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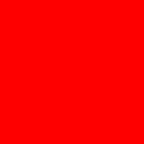
# **Application Express 4.0**

**Collaboration with Websheets and Team Development**

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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.

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# Oracle Application Express (APEX)

## Browser Based Application Development

The image shows the Oracle Application Express (APEX) login and main interface. On the left, a login form titled "ORACLE® Application Express" asks for workspace and credentials. The workspace is "Global IT", the username is "MIKE", and there is a password field. A "Login" button is below the fields. To the left of the form is an illustration of a database cylinder and a pencil. Below the form, text states: "Oracle Application Express is a rapid Web application development tool. Using only a Web browser and limited programming experience, you can develop and deploy applications that are fast and secure."

The main interface, shown in a browser window, has the title "ORACLE® Application Express" and a welcome message "Welcome MIKE (Logout)". The navigation bar includes "Home", "Application Builder", "SQL Workshop", "Team Development", and "Administration", along with a "Search Workspace" field. The "Workspace MIKE" section displays four icons: "Application Builder", "SQL Workshop", "Team Development", and "Administration". A "News" section mentions a "Requirements application" and a "Top Applications" section is at the bottom. The right sidebar contains an "About" section describing APEX and an "Available Updates" section stating "System is up-to-date".

# Oracle Application Express (APEX)

## Benefits

### Rapid Browser Based Development



Point your browser and start developing

### Leverages SQL Skills



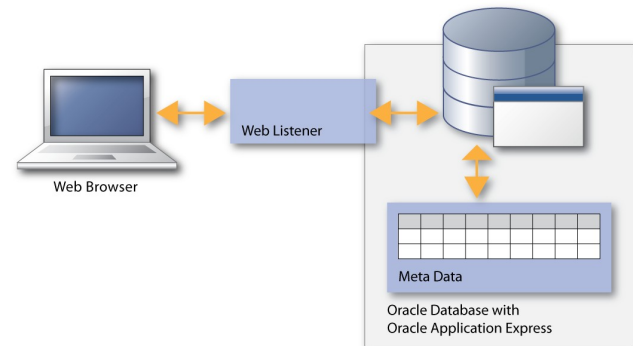
Build reports and charts using SQL

### Self Service Provisioning



Out-of-the-box elastic private cloud service

### Runs within Database



Simple to manage, highly scalable

# Oracle Application Express (APEX)

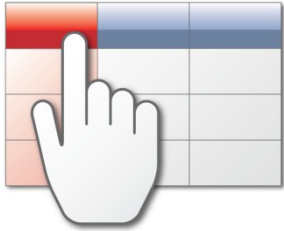
Fully supported no-cost feature of Oracle DB



- Distributed with
  - Oracle Enterprise Edition
  - Oracle Standard Edition
  - Oracle Standard Edition One
  - Oracle XE
- Supported Database Releases
  - 10gR2
  - 11gR1
  - 11gR2

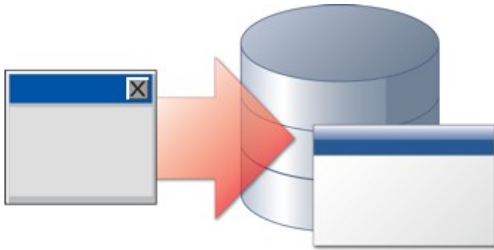
# Oracle Application Express (APEX)

## Rapid Application Development (RAD)



### Data-driven Applications

Develop opportunistic and departmental productivity applications with Robust Online Reporting



### Oracle Forms Modernization

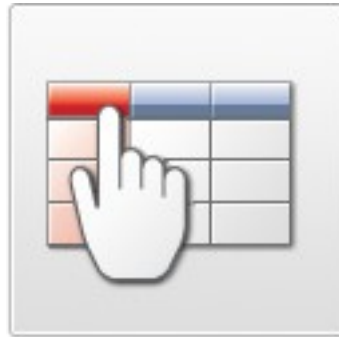
Leverage SQL & PL/SQL declarative programming skills to move Forms applications to HTML / Web 2.0



### Spreadsheet / Access Replacement

Convert spreadsheets and access applications to Web applications

# New in Oracle Application Express 4.0



**Web Sheets**



**Team Development**



**Dynamic Actions**



**RESTful Web  
Service Support**



**Improved  
Charting**



**Plug-ins**



# Integrating with Other Tools / Services

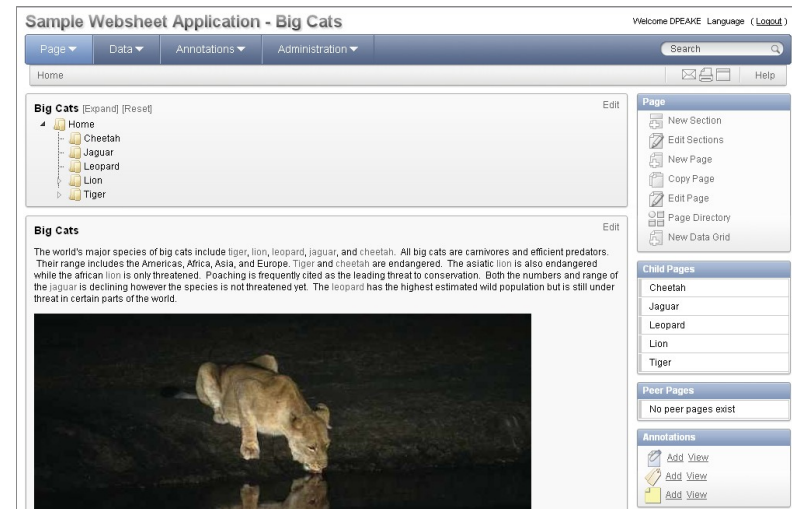
Leverage the full spectrum of the Oracle database's capabilities:

- SQL
- PL/SQL
- RAC
- Spatial
- OLAP
- Flashback
- Web Services
- Text
- Multimedia
- Analytic Functions
- Globalization
- XML DB
- eBusiness Suite

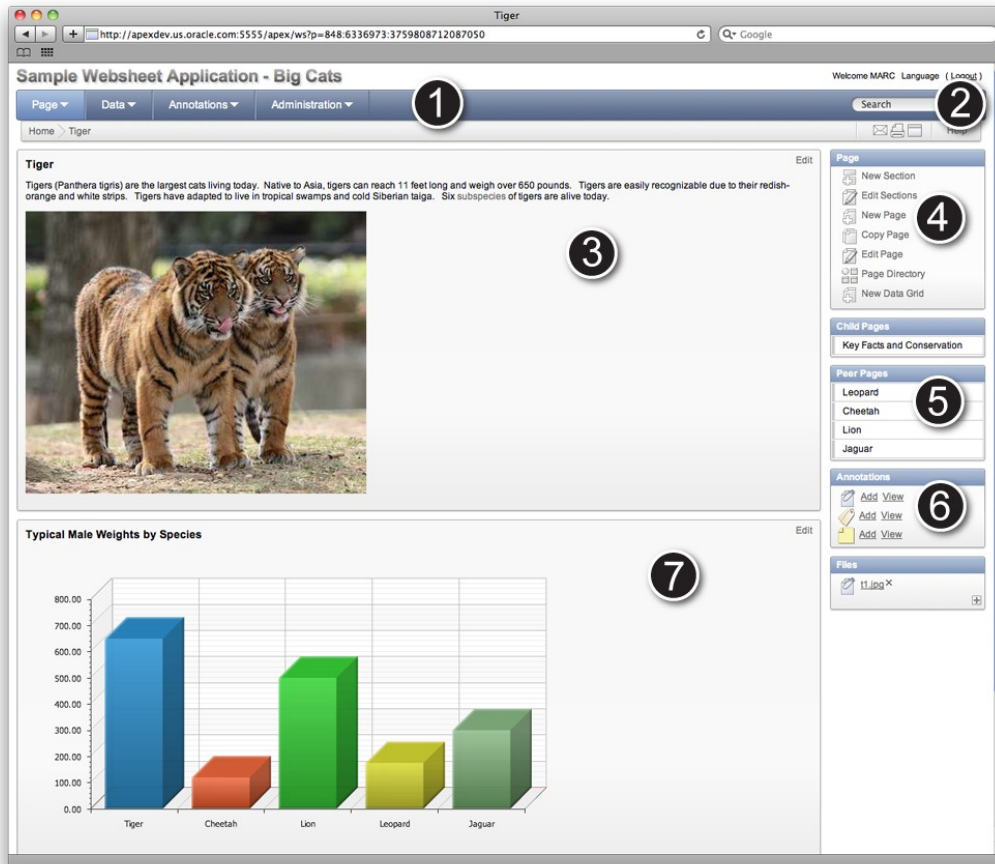


# Websheets

- Build basic applications faster and with more functionality
- Web-based content sharing
  - Hierarchical text pages
  - Editable data grids
  - Interactive Reports
- Mark-up syntax with SQL Tags
- Designed for Business Users
- Incorporates “sharing” model (Reader, Contributor, Admin)
  - Integrated annotations (attachments, tags, notes, links)



# Websheets



1. Application Controls
2. Search
3. Section Content
4. Pages
5. Navigation
6. Annotations
7. Data Visualization

# Worksheets

## Application Controls

- Ever-present application controls for quick access to:
  - Home Page
  - Page Directory
  - Page History
  - Data Grids
  - Reports
  - Annotations
- Additional Controls for Administrators

# Worksheets

## Search

- Search for specific strings in application
- Checks page content, files, tags, notes and data grids
- Click the search result item to go directly to that content
- Send email with link to search results, or send search result page content in email body

# Worksheets

## Section Content

- Sections can be text, navigation, data or charts
- Text sections can be straight text or formatted HTML
- Toolbar allows to quickly add in lists, links, images, colored text, and more, all using the WYSIWYG editor
- Use of markup syntax allows to embed images, links, reports and data grids
- Toggle to the source view to access the HTML source

# Worksheets

## Pages

- Worksheet application can have multiple pages
- Create new pages from scratch or copy an existing page if similar content or structure is needed
- Pages organized in a page hierarchy
- Access via page directory, links to peer- and child pages and links from other pages

# Websheets

## Navigation

- Breadcrumbs provide context and aid in navigation to parent pages
- Pages display a list of both child and peer pages
- Page directory displays each page within the application along with details on creation and last update
- Page navigation tree
- Section navigation



# Worksheets

## Annotations

- Include annotations with pages or rows in data grid
  - Files: Upload files for download or to display as an inline image within section text
  - Notes: Include obvious and usually temporary notes specific to the content
  - Tags: Include tags to aid in searching
  - Links: Include URL links for a data grid row

# Worksheets

## Data Visualization

- Data sections expose data from a data grid or report and can contain just a subset of the data by using a saved report that applies a specific filter
- Chart sections display content of a data grid or report as a column-, horizontal bar, a pie- or line- chart
- Charting functions include sum, average, minimum, maximum and count
- Data always retrieved in real-time, so pages are always current instead of being an aging snapshot

# Websheets

## Data Grids

- Declaratively defined and edited collections of data
- Create Data Grid from scratch, by defining the columns you need, or by copying and pasting from a spreadsheet
- Data grids can be displayed on a page using the 'datagrid' markup syntax

# Worksheets

## Administration

- Monitor activity
- Update the application properties
- Manage Access Control
- Configure Authentication schemes:
  - Public access (no authentication)
  - Application Express Accounts
  - Oracle Single Sign-On
  - LDAP
  - Custom authentication scheme

# Websheets vs Database Applications

	Worksheet Applications	Database Applications
Page Content	Managed and maintained by users	Created and deployed by developers for end-users
Database Objects	Automatically managed (APEX\$ tables)	Manually created tables
Primary Key Management	Automatically managed	Triggers and sequences
Validations	Defined using runtime UI	Created using wizards
Report Layout	Defined using runtime UI	Created using SQL
List of Values	Defined using runtime UI	SQL or Static
Form Layout	Column groups	Items and regions
Look and Feel	Basic control	Themes and templates



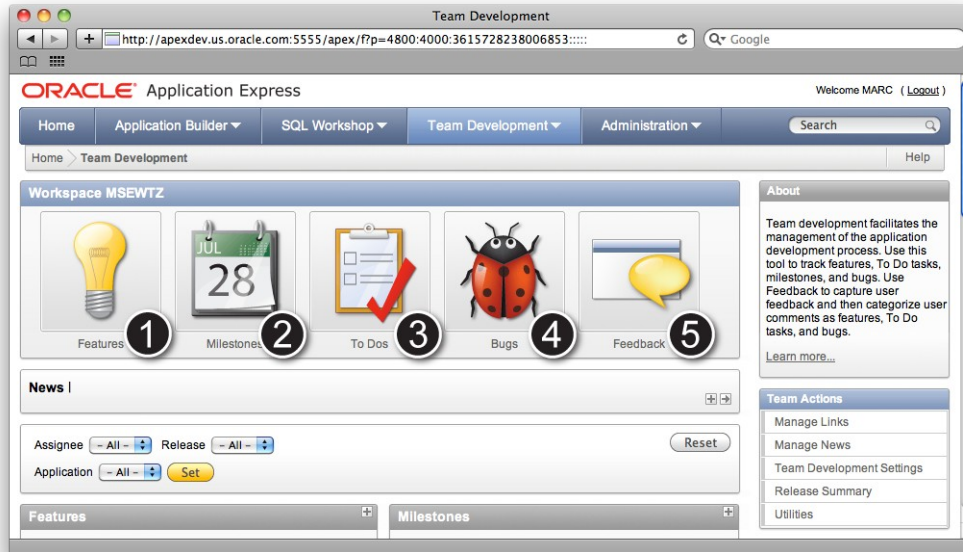
D E M O N S T R A T I O N

# Websheets

# Team Development

- Project Management solution for Oracle Application Express development projects
- Tracks features, to do's, milestones, and bugs
- Tight integration with Oracle Application Express allows for adding direct links between team development entries and specific applications and pages
- End user feedback can be captured and converted to features, to do's, and bugs

# Team Development



1. Features
2. Milestones
3. To Do's
4. Bugs
5. Feedback



# Team Development

## Features

- Track functionality from initial conception through implementation
- Track software features by release
- Assign features to developers
- Associate status with milestone
- Assign to do entries against features

# Team Development

## Milestones

- Define the important dates within an application development release
- Organize software development milestones by release
- Associate and track milestones with bugs, features, and to do entries

# Team Development

## To Do's

- Action items that can be assigned, prioritized, tagged and tracked
- Associate with features
- Assign and track by developers
- Associate with application pages
- Manage activities required to complete a feature

# Team Development

## Bugs

- Track software defects
- Track software bugs by developer, release, milestone and application page
- Create bugs based on feedback provided by end users
- Manage and report on bugs

# Team Development

## Feedback

- Solicit input from users of an application
- Streamlines the development process by structuring information from end users, making it useful to developers.
- Captures the context of the application at the time the feedback was reported making it easy for developers to see things like what page was being accessed and what browser was being used
- Synchronize feedback between environments



D E M O N S T R A T I O N

# Team Development

# Oracle Application Express Momentum

- Developer community - 80k+ downloads / year
- apex.oracle.com – 4m page views / week
- Active Discussion Forum – 4.6 m views, #3 on OTN
- 100 Consulting companies, 60 BLOGs, 10 Hosting Partners
- User Groups: 30 @OOW-09, 40 @ODTUG, APEXposed
- User interface for Oracle Store and Oracle Audit Vault

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	<a href="#">Welcome to the Oracle Application Express Discussion Forum!</a> Posted By: <a href="#">sbkened</a> -- Jun 21, 2010 3:10 PM				<a href="#">Edit</a> - <a href="#">Expire</a> - <a href="#">Delete</a>
	<a href="#">APEX Listener Early Adopter now available - New Forum available</a> Posted By: <a href="#">sbkened</a> -- Jun 21, 2010 2:31 PM				<a href="#">Edit</a> - <a href="#">Expire</a> - <a href="#">Delete</a>
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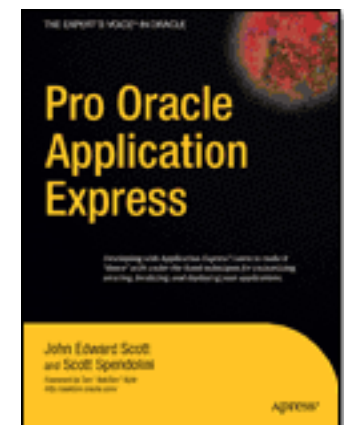
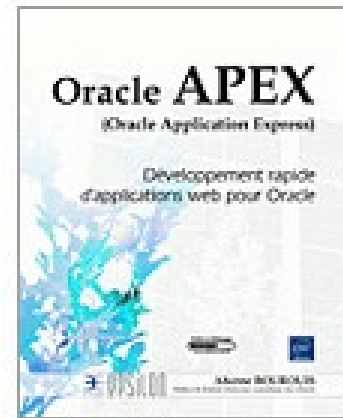
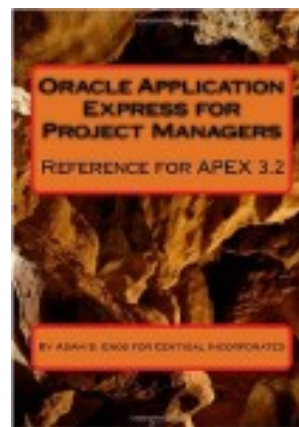
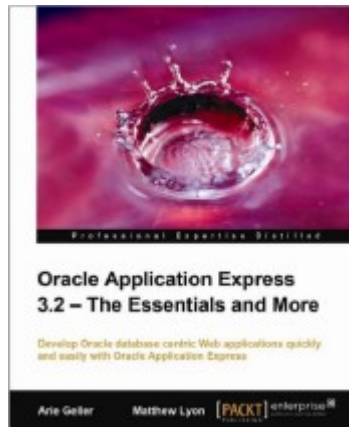
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Information:

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