Navigating between Screens using Java ME

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Overview

This code snippet demonstrates how to navigate between three different `Screen` instances. `Screen` is the superclass of all high-level user interface classes, such as `Form` and `List`.

In practice, the navigation is done by setting the current `Displayable` to the specific `Screen`:

```
private void switchCurrentScreen(Displayable displayable) {
    Display.getDisplay(this).setCurrent(displayable);
}
```

Source file

```
import javax.microedition.lcdui.Command;
import javax.microedition.lcdui.CommandListener;
import javax.microedition.lcdui.Display;
import javax.microedition.lcdui.Displayable;
import javax.microedition.lcdui.Form;
import javax.microedition.lcdui.StringItem;
import javax.microedition.midlet.MIDlet;
```

```
public class NavigationMIDlet extends MIDlet implements CommandListener {
    private Form firstScreen;
    private Form secondScreen;
    private Form thirdScreen;

    // Navigation commands
    private static final Command NEXT_COMMAND =
        new Command("Next", Command.OK, 1);
    private static final Command PREV_COMMAND =
        new Command("Previous", Command.BACK, 1);
    private static final Command EXIT_COMMAND =
        new Command("Exit", Command.EXIT, 1);;

    /**
     * Constructor. Constructs the object and initializes displayables.
     */
    public NavigationMIDlet() {
        // Initialize the screens
        initFirstScreen();
        initSecondScreen();
        initThirdScreen();
    }

    private void initFirstScreen() {
        firstScreen = new Form("First example screen");
        StringItem item = new StringItem("Description",
            "This is the first example screen.");
        firstScreen.append(item);
        firstScreen.addCommand(NEXT_COMMAND);
        firstScreen.addCommand(EXIT_COMMAND);
        firstScreen.setCommandListener(this);
    }

    private void initSecondScreen() {
        secondScreen = new Form("Second example screen");
        StringItem item = new StringItem("Description",
            "This is the second example screen.");
        secondScreen.append(item);
        secondScreen.addCommand(NEXT_COMMAND);
        secondScreen.addCommand(PREV_COMMAND);
        secondScreen.setCommandListener(this);
```


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```
    }

    private void initThirdScreen() {
        thirdScreen = new Form("Third example screen");
        StringItem item = new StringItem("Description",
            "This is the third example screen.");
        thirdScreen.append(item);
        thirdScreen.addCommand(PREV_COMMAND);
        thirdScreen.setCommandListener(this);
    }

    private void switchCurrentScreen(Displayable displayable) {
        Display.getDisplay(this).setCurrent(displayable);
    }

    /**
     * From MIDlet.
     * Called when the MIDlet is started.
     */
    public void startApp() {
        // The initial display is the first form
        switchCurrentScreen(firstScreen);
    }

    /**
     * From MIDlet.
     * Called to signal the MIDlet to enter the Paused state.
     */
    public void pauseApp() {
        // No implementation required
    }

    /**
     * From MIDlet.
     * Called to signal the MIDlet to terminate.
     * @param unconditional whether the MIDlet has to be unconditionally
     * terminated
     */
    public void destroyApp(boolean unconditional) {
        // No implementation required
    }

    /**
     * From CommandListener.
     * Called by the system to indicate that a command has been invoked on a
     * particular displayable.
     * @param command the command that was invoked
     * @param displayable the displayable where the command was invoked
     */
    public void commandAction(Command command, Displayable displayable) {
        if (command == EXIT_COMMAND) {
            // Exit the MIDlet
            notifyDestroyed();
        } else if (command == NEXT_COMMAND) {
            if (displayable == firstScreen) {
                switchCurrentScreen(secondScreen);
            } else if (displayable == secondScreen) {
                switchCurrentScreen(thirdScreen);
            }
        } else if (command == PREV_COMMAND) {
            if (displayable == secondScreen) {
                switchCurrentScreen(firstScreen);
            } else if (displayable == thirdScreen) {
                switchCurrentScreen(secondScreen);
            }
        }
    }
}
```

It is also possible to display an `Alert` before switching the screen. In addition, the switching can be done only after the user has dismissed the alert. `AlertType` class defines the type of the alert and whether user interaction is required before the screen is switched (`AlertType.CONFIRMATION`). To implement showing an informative alert (`AlertType.INFO`; doesn't require user interaction) before switching the screen, add the following code to the example above:

```
import javax.microedition.lcdui.Alert;
import javax.microedition.lcdui.AlertType;
```

```
private void switchCurrentScreen(Alert alert, Displayable displayable) {
    Display.getDisplay(this).setCurrent(alert, displayable);
}
```

```
Alert alert = new Alert("Screen changing",
    "Switching current screen in a moment...", null, AlertType.INFO);
switchCurrentScreen(alert, firstScreen);
```

Postconditions

The MIDlet demonstrates navigation between three different screens.

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