

CMSC 436 Quiz #6

Mar. 28, 2013

Name: _____

Directory ID: _____

Problem 1

Rank the priority of following processes. The 1st process is most important and is killed last. [5pts]

Rank	Process type	Description
2	Visible process	A process that doesn't have any foreground components, but still can affect what the user sees on screen.
1	Foreground process	A process that is required for what the user is currently doing.
5	Empty process	A process that doesn't hold any active application components.
4	Background process	A process holding an activity that's not currently visible to the user.
3	Service process	A process that is running a service that has been started with the startService() method.

Problem 2

An activity that initiates a long-running operation might do well to start a service for that operation, rather than simply create a worker thread. Why? [4pts]

Solution:

Using a service guarantees that the operation will have at least "service process" priority, regardless of what happens to the activity. This is the same reason that broadcast receivers should employ services rather than simply put time-consuming operations in a thread. For example, an activity that's uploading a picture to a web site should start a service to perform the upload so that the upload can continue in the background even if the user leaves the activity.

Problem 3

Determine the correctness of following statements about processes and threads. [3pts]

✓	✗	Description
<input checked="" type="checkbox"/>	<input type="checkbox"/>	a process that is serving another process can never be ranked lower than the process it is serving.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	The system creates a separate thread for each instance of a component.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	The Android UI toolkit is not thread-safe. So you must not manipulate your UI from a worker thread.