

Course No: MIS 3310
Course Title: Topics in Computer Information Systems 1 (Mobile Computing)
Date: 6/01/2014
No. of Questions: (4)
Time: 2 hours
Using Calculator (No)

University of Palestine

Final Exam
2012/2013
Total Grade: 60

Instructor Name: Dr. Said Marouf
Student No.: _____
Student Name: _____
College Name: _____
Dep. / Specialist: _____
Using Dictionary (Yes)

Question One: (12 Points)

Specify whether the following statements are True or False:

Statement	T/F
A Handler can be used to trigger a task after a certain number of seconds.	
The most popular type of DOM parsers is the SAX parser.	
It is safe to access UI components from a background thread.	
It is highly recommended to perform long tasks on the main thread.	
The onProgressUpdate() method of an AsyncTask is performed on a background thread.	
A well-formed XML document must have two root elements.	
Using the convertView argument within the getView() method of an extended ArrayAdapter can increase the performance of a ListView .	
Data represented in JSON is usually larger than that represented with XML.	
By default, the ArrayAdapter calls the toString method of an object.	
SQLite is insufficient for most mobile applications.	
A JSON array starts with a “{“ and ends with a “}”	
BasicNameValuePair is used to add parameters to an HttpGet request.	

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Question Two: (20 Points)

Write the code necessary to perform the following tasks. *Note: Do not write full application code. Only the specific part of code related to the task requested.*

- a) (8 Points) Create a custom **AsyncTask** class named **GetPhotosTask**. **GetPhotosTask** should be a subclass of **AsyncTask** and overrides the 4 methods of **AsyncTask**. The input type for **GetPhotosTask** is a **String**, the progress type is an **Integer**, and the result type is an **ArrayList** of **Person** objects.

- b) (4 Points) Using a **Handler** named **myHandler**, log the message “Hello World” after 9 seconds.

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c) (2 Points) Create an **Intent** that lets you call the telephone number: **7048881234**

d) (6 Points) For the database table named **students**, write the **onCreate** method for its Table class **StudentsTable**. The method is responsible for creating the table within the database. The **students** table has 3 columns: **id** which is an integer and a primary key, **name** which is a string and cannot be null, and **age** which is an integer.

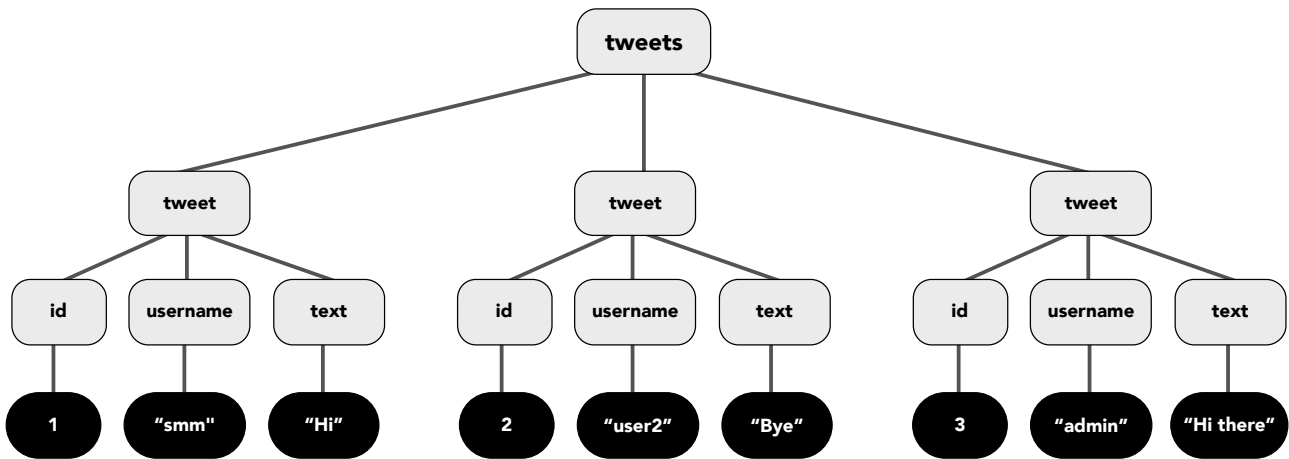
Note: You must use constants to represent the table name and its columns' names.

Question Three: (20 Points)

Answer the following questions:

a) (6 Points) Compare between DOM parsers and Stream parsers. Mention one example for a Stream parser.

b) (11 Points) Given the following tree:



1. (6 Points) Write the XML that represents this tree. Your XML should be well formed. The id of a tweet should be represented as an attribute.

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2. (5 Points) Write the JSON representation for the tree above.

e) (3 Points) Explain what the **convertView** is and how it is used to improve the performance of a **ListView**.

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Question Four: (8 Points)

You are asked to develop a Facebook application. This application will show a user's timeline and recent posts within a list. A custom layout is used for each post within the list. The application will talk to the Facebook API to get the data it needs. It is also able to cache a local copy of the data. Assume the Facebook API returns XML data only.

1. **(6 Points)** List and discuss the technologies that you should use to build this application.
Note: Only mention technologies we have covered in class.

2. **(2 Points)** What are the performance techniques that you should use to make the application fast, responsive, and user friendly?
Note: You should mention at least 2 techniques!