ORACLE
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Database Foundations

6-1
Introduction to Oracle Application Express

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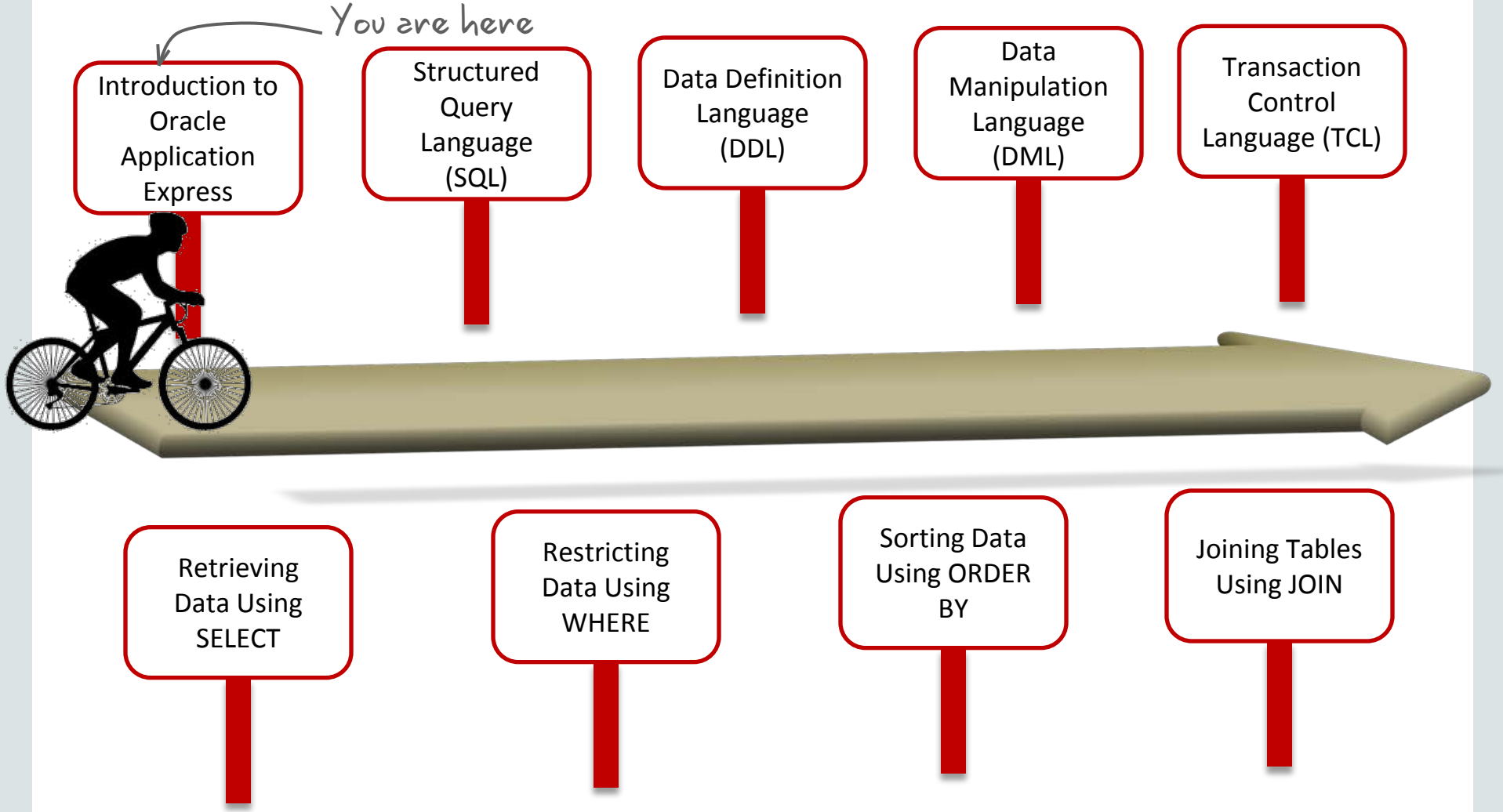
Roadmap



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Objectives

This lesson covers the following objectives:

- Distinguish between application software and system software and give an example of each
- Log-in to the Oracle Application Express practice environment
- Execute a simple query to retrieve information from the Database
- Apply the rules of SQL to display all columns and a subset of columns specified by criteria

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Purpose

Every day, in one way or another, we come in contact with computer applications.

If you checked your email today, it was probably done using an application. If you bought an item at a grocery store, the clerk scanned the item using an application that calculated your bill and updated the store inventory. In this course, you will learn the syntax of SQL using the application called Oracle Application Express.

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Application Programs

Although computers have been around for a very long time (possibly before you were born), their use for business and personal computing didn't take place until application software programs were developed. Application programs allowed the end user—people like you and me—to be able to buy fully developed, ready-to-use programs. It was no longer necessary to know how the program worked, just that it did work and accomplished what we wanted it to do.

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Application Programs

Yahoo.com uses the Oracle database to store data. Rather than having everyone who wants to search the database or retrieve email learn SQL, an application has all of the SQL (and other coding languages) pre-programmed into it. With a few mouse clicks, users have access to all of the information they need.

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Using Applications

An application is like a car. To drive a car, you need to know enough to make it work. It has a friendly “shell” to hide all the things that you don’t need to know, such as how the transmission works or how fuel like petrol or diesel is used to power the engine. Could you ever get your driver's license if you had to demonstrate an understanding of every system—electrical, powertrain, hydraulic, fuel, etc.—used to make the car run?

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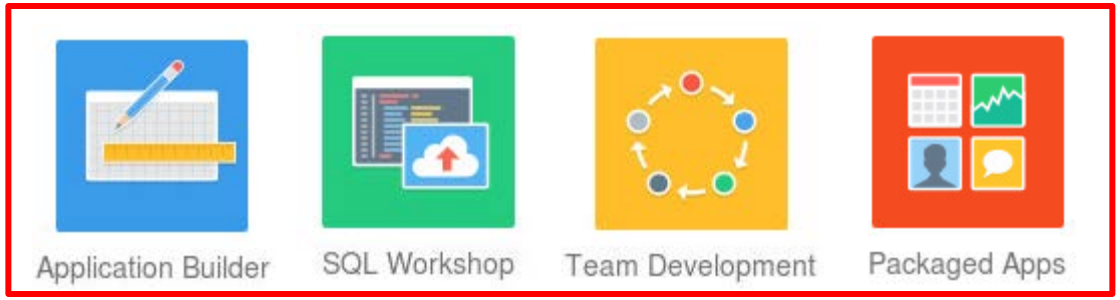
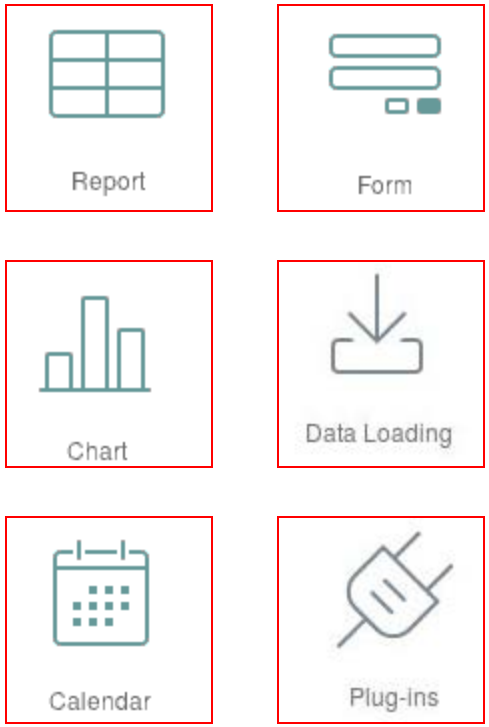
Oracle Application Express

Oracle Application Express is a web application development, deployment, and maintenance tool.

Oracle Application Express Home Page



Key Features



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Oracle Application Express Components

Oracle Application Express has three components:

- SQL Workshop
- Application Builder
- Object Browser

To learn SQL, you will use the SQL Workshop component.
To design an application, you use Application Builder.

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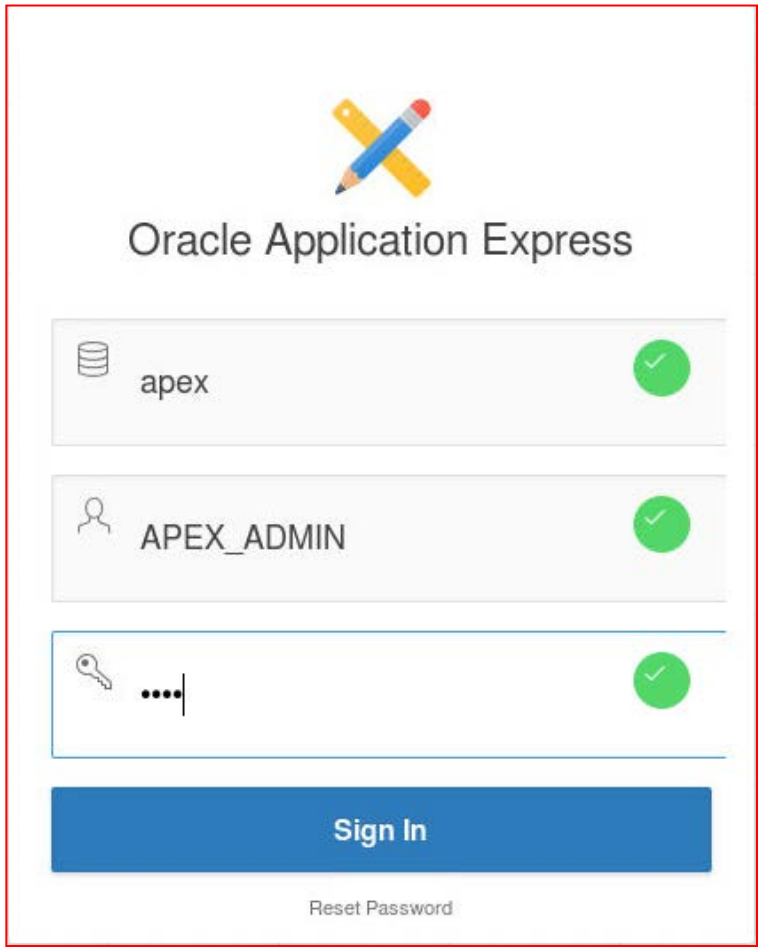
Logging In to a Workspace

- To log in to an Oracle Application Express workspace:
  - Enter the correct URL in your browser address bar.
  - Enter the workspace name.
  - Enter the username and password. Then click Sign In.



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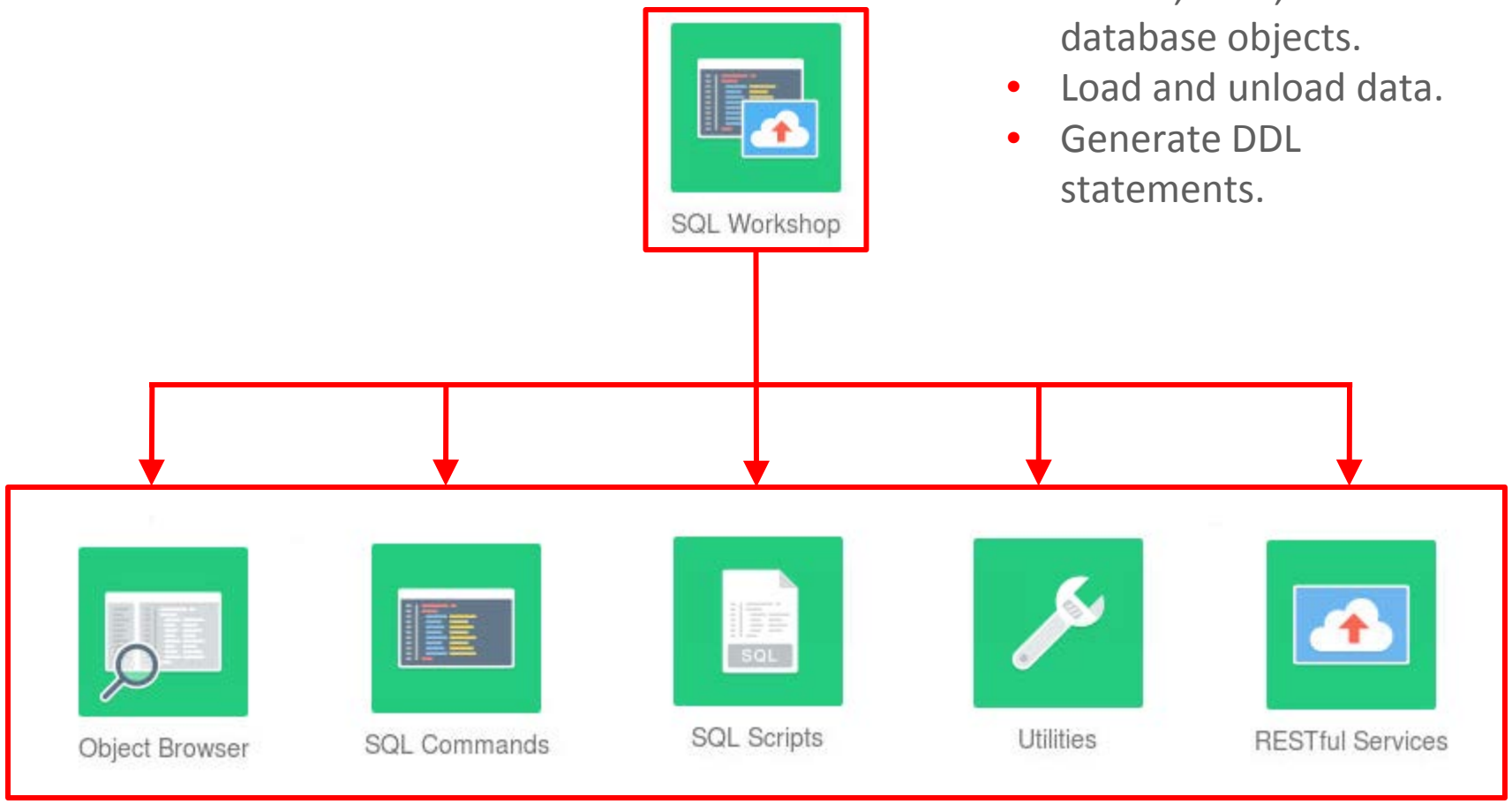
What Is SQL Workshop?

- Create, view, and edit database objects.
- Load and unload data.
- Generate DDL statements.



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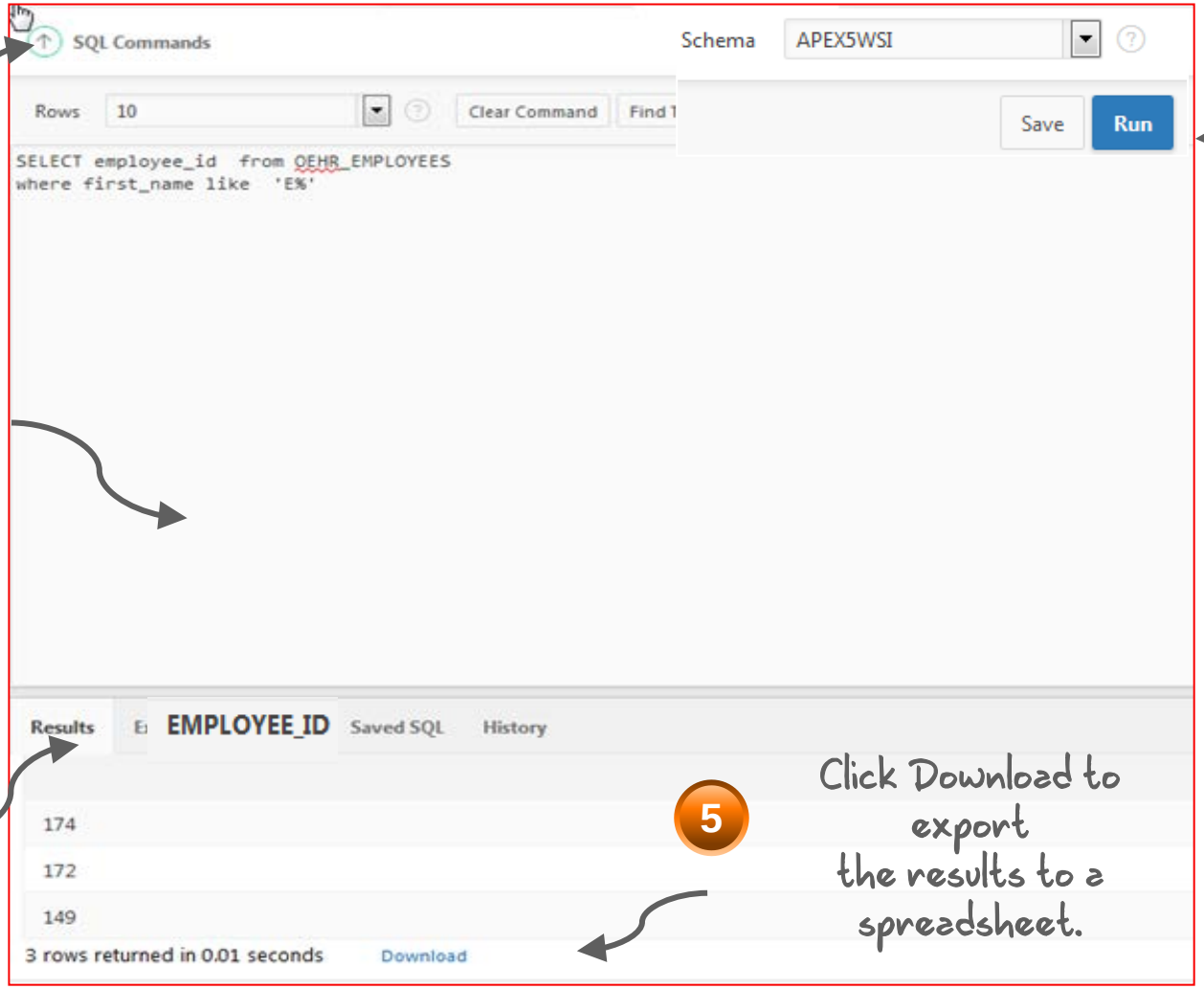
Running SQL Commands

1 Navigate to:



2 Enter the command in the command editor.

3 Click the Run button.

4 View the output on the Results tab.

5 Click Download to export the results to a spreadsheet.

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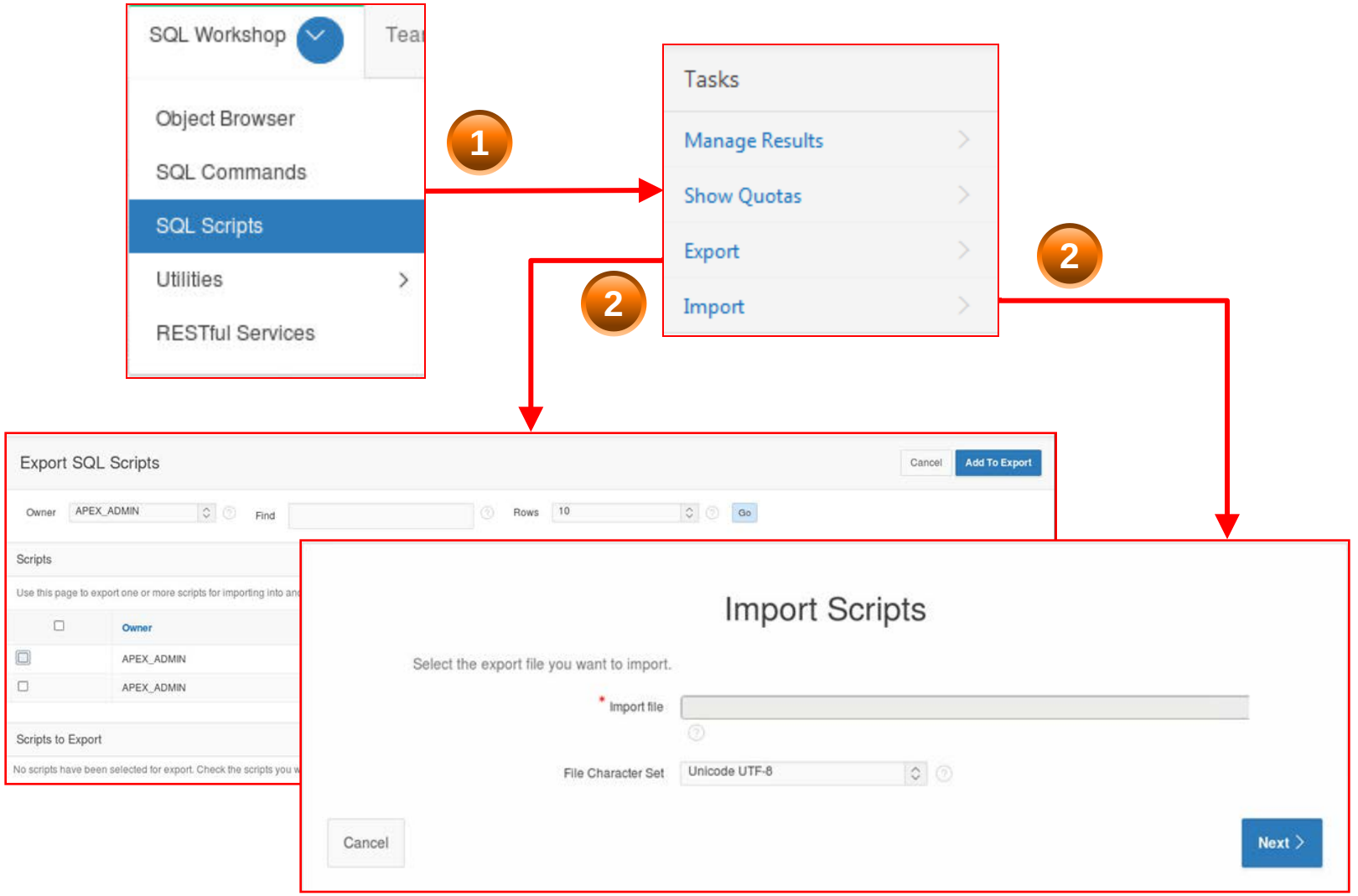
Importing and Running a SQL Script



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Basic SELECT Statement

- The SELECT * command returns all the rows in a table. The syntax is:

```
SELECT *
FROM <table name>;
```

- For example:

```
SELECT *
FROM employees;
```


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SELECT Statement with a Condition

- To return a subset of the data, modify the SELECT statement. The syntax is:

```
SELECT <column name 1, column name 2, etc.>
FROM <table name>
WHERE <condition>;
```

- For example:

```
SELECT first_name, last_name, job_id
FROM employees
WHERE job_id = 'SA_REP';
```


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Correcting errors

- When entering SQL commands, it is important to use the correct spelling, otherwise you will get an error message.
- For example (SELECT: spelling incorrect):

```
SEECT *
FROM employees;
```

- Would result in the error message:

```
ORA-00900: invalid SQL statement
```

- To rectify, simply correct the spelling and run again.

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Terminology

Key terms used in this lesson included:

- Application software
- System software
- Oracle Application Express
- Syntax
- Subset
- Comparison Operator

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Summary

In this lesson, you should have learned how to:

- Distinguish between application software and system software and give an example of each
- Log-in to the Oracle Application Express practice environment
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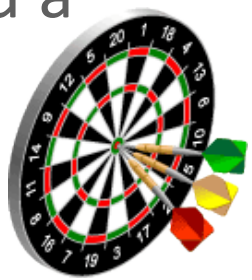
- Apply the rules of SQL to display all columns and a subset of columns specified by criteria



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