

### **Warm-Up**

**Activity 1.1. What do these words stand for? Look for the following information on the internet to complete the sentences.**

1. CRUD stands for \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_.
2. SQL stands for \_\_\_\_\_.
3. HTTP stands for \_\_\_\_\_.

**Activity 1.2. Answer the following questions based on your own personal information.**

1. Do you have any experience working with databases? If so, can you elaborate?
2. Do you have any experience working with CRUD operations? If so, can you elaborate?

### **Reading Section 1**

**Activity 2.1. Match the following words with the right definitions.**

- |                    |  |
|--------------------|--|
| 1. Database        | a. A process or skill of writing computer programs                             |
| 2. Storage         | b. A process through which data is saved                                       |
| 3. Tips and tricks | c. An organized collection of structured information                           |
| 4. Programming     | d. An expression to refer to an easy way of doing something                    |
| 5. Data            | e. Information that has been processed and/or stored by a computer             |
| 6. User-interface  | f. A chunk of a code that can be used over and over again                      |
| 7. Functions       | g. It can refer to the way someone can interact with an application or website |

## Activity 2.2.

Use the words in activity 2.1 to complete the following text.

### What are CRUD Operations: How CRUD Operations Work, Examples, Tutorials & More

Alexandra Altwater / May 2, 2017

If you've ever worked with a (1) \_\_\_\_\_, you've likely worked with CRUD operations. CRUD operations are often used with SQL, a topic we've covered in depth (follow this link for some of our recent SQL (2) \_\_\_\_\_ and get familiar with more pieces of advice). Since SQL is pretty prominent in the development community, it's crucial for developers to understand how CRUD operations work. So, this article is meant to bring you up to speed (if you're not already) on CRUD operations.

#### The Definition of CRUD

Within computer (3) \_\_\_\_\_, the acronym CRUD stands for create, read, update and delete. These are the four basic functions of persistent (4) \_\_\_\_\_ or repository. Also, each letter in the acronym can refer to all (5) \_\_\_\_\_ executed in relational database applications and mapped to a standard HTTP method, SQL statement or DDS operation.

It can also describe (6) \_\_\_\_\_ conventions that allow viewing, searching, and modifying information through computer-based forms and reports. In essence, entities are read, created, updated, and deleted. Those same entities can be modified by taking the (7) \_\_\_\_\_ or information from a service and changing the setting properties before sending the data back to the service for an update. Plus, CRUD is data-oriented and the standardized use of HTTP action verbs.

### Standard CRUD Operations

This table lists the standard create, read, update, and delete (CRUD) operations for a business object service.

Operation	Method Name	Description
create Operation	createServiceDataObjectName	Creates a service data object and its descendants.
delete Operation	deleteServiceDataObjectName	Deletes a business object.
get Operation	getServiceDataObjectName	Retrieves a single business object by the primary key.
find Operation	findServiceDataObjectName	Finds and returns a list of business objects that meet the specified search criteria.
find by additional predefined search criteria Operation	findServiceDataObjectNameSearchCriteriaName	Finds and returns a list of business objects that meet the specified search criteria and the additional predefined search criteria.
update Operation	updateServiceDataObjectName	Updates a business object.
merge Operation	mergeServiceDataObjectName	Updates a business object, if it exists. Otherwise creates a new business object.
process Operation	processServiceDataObjectName	Performs create, update, delete, or merge operation on a list of business objects. The specified operation is applied to all the objects in a given list.
process change summary Operation	processCSServiceDataObjectName	Performs create, update, or delete operations on a list of business objects. Allows you to specify different operations for different objects.

Screenshot Source: Oracle

### Activity 2.3.

Listen to the following audio. Complete the text with the missing words.

Most (1) \_\_\_\_\_ have some form of CRUD functionality. In fact, every programmer has had to deal with CRUD at some point. Not to mention, a CRUD application is one that utilizes forms to retrieve and return data from a (2) \_\_\_\_\_.

The first reference to CRUD operations came from Haim Kilov in 1990 in an article titled, "From semantic to object-oriented (3) \_\_\_\_\_ modeling." However, the term was first made popular by James Martin's 1983 book, *Managing the Database Environment*. Here's a breakdown:

- CREATE procedures: Performs the INSERT (4) \_\_\_\_\_ to create a new record.
- READ procedures: Reads the table records based on the primary key noted within the input (5) \_\_\_\_\_.
- UPDATE procedures: Executes an UPDATE statement on the table based on the specified primary key for a record within the WHERE clause of the statement.
- DELETE procedures: Deletes a specified row in the WHERE clause.

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