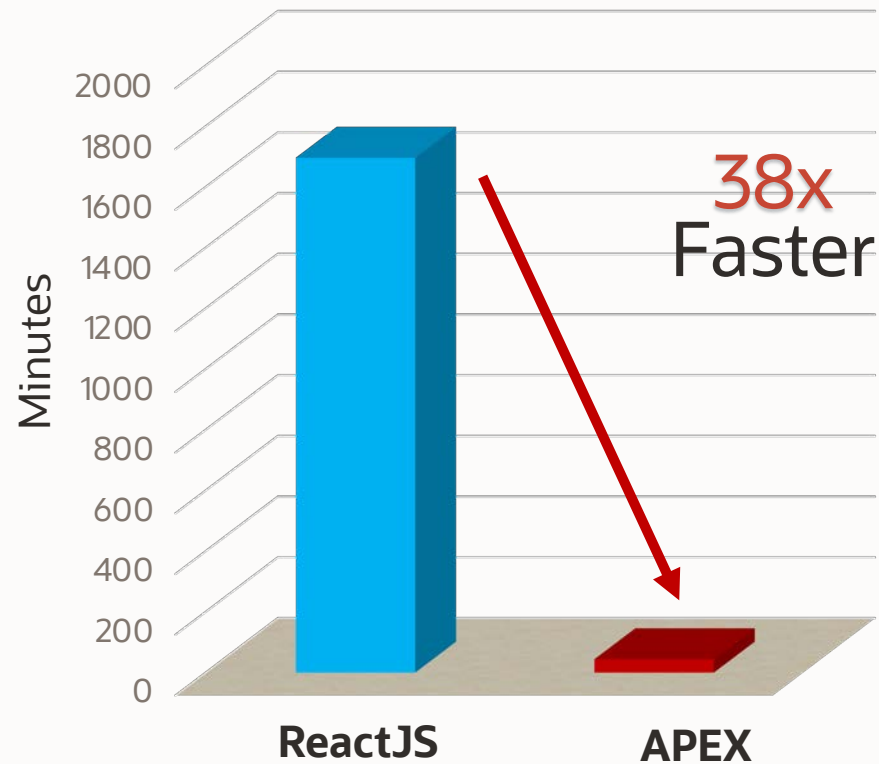
## Developer Experience



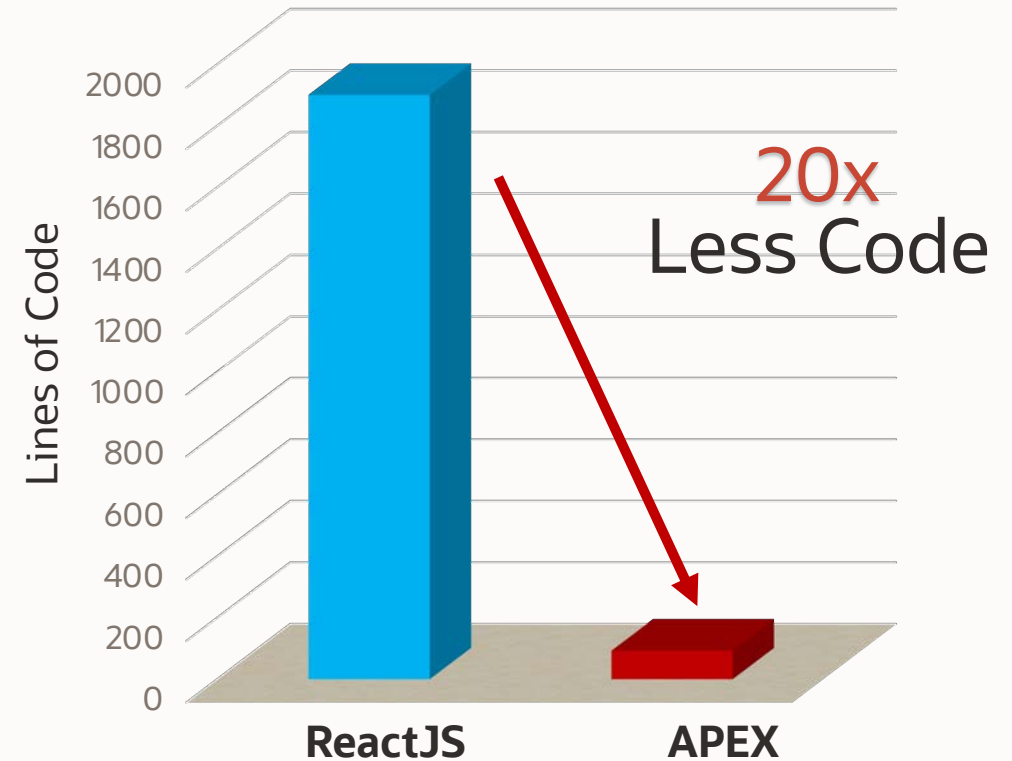
# Radically Faster and Simpler App Development

## Time and Motion Study : ReactJS vs. Low-Code APEX

### Development Time



### Lines of Code



Most systems don't need to be hand coded, hand coding should be the exception not the rule



# Time and Motion Study by Pique Solutions: Developing applications using APEX versus traditional development approaches

<https://www.oracle.com/application-development/apex/solutions/low-code-development-platform/>

Figure 7. Separate and Combined Summary Comparison of Time and Motion

<i>interactive grid</i>	APEX		JavaScript Framework (ReactJS)		APEX vs. JavaScript Framework			
	Time (min)	Lines of Code	Time (min)	Lines of Code	% faster	% less code	x faster	x less code
Setup/Preparation	21	0	246	365	91%	100%	11.71	
Module Development	14	0	1,373	1,592	99%	100%	98.07	
Additional/Solution Development	10	93	10	7	0%	-1229%	1.00	0.08
Totals	45	93	1,629	1,964	97%	95%	36.20	21.12
Totals (time in hours)	0.75		27.15					

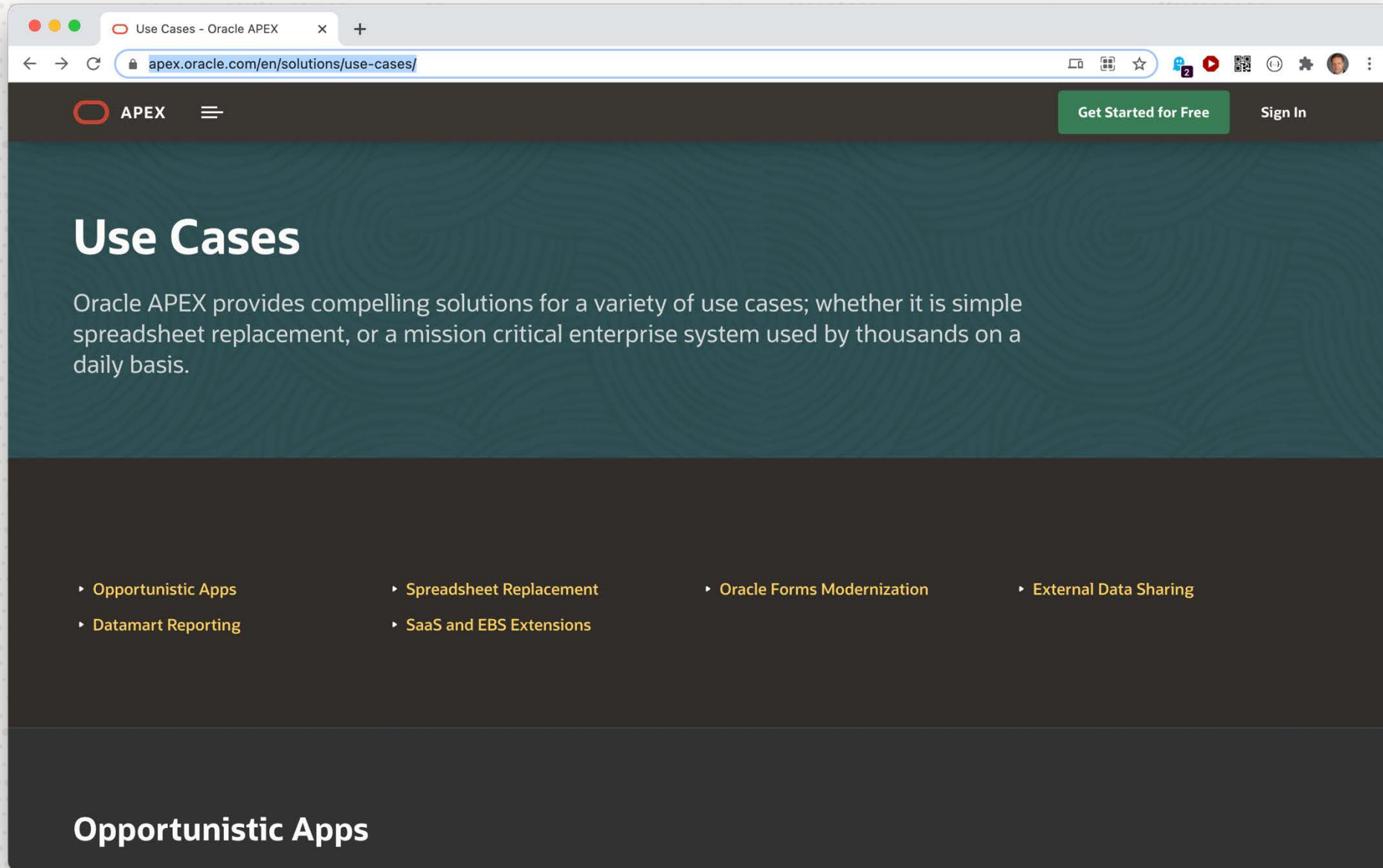
<i>faceted search</i>	APEX		JavaScript Framework (ReactJS)		APEX vs. JavaScript Framework			
	Time (min)	Lines of Code	Time (min)	Lines of Code	% faster	% less code	x faster	x less code
Setup/Preparation	21	0	246	365	91%	100%	11.71	
Module Development	12	0	1,518	1,378	99%	100%	126.50	
Additional/Solution Development	10	93	10	7	0%	-1229%	1.00	0.08
Totals	43	93	1,764	1,743	98%	95%	41.02	18.74
Totals (time in hours)	0.72		29.40					

<i>combined development*</i>	APEX		JavaScript Framework (ReactJS)		APEX vs. JavaScript Framework			
	Time (min)	Lines of Code	Time (min)	Lines of Code	% faster	% less code	x faster	x less code
Setup/Preparation	21	0	246	365	91%	100%	11.71	
Module Development - FS	12	0	1,518	1,378	99%	100%	126.50	
Module Development - IG	14	0	1,373	1,592	99%	100%	98.07	
Additional/Solution Development	10	93	10	7	0%	-1229%	1.00	0.08
Totals	57	93	3,147	3,342	98%	97%	55.21	35.94
Totals (time in hours)	0.95		52.45					

\*If both modules would have been built in a single cycle.



# apex.oracle.com/en/solutions/use-cases/



The screenshot shows a web browser window with the URL [apex.oracle.com/en/solutions/use-cases/](https://apex.oracle.com/en/solutions/use-cases/). The page features a dark blue header with the APEX logo and navigation links for "Get Started for Free" and "Sign In". The main content area has a dark teal background with the heading "Use Cases" and a paragraph describing Oracle APEX's capabilities. Below this, a dark grey section lists six use cases in a grid format. At the bottom, a dark grey section is titled "Opportunistic Apps".

**Use Cases**

Oracle APEX provides compelling solutions for a variety of use cases; whether it is simple spreadsheet replacement, or a mission critical enterprise system used by thousands on a daily basis.

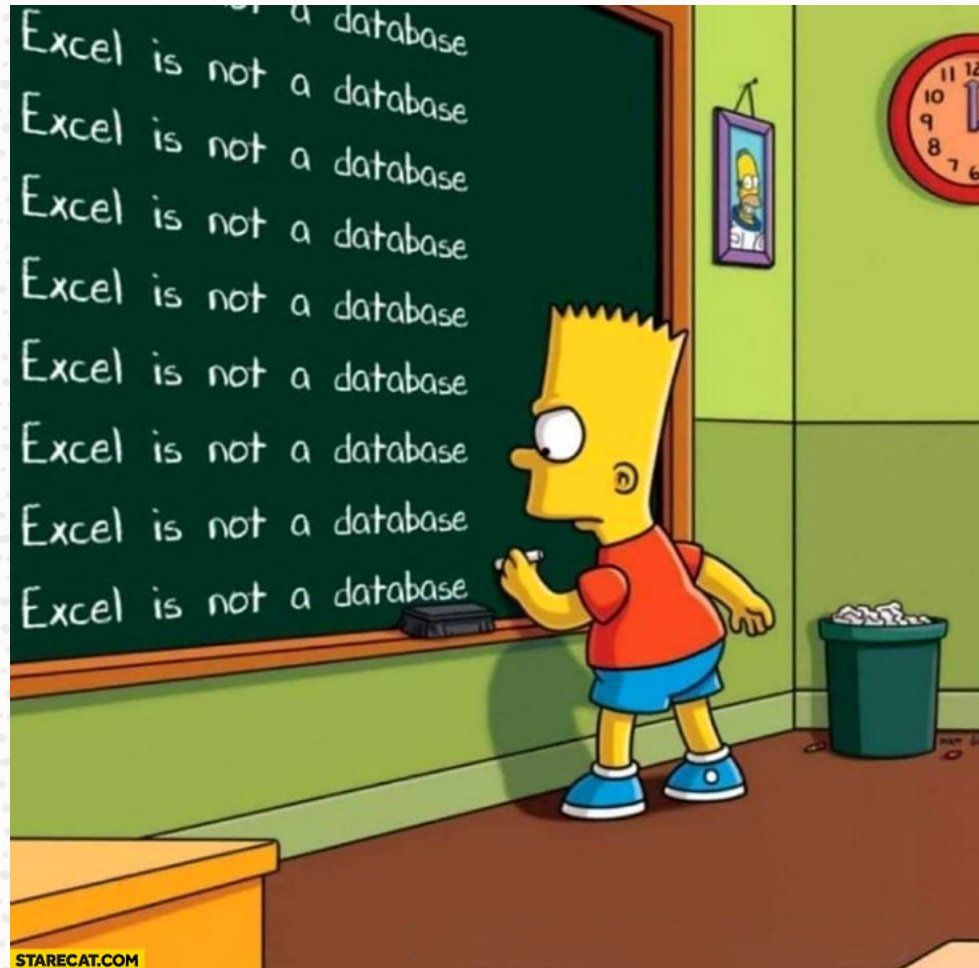
- ▶ Opportunistic Apps
- ▶ Spreadsheet Replacement
- ▶ Oracle Forms Modernization
- ▶ External Data Sharing
- ▶ Datamart Reporting
- ▶ SaaS and EBS Extensions

**Opportunistic Apps**





# Demo: Spreadsheet Replacement



# apex.oracle.com/en/solutions/success-stories/

Success Stories - Oracle APEX x +


apex.oracle.com/en/solutions/success-stories/

APEX


Get Started for Free Sign In

## Success Stories

Oracle APEX has been used to successfully provide solutions for real business problems across industries and geographies. Here are just a few stories on how a diverse group of customers have used APEX to solve a myriad of business problems.

 *“Oracle has been named a November 2019 Gartner Peer Insights Customer's Choice for Enterprise Low-Code Application Platforms for **Oracle APEX!**”*

[Read More >](#)

 **SIEMENS**

### Siemens Mobility Tames Project Complexity with Oracle Cloud

For a vital project to digitize European railroad operations, Siemens Mobility is automating its processes with Oracle Autonomous Database and Oracle APEX.

European rail operators are modernizing thousands of kilometers of rail traffic with a new train signal control



# Gartner Peer Insights Customer's Choice

<https://www.gartner.com/reviews/market/enterprise-low-code-application-platform/vendor/oracle/product/application-express-apex>

**Gartner peerinsights™** Enter a vendor, product, or market name

**ORACLE** **Application Express (APEX) Reviews**  
by Oracle in Enterprise Low-Code Application Platforms  
4.9 ★★★★★ 80 Reviews

COMPARE WRITE A REVIEW DOWNLOAD PDF

Overview Reviews Ratings Alternatives

### Application Express (APEX) Ratings Overview

Reviewed in Last 12 Months EMAIL PAGE

4.9 ★★★★★ 80 Reviews (Last 12 Months)

96% Would Recommend

#### Rating Distribution

Rating	Percentage
5 Star	88%
4 Star	11%
3 Star	0%
2 Star	1%
1 Star	0%

Distribution based on 80 ratings ⓘ

#### Customer Experience

Evaluation & Contracting	4.7
Integration & Deployment	4.8
Service & Support	4.8

#### Product Capabilities

Product Capabilities	4.9
----------------------	-----

All User Ratings





# Oracle APEX Adoption

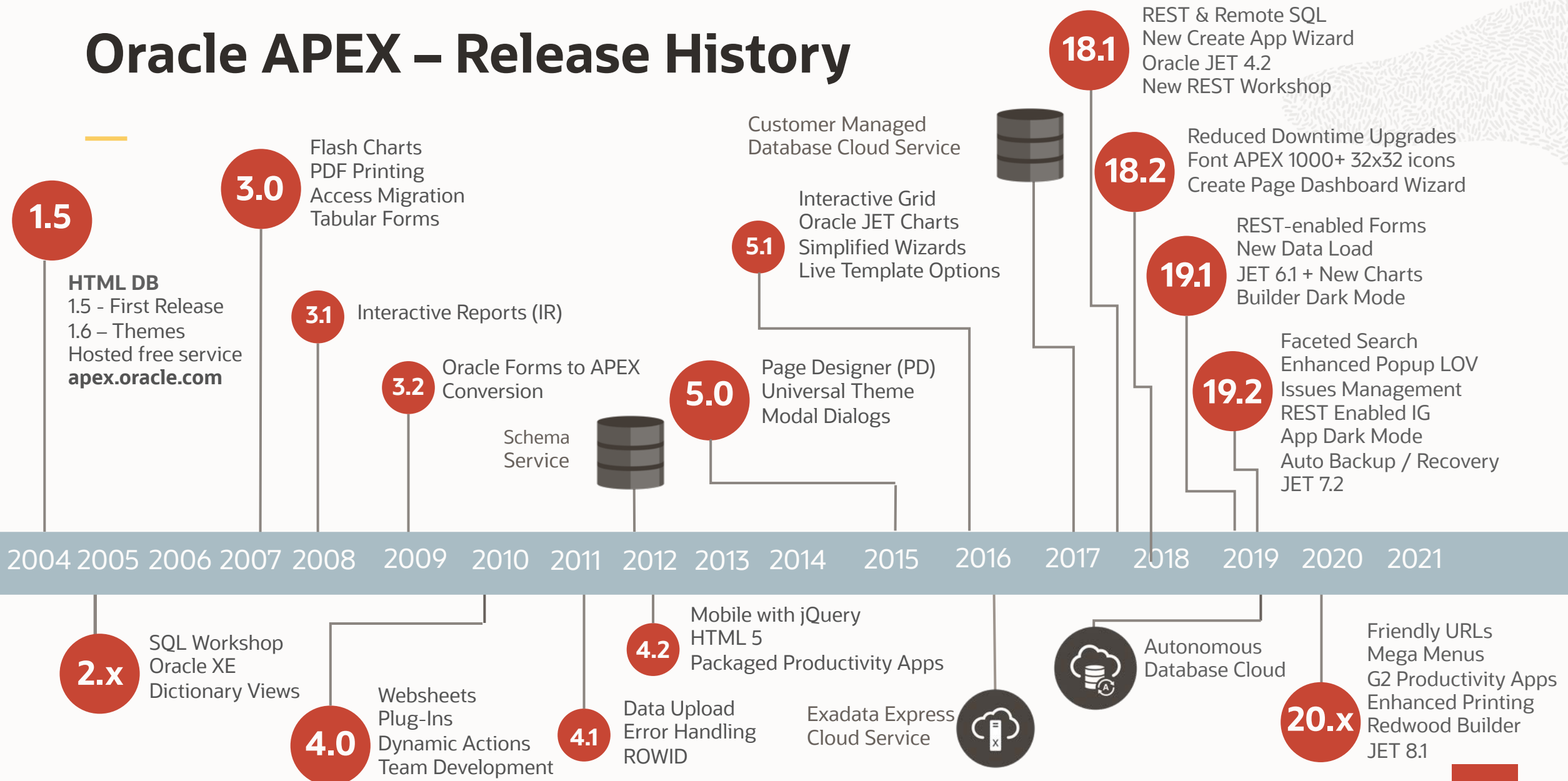
Distributed and Supported With Oracle Database On-Prem and In-Cloud since 2004

- 500,000 developers
- Millions of Apps created
- 6,000+ new apps every day
- 50,000 customers
- 150 partners

**TENS OF MILLIONS OF  
USERS WORLDWIDE**

All APEX apps built since initial release are upward compatible

# Oracle APEX – Release History



# Getting Started



# apex.oracle.com

The image shows a browser window displaying the Oracle APEX website. The browser's address bar shows the URL `apex.oracle.com/en/`. The website's header features the APEX logo, a navigation menu, and a "Sign In" button. The main content area has a dark background with the headline "Build enterprise apps 20x faster with 100x less code." and a prominent green "Get Started for Free" button.

Below the main content is a screenshot of the APEX dashboard. The dashboard header includes the APEX logo and navigation links for "App Builder", "SQL Workshop", "Team Development", and "App Gallery". The main dashboard area contains several tiles: "App Builder" (with a blue icon), "SQL Workshop" (with a green icon), "Team Development" (with a yellow icon), and "App Gallery" (with a red icon). Below these are "Top Apps", "Top Users", and "Messages" sections. A right-hand sidebar contains an "About" section with the text "Oracle APEX is the native application development framework of the Oracle Database." and a "Learn More ..." link, and a "Dashboard" section.

At the bottom of the dashboard screenshot, there is a dark banner with the text "The new Oracle APEX service is here!" and a "Learn More" button.



# Oracle APEX – Availability

[apex.oracle.com/en/learn/getting-started/](https://apex.oracle.com/en/learn/getting-started/)

## Oracle Cloud

Autonomous Database Serverless  
(ATP, ADW)\*

Autonomous Database Dedicated  
APEX Application Development Service  
Database Cloud Service (DBCS)

[apex.oracle.com](https://apex.oracle.com)  
(free schema service)

## On Premises

Oracle Database XE  
(free database)

Oracle Enterprise Edition  
(and all other editions)  
Oracle Exadata

## Third Party Cloud

Amazon RDS  
For Oracle Database

Any third-party Cloud / Hosting  
provider that supports Oracle  
DB

\* Available on Always Free Configuration



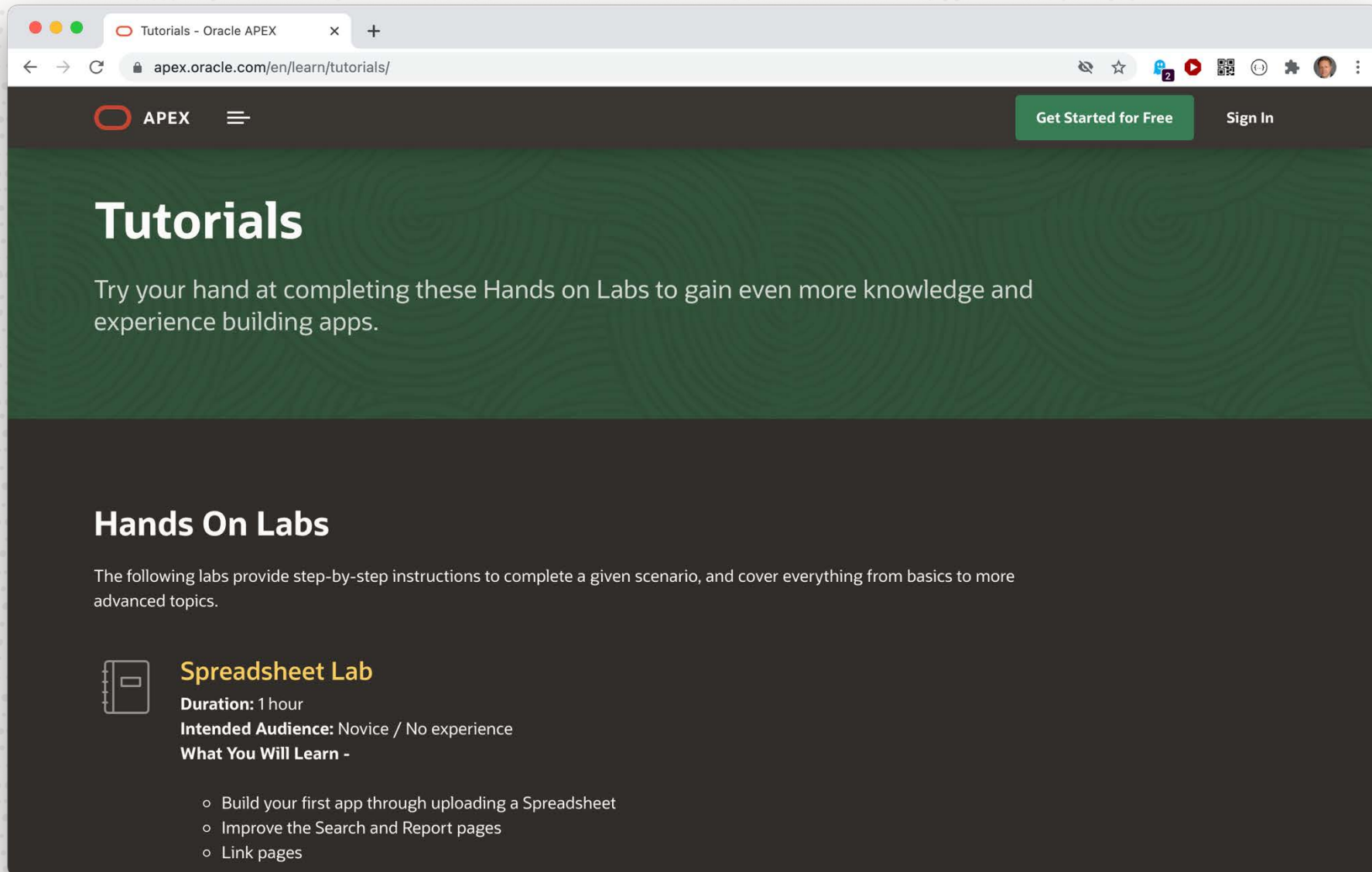
# Demo





# Learn More

# apex.oracle.com/en/learn/tutorials/



The screenshot shows a web browser window with the URL `apex.oracle.com/en/learn/tutorials/`. The page features a dark green header with the APEX logo and navigation links for "Get Started for Free" and "Sign In". The main content area has a dark green background with the word "Tutorials" in large white text. Below this, a paragraph encourages users to try hands-on labs. A section titled "Hands On Labs" provides a brief description of the labs. A specific lab, "Spreadsheet Lab", is highlighted with an icon of a spreadsheet, its duration (1 hour), intended audience (Novice / No experience), and a list of learning objectives.

Tutorials - Oracle APEX

apex.oracle.com/en/learn/tutorials/

APEX


Get Started for Free Sign In

## Tutorials

Try your hand at completing these Hands on Labs to gain even more knowledge and experience building apps.

### Hands On Labs

The following labs provide step-by-step instructions to complete a given scenario, and cover everything from basics to more advanced topics.

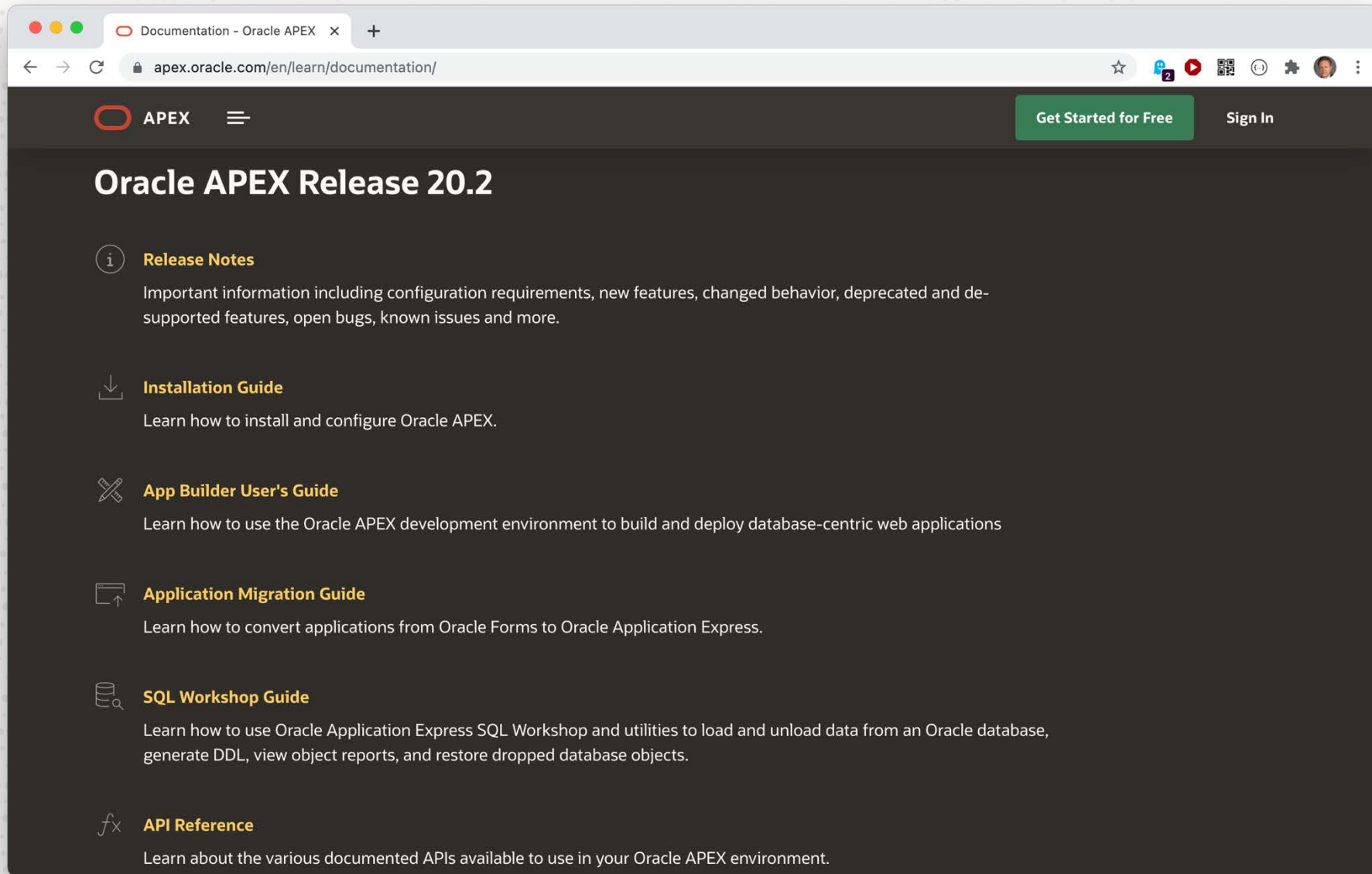
 **Spreadsheet Lab**

**Duration:** 1 hour  
**Intended Audience:** Novice / No experience  
**What You Will Learn -**

- o Build your first app through uploading a Spreadsheet
- o Improve the Search and Report pages
- o Link pages



# apex.oracle.com/en/learn/documentation/

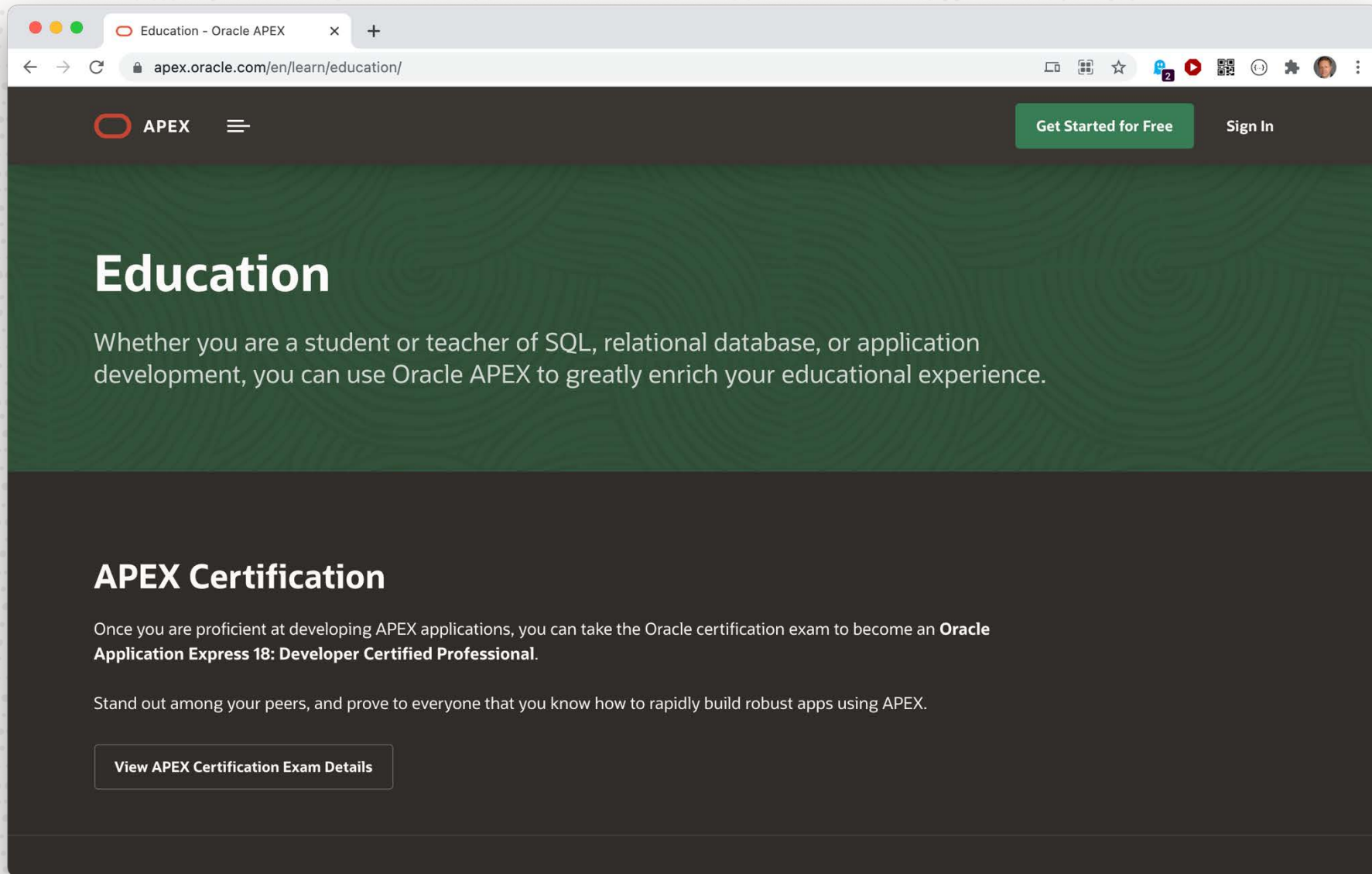


The screenshot shows a web browser window with the URL `apex.oracle.com/en/learn/documentation/`. The page header includes the APEX logo, a navigation menu icon, a "Get Started for Free" button, and a "Sign In" button. The main content area features the heading "Oracle APEX Release 20.2" and a list of links with icons and descriptions:

- Release Notes** (info icon): Important information including configuration requirements, new features, changed behavior, deprecated and de-supported features, open bugs, known issues and more.
- Installation Guide** (download icon): Learn how to install and configure Oracle APEX.
- App Builder User's Guide** (wrench icon): Learn how to use the Oracle APEX development environment to build and deploy database-centric web applications
- Application Migration Guide** (migration icon): Learn how to convert applications from Oracle Forms to Oracle Application Express.
- SQL Workshop Guide** (database icon): Learn how to use Oracle Application Express SQL Workshop and utilities to load and unload data from an Oracle database, generate DDL, view object reports, and restore dropped database objects.
- API Reference** (fx icon): Learn about the various documented APIs available to use in your Oracle APEX environment.



# apex.oracle.com/en/learn/education/

A screenshot of a web browser displaying the Oracle APEX Education page. The browser's address bar shows the URL 'apex.oracle.com/en/learn/education/'. The page features a dark green header with the APEX logo and a navigation menu. Below the header, the main content area has a dark green background with the word 'Education' in large white text. A paragraph follows, stating that Oracle APEX can enrich educational experiences for students and teachers. Below this, the 'APEX Certification' section is highlighted in white text on a dark background, with a paragraph explaining the certification exam and a button to view details.

Education

Whether you are a student or teacher of SQL, relational database, or application development, you can use Oracle APEX to greatly enrich your educational experience.

## APEX Certification

Once you are proficient at developing APEX applications, you can take the Oracle certification exam to become an **Oracle Application Express 18: Developer Certified Professional**.

Stand out among your peers, and prove to everyone that you know how to rapidly build robust apps using APEX.

[View APEX Certification Exam Details](#)





# apex.oracle.com/en/community/community-resources/

The screenshot shows a web browser window with the URL `apex.oracle.com/en/community/community-resources/`. The page features a dark green header with the APEX logo and navigation links for "Get Started for Free" and "Sign In". The main content area has a dark green background with the title "Community Resources" and a sub-header stating that these resources are excellent for both novice and experienced Oracle APEX developers. Below this, there is a section titled "Oracle Sites" which lists three resources: Oracle Application Express Community Central, Oracle APEX Shortcuts, and Oracle APEX Discussion Forum, each with a brief description.

Community Resources - Oracle X +




apex.oracle.com/en/community/community-resources/

APEX ☰ [Get Started for Free](#) [Sign In](#)

## Community Resources

These Oracle and community-driven resources are excellent assets for both novice and experienced Oracle APEX developers.

### Oracle Sites

-  **Oracle Application Express Community Central**  
Includes consulting companies, hosting companies, applications, books, success stories, and quotes.
-  **Oracle APEX Shortcuts**  
Contains numerous shortcuts to regularly visited Oracle APEX sites.
-  **Oracle APEX Discussion Forum**  
Join one of the most vibrant and growing communities Oracle has to offer if you have a question, and search for answers.



# apex.oracle.com/en/community/community-resources/

The screenshot shows a web browser window with the URL `apex.oracle.com/en/community/community-resources/`. The page header includes the APEX logo, a menu icon, and buttons for "Get Started for Free" and "Sign In". The main content area is titled "Community Sites" and contains the following text:

These community-based sites, built by the community for the community, continue to grow and help support the Oracle APEX community as a whole.

**Note:** Oracle does not host or maintain these sites. Any comments or concerns should be reported directly to the site owners.

**Note:** 3rd Party Plug-ins are not part of Oracle APEX software and are therefore not supported by Oracle Support in any way. Oracle has done no review or vetting of any of the plug-ins available from these third party sites. Any issues with the plug-ins can be discussed on the [APEX World Plug-In Slack Channel](#) or on the [Oracle APEX Discussion Forum](#).

The page lists four community sites:

- apex.world**: Includes access to the APEX Slack channel, and discussion forum, latest news, recent tweets, and much more.
- Built with APEX**: Showcases some of the public-facing applications built with Oracle APEX.
- Translate APEX**: Contains translation for the Oracle APEX development environment and built-in runtime messages used on buttons, error messages, and the like.
- APEX Theme Styles**: A site for APEX developers to share custom themes they have built with the community.

# APEX Office Hours

---

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

- **Feb-18** Real-world Low Code: Four partners show how they deliver solutions using Oracle APEX!  
<https://asktom.oracle.com/pls/apex/asktom.search?oh=11485>
- **Nov-19** Super Easy Report Printing in Oracle APEX 20.2!  
<https://asktom.oracle.com/pls/apex/asktom.search?oh=10265>
- **Oct-22** What's new in APEX 20.2  
<https://asktom.oracle.com/pls/apex/asktom.search?oh=9824>



# Oracle APEX Jobs

<https://www.oracle.com/corporate/careers/>

Software Developer (JavaScript)  
2100076T

The screenshot shows a web browser window displaying the Oracle APEX job description page. The browser's address bar shows the URL: `oracle.taleo.net/careersection/2/jobdetail.ftl?job=2100076T&tz=GMT-0...`. The page header includes the Oracle logo, navigation links for "Job Search", "My Job Page", "My Account", "My Job Cart", and "Sign In", along with language options for "English", "Français", and "日本語".

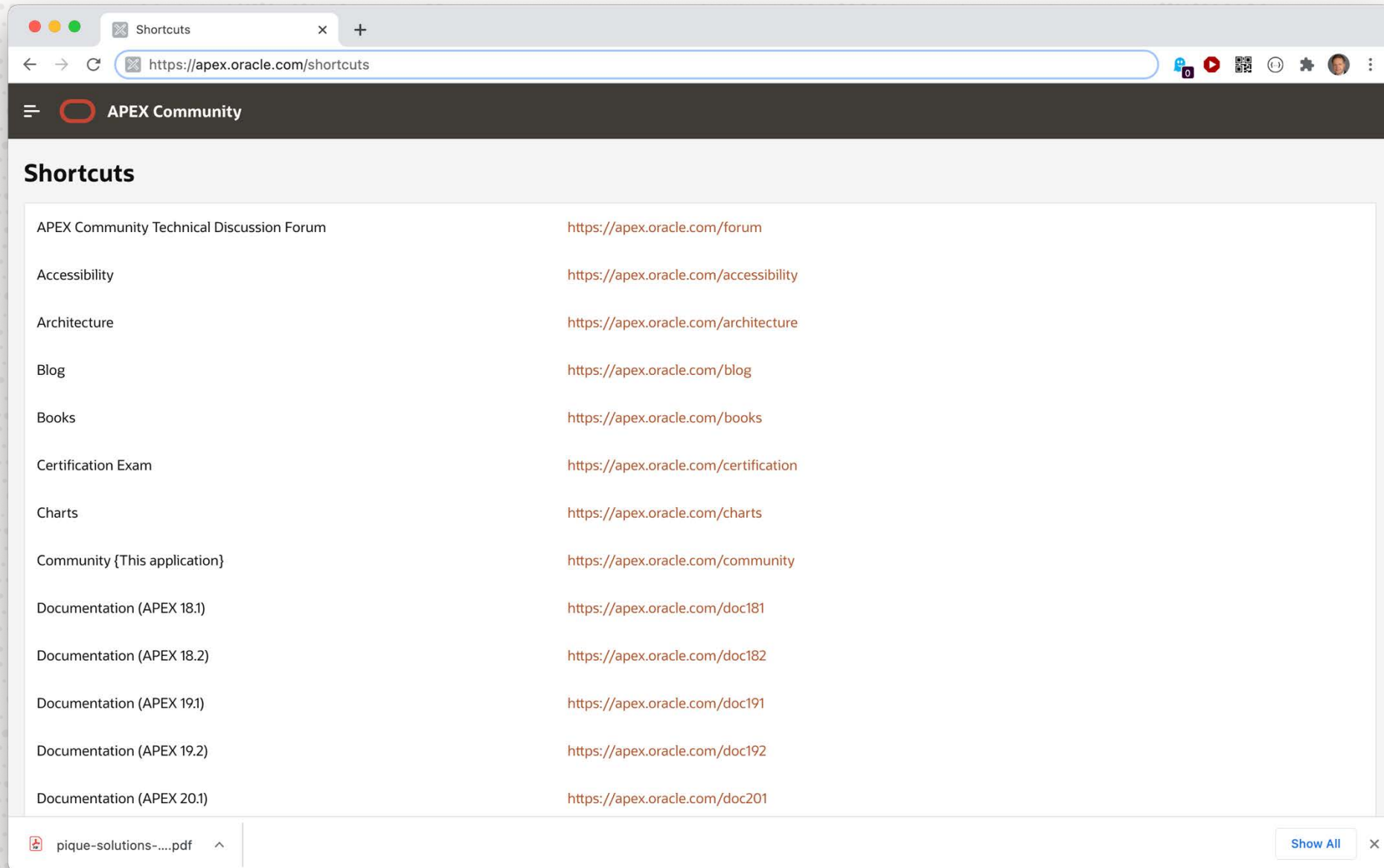
The main content area features a large banner with the text "CREATE THE FUTURE WITH US" in red and orange. Below the banner, there is a "Return to job search" link and three buttons: "Share Job" (with a dropdown arrow), "Add to My Job Cart", and "Apply Online" (in a green box).

The job title "Software Developer-2100076T" is prominently displayed. Below the title, a section titled "Applicants are required to read, write, and speak the following languages: English" is visible. The "Preferred Qualifications" section describes the role: "The Oracle Application Express (APEX) development team is looking for highly motivated, experienced and self-directed front end JavaScript developers to work on enhancements and new capabilities for the core APEX product. Oracle APEX is the market-leading enterprise low-code development platform which enables customers to design, develop and deploy beautiful, responsive, data-driven desktop and mobile applications using only a browser. The ideal candidate for this position will have mastery of JavaScript, HTML, CSS and SQL, and has a thorough understanding of modern web development principles and REST-based Web services. Experience with jQuery, Oracle Database & PL/SQL, and APEX is a plus."

On the right side of the page, there are two video thumbnails. The top one is titled "Oracle Careers | ..." and the bottom one is titled "Life at Oracle: C...".



# apex.oracle.com/shortcuts



Shortcuts

APEX Community Technical Discussion Forum	<a href="https://apex.oracle.com/forum">https://apex.oracle.com/forum</a>
Accessibility	<a href="https://apex.oracle.com/accessibility">https://apex.oracle.com/accessibility</a>
Architecture	<a href="https://apex.oracle.com/architecture">https://apex.oracle.com/architecture</a>
Blog	<a href="https://apex.oracle.com/blog">https://apex.oracle.com/blog</a>
Books	<a href="https://apex.oracle.com/books">https://apex.oracle.com/books</a>
Certification Exam	<a href="https://apex.oracle.com/certification">https://apex.oracle.com/certification</a>
Charts	<a href="https://apex.oracle.com/charts">https://apex.oracle.com/charts</a>
Community (This application)	<a href="https://apex.oracle.com/community">https://apex.oracle.com/community</a>
Documentation (APEX 18.1)	<a href="https://apex.oracle.com/doc181">https://apex.oracle.com/doc181</a>
Documentation (APEX 18.2)	<a href="https://apex.oracle.com/doc182">https://apex.oracle.com/doc182</a>
Documentation (APEX 19.1)	<a href="https://apex.oracle.com/doc191">https://apex.oracle.com/doc191</a>
Documentation (APEX 19.2)	<a href="https://apex.oracle.com/doc192">https://apex.oracle.com/doc192</a>
Documentation (APEX 20.1)	<a href="https://apex.oracle.com/doc201">https://apex.oracle.com/doc201</a>

pique-solutions-....pdf

Show All

# apex.oracle.com/go/graphics



blogs.oracle.com/apex/oracle-apex-graphics-āpěks

# ā'pěks (#orclapex)

You've seen the stickers and logos before: ā'pěks. What began as a [clarifying blog post](#) in 2009 to precisely define how APEX should be spelled and pronounced, has since morphed into a broad, community-based show of force. This is due, in large part, to long-time partner and advocate [Jürgen Schuster](#), who was the inspiration, effort and money behind the original ā'pěks stickers which are spread around the global [Oracle APEX](#) community.

The original artwork was developed by [Bob Daly](#) back in 2014. When the community APEX site [apex.world](#) was launched, Jürgen ensured that the SVG versions of artwork were available to the public ([apex.world](#) -> Community -> Fan-Shop -> Stickers & Others -> download link), and this includes SVG versions of ā'pěks, apex.world, #lets wreckthistgether, and more.

We wish to share the original artwork with the global APEX community. You can download the file [apeks.zip](#), which includes the following files:

1. apeks.png
2. apeks.ai
3. apeks.pdf
4. apeks-outline.ai
5. apeks-outline.pdf

apeks.zip    pique-solutions-....pdf    Show All



# Q&A

---

