Advanced Programming Language (630501)
Fall 2011/2012 – Lecture Notes # 8

Handling User Input

Outline of the Lecture
- **Creating Selection Lists (Radio Buttons)**
- **Input fields**
- **Setting Variable Values in WML**

WML supports two kinds of user input: entering text and selecting from a list. The following sections describe how to both prompt the user and handle the response.

Creating Selection Lists (<select> <option> elements)

- A selection list is a list of options that a user can select.
  - The `<select></select>` WML tags are used to define a selection list
  - The `<option></option>` tags are used to define an item in a selection list. Items are presented as radio buttons in some WAP browsers.
- The <option></option> tag pair should be enclosed within the <select></select> tags.

Example 8.1

```
<?xml version="1.0"?>
<!DOCTYPE wml PUBLIC "-//WAPFORUM//DTD WML
1.3//EN""http://www.wapforum.org/DTD/wml13.dtd">
<wml>
<card id="card1" title="Selection List">
<p>
This is a selection list:<br/>
<select name="selection_list">
<option value="WML">WML Tutorial </option>
<option value="WAP">WAP Tutorial </option>
<option value="HTML">HTML Tutorial </option>
</select>
</p>
</card>
</wml>
```

- In WML, a selection list is associated with a **variable**, which stores the value of the item selected. The **variable name** is specified with the name attribute of the <select> element and the **value of an item** is specified with the value attribute of the <option> element.
- The **value** attribute of the <select> tag can be used to set the **default** option that will be selected initially.

```
<select name="selection_list" value=" WAP ">
<option value=" WML ">WML Tutorial </option>
<option value=" WAP ">WAP Tutorial </option>
<option value=" HTML ">HTML Tutorial</option>
</select>
```

<option>

- The *<option>* element specifies a particular choice within a <select> element.
- **Syntax**

```
<option title="label" value="value" onpick="url">content </option>
```

- Where content represents the text the device will display to represent the particular selection item and the action to perform if the user selects it.

```
<option value="1">
<img src="/img1" localsrc="" alt="Choice 1"/>
</option>
```

Attributes

title	A label that identifies the option.
value	Specifies the value to assign to the variable defined in the <select> element name attribute
onpick	Specifies the URL to open if the user selects the option

- **Example**

```
<wml><card>
<p>Please select your favorite color:
<select name="color">
<option value="1">red</option>
<option value="2">blue</option>
<option value="3">green</option>
```

```
<option value="4">yellow</option>
</select> </p></card></wml>
```

<select>

- The <select> element specifies a list of options from which the user can choose. You can specify either single- or multiple-choice <select> elements.
- **Syntax**

```
<select title="label" multiple="boolean" name="variable"
    value="default" tabindex="n">content </select>
```

Attributes

title	Specifies a brief label for the <select> list.
multiple	true | false Specifies whether the user can select multiple items.
name	The name of the variable in which the device stores the value(s) associated with the option(s) chosen by the user.
value	A string specifying the default value(s) for the variable specified by the name attribute.
tabindex	The UP.Browser software does not currently support this attribute.

- **Example**

```
<wml><card>
<p>Please choose your favorite animals:
<select multiple="true" name="x" >
<option value="D">Dog</option>
<option value="C">Cat</option>
<option value="H">Horse</option>
</select>
</p>
<do type="accept"><noop/></do>
</card>
</wml>
```

`<optgroup>`

- The *<optgroup>* element allows you to group multiple <option> elements within a card.
- **Syntax**

```
<optgroup title="label">content</optgroup>
```

`<fieldset>`

- The *<fieldset>* element allows you to group multiple text or input items within a card. Specifying one or more <fieldset> elements lets you control how the device presents card content in order to simplify user navigation.

- **Syntax**

```
<fieldset title="label">content</fieldset>
```

Input fields

- Input fields are used to obtain alphanumeric data from users. The **`<input/>`** tag is used to create input fields

```
<input name="myname" maxlength="16"/>
```

- Like a selection list, an input field is associated with a *variable*, which stores the data entered by the user. The variable name is specified with the *name* attribute of the <input> element.
- The *maxlength* attribute of the <input> element limits the number of characters that a user can enter in an input field.

- The input field can contain a **value** by **default**.
```
<input name="FisrtName" maxlength="16" value="Ahmed"/>
```

- **Syntax**

```
<input name="variable" title="label" type="type" value="value"
format="specifier" emptyok="boolean" size="n" maxlength="n"
tabindex="n"/>
```

Input Element (*Attributes*)	
Attribute Name	**Attribute value**
name	**Required**. The name of the variable in which the device stores the text entered by the user
title	Specifies a brief label for the input item. Some devices use the label as a tooltip when displaying the input field
type	text | password Specifies how the device should display text the user enters. Specifying type="text" causes the text to be visible. Specifying type="password" causes the text to be
value	Specifies the value of the variable named in the name attribute.
format	Specifies a data format that the user entry must match as the following:

Tag	Description
A	Any symbolic or uppercase alphabetic character (no numbers)
a	Any symbolic or lowercase alphabetic character (no numbers)
N	Any numeric character (no symbols or alphabetic characters)
X	Any symbolic, numeric, or uppercase alphabetic character (not changeable to lowercase)
x	Any symbolic, numeric, or lowercase alphabetic character (not changeable to uppercase)
M	Any symbolic, numeric, or uppercase alphabetic character (changeable to lowercase)--for multiple character input, defaults to uppercase first character
m	Any symbolic, numeric, or lowercase alphabetic character (changeable to uppercase)--for multiple character input, defaults to lowercase first character

emptyok	true | false Specifies whether the user can leave the field blank.
size	The UP.Browser software does not support this attribute.
maxlength	Specifies the maximum number of characters the user can enter.
tabindex	The UP.Browser software does not support this attribute.

- **Example**

```
<wml> <card> <p>
First Name:
<input name="fname" maxlength="15" /> <br/>
Last Name:
<input name="lname" maxlength="15" /> <br/>
State:
<input name="state" maxlength="2" emptyok="true" value="CA" />
<br/>
Zipcode:
<input name="zipcode" maxlength="10" /> <br/>
Password:
<input name="password" maxlength="8" type="password"/>
</p> </card> </wml>
```

Setting Variable Values in WML

- A major difference between WML and HTML is that WML has build-in *support of variables*.
- Variable names in WML are *case-sensitive*.
- All variables are stored as string. They have a global scope, which means once you have set the value of a variable, you can read it in any cards and decks.
- You can set the value of a variable in the following ways:

   1. Using the **<setvar/>** tag
   2. Using data collection tags **<select>** and **<input/>**

- **syntax.**
   o **$identifier**
   o **$(identifier)**

<div align="center">

Example 8.2
</div>

```
<?xml version="1.0" encoding="utf-8"?>
<!DOCTYPE wml PUBLIC "-//WAPFORUM//DTD WML 1.3//EN"
     "http://www.wapforum.org/DTD/wml13.dtd">
<wml>
<card id ="card1" title ="free form input">
<do type ="accept" label="Get Res">
<go href="#card2">
```

```
</do>
<p>
First Name:
<input  type="text" name="first" value ="Fname" size ="8"
maxlength="8" emptyok="no" format ="A*a" / ><br/>
Last Name:
<input  type="text" name="last" value ="Lname" size ="8"
maxlength="8" emptyok="yes" format ="A*a" /><br/>
Age:
<input  type="text" name="age"  size ="2" maxlength="2"
emptyok="yes" format ="2N" / ><br/>
Country:
<select name="country">
<option value ="jordan">Jordan</option>
<option value ="Syria">Syria</option>
<option value ="Ukraine">Ukraine</option>
<option value ="Russia">Russia</option>
<option value ="Italy">Italy</option>
</select></p></card>
<card id ="card2" title = "Results">
<p>Your entry:<br/>
First Name:$first <br/>
Last Name:$last <br/>
Age: $age <br/>
country: $country
</p> </card></wml>
```