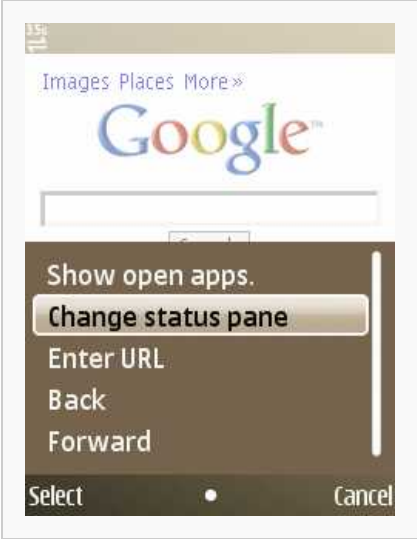
Using eSWT Browser in Java ME

This code snippet demonstrates how to use eSWT's Browser class in Java ME.

Overview

The Browser class instance implements the browser user interface metaphor and it allows the user to visualize and navigate through HTML documents. This example has also "Back", "Forward", and "Open URL" Commands for navigating to the previous or next session history items and for opening desired HMTL page. The MIDlet uses MobileShell, because it has a possibility to change the status pane size. The following section contains the complete code for compiling and running the example application.

A Browser-MIDlet integration



The custom Browser with the Option menu expanded

Source code

```
import javax.microedition.midlet.MIDlet;
import org.eclipse.swt.SWT;
import org.eclipse.swt.SWTError;
import org.eclipse.swt.events.SelectionEvent;
import org.eclipse.swt.events.SelectionListener;
import org.eclipse.swt.layout.FillLayout;
import org.eclipse.swt.widgets.Display;
import org.eclipse.ercp.swt.mobile.MobileShell;
import org.eclipse.swt.widgets.MessageBox;
import org.eclipse.swt.browser.Browser;
import org.eclipse.ercp.swt.mobile.QueryDialog;
import org.eclipse.ercp.swt.mobile.Command;


public class BrowserMIDlet extends MIDlet implements SelectionListener, Runnable {
    private Command exitCommand;
    private Command backCommand;
    private Command openCommand;
    private Command forwardCommand;
    private Command changeCommand;
    private Display display;
    private MobileShell shell;
    private Thread uiThread;
```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```
    private Browser browser = null;
    private boolean exiting = false;
    private int style = 2;  //MobileShell.SMALL_STATUS_PANE
    private String url = "http://www.google.com";

    public void startApp() {
        if(uiThread == null) {
            uiThread = new Thread(this);
            uiThread.start();
        }
    }

    public void pauseApp() {
     //To do
    }

    public void destroyApp(boolean unconditional) {
        exitEventLoop();
        try {
            uiThread.join();
        }
        catch(InterruptedException e) {
         //To do
        }
    }

    void exitEventLoop() {
        exiting = true;
        Display.getDefault().wake();
    }

    public void run() {
        display = new Display();
        shell = new MobileShell(display, SWT.NONE, style);
        shell.setLayout(new FillLayout());
        exitCommand = new Command(shell, Command.EXIT, 0);
        exitCommand.setText("Exit");
        exitCommand.addSelectionListener(this);
        backCommand = new Command(shell, Command.BACK, 0);
        backCommand.setText("Back");
        backCommand.addSelectionListener(this);
        forwardCommand = new Command(shell, Command.OK, 0);
        forwardCommand.setText("Forward");
        forwardCommand.addSelectionListener(this);
        openCommand = new Command(shell, Command.OK, 1);
        openCommand.setText("Enter URL");
        openCommand.addSelectionListener(this);
        changeCommand = new Command(shell, Command.OK, 2);
        changeCommand.setText("Change status pane");
        changeCommand.addSelectionListener(this);
        try {
            browser = new Browser(shell, SWT.NONE);
        } catch (SWTError e) {
            MessageBox message = new MessageBox(shell, SWT.NONE);
            message.setText("SWTError: " + e.getMessage());
            message.open();
        }
```


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```
        if (browser != null) {
            browser.setUrl(url);
        }
        shell.open();
        while(!exiting) {
            if(!display.readAndDispatch()) {
                display.sleep();
            }
        }
        browser.dispose();  // dispose objects
        shell.dispose();
        display.dispose();
        notifyDestroyed();  // exit MIDlet
    }

    public void widgetSelected(SelectionEvent e) {
        if (e.widget.equals(exitCommand)) {
            exitEventLoop();
        }
        if (e.widget.equals(backCommand)) {
            if (browser.isBackEnabled()) browser.back();
        }
        if (e.widget.equals(forwardCommand)) {
            if (browser.isForwardEnabled()) browser.forward();
        }
        if (e.widget.equals(openCommand)) {
            QueryDialog dialog = new QueryDialog(shell, SWT.NONE, QueryDialog.STANDARD);
            dialog.setPromptText("Enter URL:", "http://");
            url = dialog.open();
            if (url != null) {
                browser.setUrl(url);
                shell.redraw();
            } else {}
        }
        if (e.widget.equals(changeCommand)) {
            if (style < 3) style = style + 1;
            else if (style == 3) style = 1;
            shell.changeTrim(SWT.SHELL_TRIM, style);
        }
    }

    public void widgetDefaultSelected(SelectionEvent arg0) {
     //To do
    }
}
```

Postconditions

When a `BrowserMIDlet` is opened, a browser window is shown on the screen. The browser will open the URL http://www.google.com.

See also

- eSWT

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