

# CMSC 436 Quiz #4

Feb. 28, 2013

Name: \_\_\_\_\_

Directory ID: \_\_\_\_\_

## Problem 1

What is a content provider? Explain the relationship between a `ContentResolver` and a `ContentProvider`. [4pts]

*Solution:*

A content provider manages access to a central repository of data. A provider is part of an Android application, which often provides its own UI for working with the data. `ContentProvider` acts as an abstraction layer between its repository of data and the external appearance of data as tables.

An application accesses the data from a content provider with a *ContentResolver* client object. This object has methods that call identically-named methods in the provider object, an instance of one of the concrete subclasses of *ContentProvider*.

## Problem 2

```
Cursor c = getContentResolver().query(Uri,projection,selectionClause,selectionArgs,sortOrder);
```

Given the above code, explain the functionality of each argument in the `query()` method. [5pts]

*Solution:*

*Uri* maps to the table in the provider named `table_name`.

*projection* is an array of columns that should be included for each row retrieved.

*selectionClause* specifies the criteria for selecting rows. It is a combination of logical and Boolean expressions, column names, and values.

If you specify the replaceable parameter `?` instead of a value, the query method retrieves the value from the *selectionArgs* array.

*sortOrder* specifies the order in which rows appear in the returned `Cursor`.

## Problem 3

Determine the correctness of following statements about content providers. [3pts]

✓	✗	Description
<input type="checkbox"/>	<input checked="" type="checkbox"/>	A provider's data table is required to have a column designated as the primary key.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	To access a provider, your application usually has to request specific permissions in its manifest file.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	In actual code, it is better to do queries asynchronously on a separate thread.