COSC2543 Mobile Application development

# TUTORIAL WEEK 1: GETTING FAMILIAR WITH UI COMPONENTS

***PS: SUBSCRIBE TO DISCUSSION BOARD BEFORE STARTING THIS TUTORIAL***

## Objectives (Timing estimate: 75’):

* Review J2ME Architecture concepts
* To get familiar with configuring emulator to run an imported MIDlet behind proxy
* To get familiar with different UI Components
* Compare event handling in J2SE & J2ME

## Theories Review

1. What is a MIDlet? Draw a diagram of the MIDlet Life’s Cycle
2. What are the differences between Connected Limited Device Configuration (CLDC) and Mobile Information Device Profile (MIDP)?
3. What are the mandatory attributes in a .jad file?
4. What is CDC? What is the difference between CDC and CLDC
5. What is pre-verification? Describe how does two-pass bytecode verification work ?

## Task 1 (15’)

Download DemoMIDlet.java in BB; execute it to get familiar with running and configuring emulator to work behind proxy.

## Task 2 (45’)

Spend 45 minutes to research and try to display these UI components below in the Form that was demonstrated previous class.

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| **Classes** | **Description** |
| Alert | A screen that shows data to the user and waits for a certain period of time before proceeding to the next screen. |
| ChoiceGroup | A group of selectable elements intended to be placed within a Form. |
| Command | A construct that encapsulates the semantic information of an action. |
| DateField | An editable component for presenting calendar date and time information that may be placed into a Form. |
| Form | A screen that contains an arbitrary mixture of items (images, text, text fields, choice groups, for instance.) |
| Gauge | Implements a bar graph display of a value intended for use in a form. |
| ImageItem | Provides layout control when Image objects are added to a Form or Alert. |
| List | A screen containing a list of choices. |
| StringItem | An item that can contain a string. |
| TextBox | A screen that allows the user to enter and edit text. |
| TextField | An editable text component that can be placed into a Form. |
| Ticker | A ticker-type piece of text that runs continuously across the display. It can be attached to all screen types except Canvas. |

## Task 3 (10’)

Quickly discuss in pair the following interfaces and describe how the events will be handled in J2ME

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| **Interfaces** | **Description** |
| Choice | Defines an API for a user interface component that implements selections from a predefined number of choices. |
| CommandListener | Used by applications that needs to receive high-level events from the implementation. |
| ItemStateListener | Used by applications that need to receive events that indicates changes in the internal state of the interactive items. |