CS 696 Mobile Phone Application Development
Fall Semester, 2009
Doc 13 Fonts & WebView (Preliminary copy)
Oct 13, 2009

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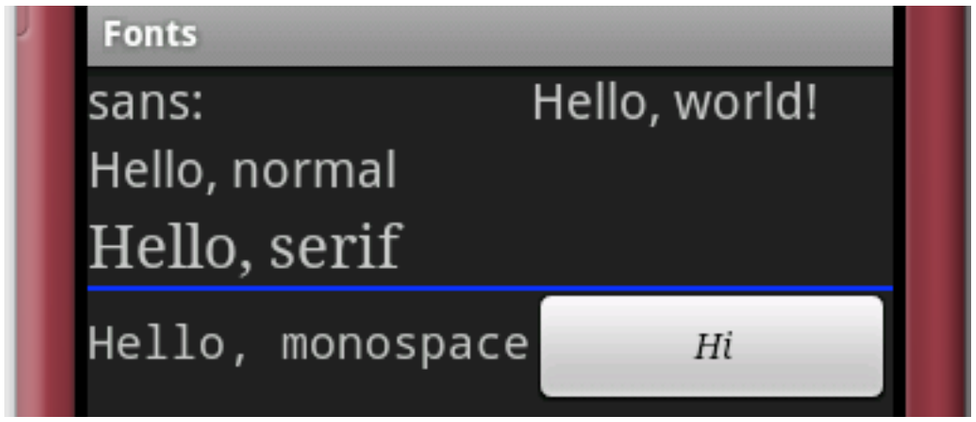
onClick()

Fonts

sans (normal)
serif
monospace




```
<TextView
    android:text="Hello, world!"
    android:typeface="sans"
    android:textSize="20sp"
  />
```

```
<Button
    android:text="Hi"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:textStyle="italic"
    android:typeface="serif">
  </Button>
```

TableView

```
<TableLayout
        android:layout_width="fill_parent"
        android:layout_height="fill_parent"
        android:stretchColumns="1">
            <TableRow

            android:layout_width="wrap_content"


    android:layout_height="wrap_content">
                    <TextView
                      android:text="sans:"
                      android:layout_marginRight="4px"
                      android:textSize="20sp"
                    />
                    <TextView
                      android:text="Hello, world!"
                      android:typeface="sans"
                      android:textSize="20sp"
                    />
        </TableRow>
</TableLayout>
```

Each item in a row starts a new column

layout_span

```
<EditText
    android:id="@+id/entry"
    android:layout_span="3"/>
```

Number of columns a item spans

layout_column

```
<TableRow>
  <Button
    android:id="@+id/cancel"
    android:layout_column="2"
    android:text="Cancel" />
  <Button android:id="@+id/ok" android:text="OK" />
</TableRow>
```

Stretch & Shrink

android:stretchColumns="1"

android:stretchColumns="0,3"

android:shrinkColumns="2"

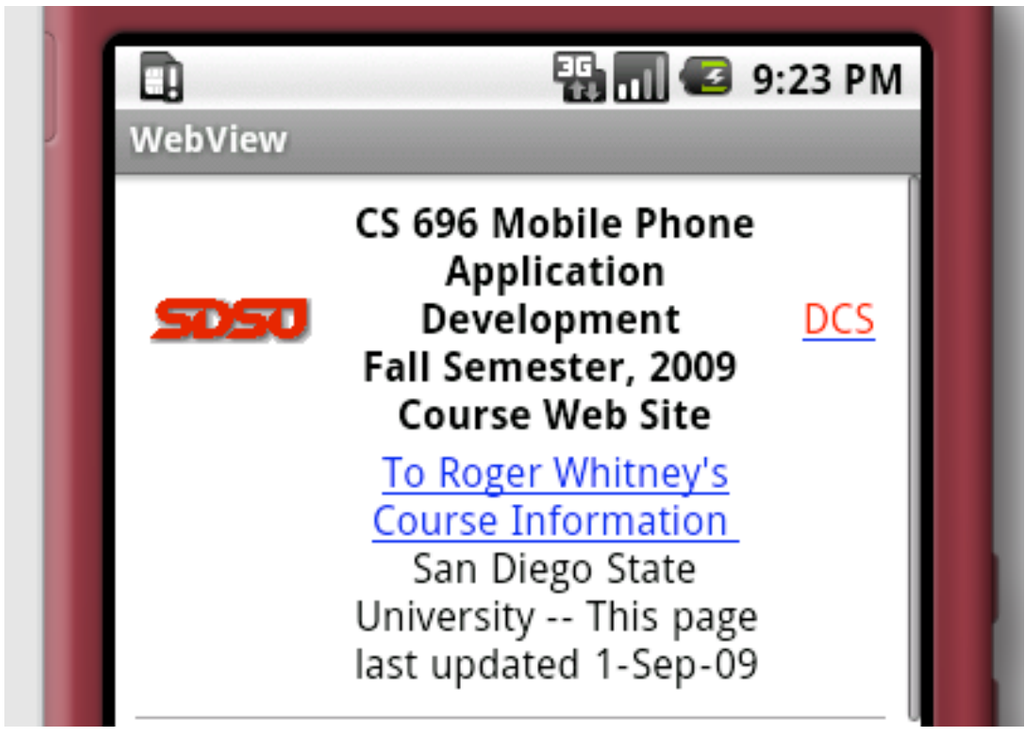
The Blue Line

<View android:layout_height = "2px" android:background = "#0000FF" />

ScrollView

```
<ScrollView
      xmlns:android="http://schemas.android.com/apk/res/android"
      android:layout_width="fill_parent"
      android:layout_height="wrap_content">
      <TableLayout
        android:layout_width="fill_parent"
        android:layout_height="fill_parent"
        android:stretchColumns="1">
            <TableRow
          android:layout_width="wrap_content"
          android:layout_height="wrap_content">
            </TableRow>
      </TableLayout>
</ScrollView>
```

WebView


9:23 PM
WebView
CS 696 Mobile Phone Application Development Fall Semester, 2009 Course Web Site
DCS
To Roger Whitney's Course Information
San Diego State University -- This page last updated 1-Sep-09

Activity

```
import android.app.Activity;
import android.os.Bundle;
import android.webkit.WebView;

public class WebViewExample extends Activity {
    @Override
    public void onCreate(Bundle savedInstanceState) {
      super.onCreate(savedInstanceState);
      setContentView(R.layout.main);
      WebView browser = (WebView) findViewById(R.id.web);
      browser.loadUrl("http://www.eli.sdsu.edu/courses/fall09/cs696/index.html");
    }
}
```

main.xml

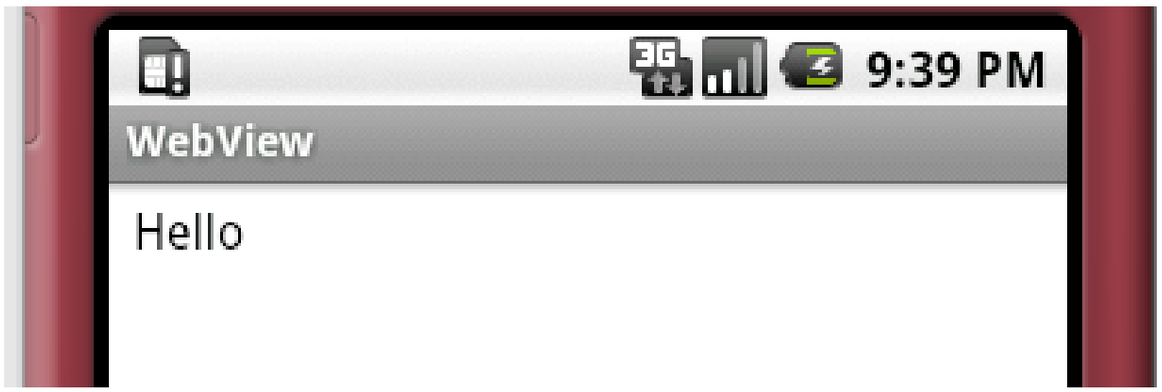
```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:orientation="vertical"
    android:layout_width="fill_parent"
    android:layout_height="fill_parent"
    >
      <WebView android:id="@+id/web"
      android:layout_width="fill_parent"
    android:layout_height="fill_parent"
      />
</LinearLayout>
```

Don't Forget INTERNET Permisson

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
      package="edu.sdsu.cs.whitney"
      android:versionCode="1"
      android:versionName="1.0">
    <application android:icon="@drawable/icon" android:label="@string/app_name">
        <activity android:name=".WebViewExample"
                  android:label="@string/app_name">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />
                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>
    </application>
    <uses-sdk android:minSdkVersion="3" />
      <uses-permission android:name="android.permission.INTERNET" />
</manifest>
```

Local Pages

```
browser.loadData("<html><body>Hello</body></html>", "text/html",
                 "UTF-8");
```

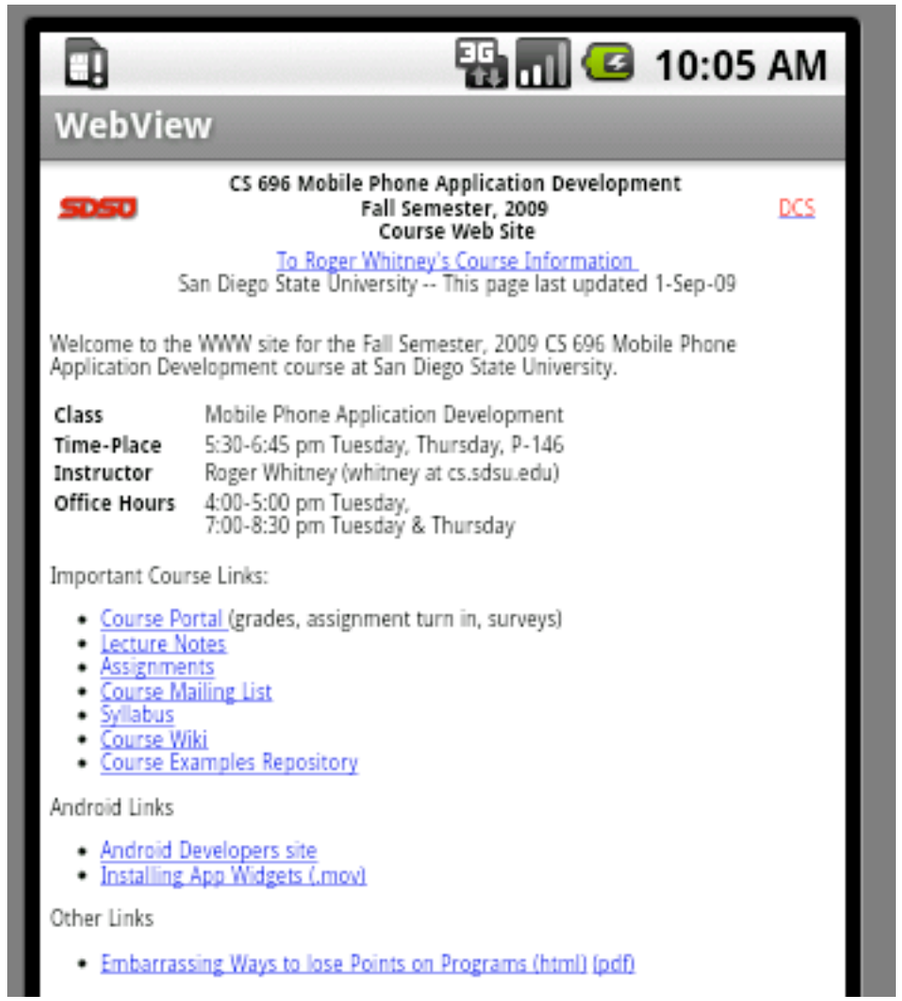


Navigation Methods WebView

reload()
goBack()
goForward()
canGoForward()
clearCache()
clearHistory()

Some WebView Features

Padding
Builtin Zoom Controls
Settings
JavaScript
InitialScale



zoom controls are a bit difficult to get. click and drag

WebViewExample

```
public class WebViewExample extends Activity {
    WebSettings viewSettings;
    WebView browser;

  public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.main);
        takeKeyEvents(true);
        this.browser = (WebView) findViewById(R.id.web);
    this.browser.setPadding(2, 2, 2, 2);
    this.browser.setInitialScale(50);
    this.viewSettings = this.browser.getSettings();
    this.viewSettings.setBuiltInZoomControls(true);
    this.viewSettings.setJavaScriptEnabled(true);
    this.browser
            .loadUrl("http://www.eli.sdsu.edu/courses/fall09/cs696/index.html");
}
```

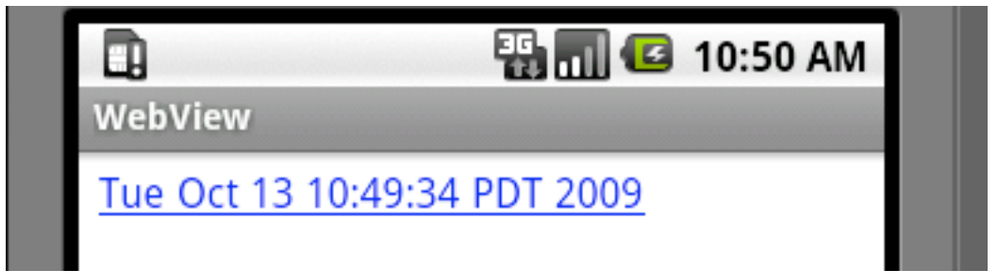
WebViewExample

```
public boolean onKeyDown(int keyCode, KeyEvent event) {
    if (keyCode == KeyEvent.KEYCODE_S) {
        Toast.makeText(this, this.viewSettings.getUserAgentString(),
                Toast.LENGTH_LONG).show();
        return true;
    } else if (keyCode == KeyEvent.KEYCODE_Z) {
        this.browser.zoomIn();
        return true;
    } else if (keyCode == KeyEvent.KEYCODE_O) {
        this.browser.zoomOut();
        return true;
    }
    return super.onKeyDown(keyCode, event);
}
```

WebViewSettings

Allow file access
User agent
cache mode
font information
Javascript allowed to run
Javascript allowed open windows
Layout algorithm
load images
Enable plugins
Save form data
Save passwords

WebClient



Based on an example from The Busy Coder's Guide to Android Development, V2.1, Mark L. Murphy

The Activity

```
public class WebViewExample extends Activity {
    private WebView browser;

    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.main);
        takeKeyEvents(true);
        this.browser = (WebView) findViewById(R.id.web);
        this.browser.setWebViewClient(new RedirectClient());
        loadTime();
}

  void loadTime() {
        String page = "<html><body><a href=\"clock\">" + new Date().toString()
            + "</a></body></html>";

        this.browser.loadDataWithBaseURL("x-data://base", page, "text/html",
            "UTF-8", null);
}
```

RedirectClient

```
private class RedirectClient extends WebViewClient {
    public boolean shouldOverrideKeyEvent(WebView view, KeyEvent event) {
        WebViewExample.this.browser
                .loadUrl("http://www.eli.sdsu.edu/courses/fall09/cs696/index.html");
        return true;
    }

    public boolean shouldOverrideUrlLoading(WebView view, String url) {
        Toast.makeText(WebViewExample.this, url, Toast.LENGTH_LONG).show();
        loadTime();
        return true;
    }
}
```

WebViewClient

History
Form resubmission
load resource
Page start
Page finish
Handle errors
Http Authentication request
Scale change
Too many redirects
Key events
Override URL loading

WebChromeClient & Download

Activity

```
public class WebViewExample extends Activity {
    private WebView browser;

    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.main);
        takeKeyEvents(true);
        this.browser = (WebView) findViewById(R.id.web);
        WebSettings viewSettings = this.browser.getSettings();
        viewSettings.setBuiltInZoomControls(true);
        viewSettings.setJavaScriptEnabled(true);

        this.browser.setWebChromeClient(new ChromeClient());
        this.browser.setDownloadListener(new DownloadListener() {
            public void onDownloadStart(final String url, String userAgent,
                    String contentDisposition, String mimetype,
                    long contentLength) {
                Toast.makeText(WebViewExample.this, url, Toast.LENGTH_LONG);
            }
        });
        this.browser
                .loadUrl("http://www.eli.sdsu.edu/courses/fall09/cs696/index.html");
    }
```

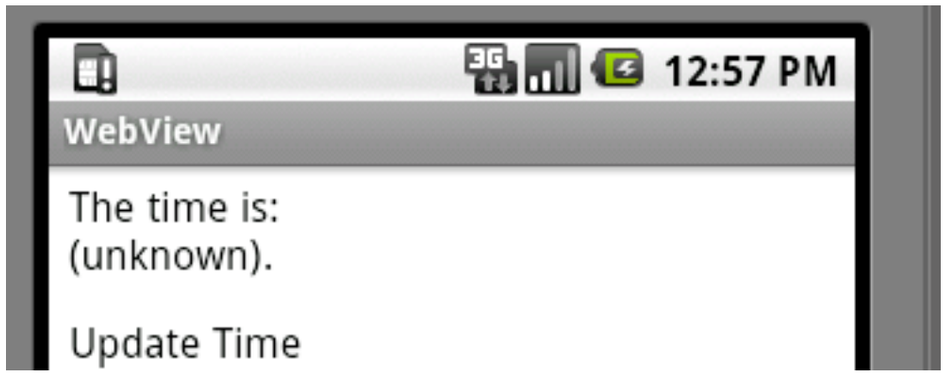
ChromeClient

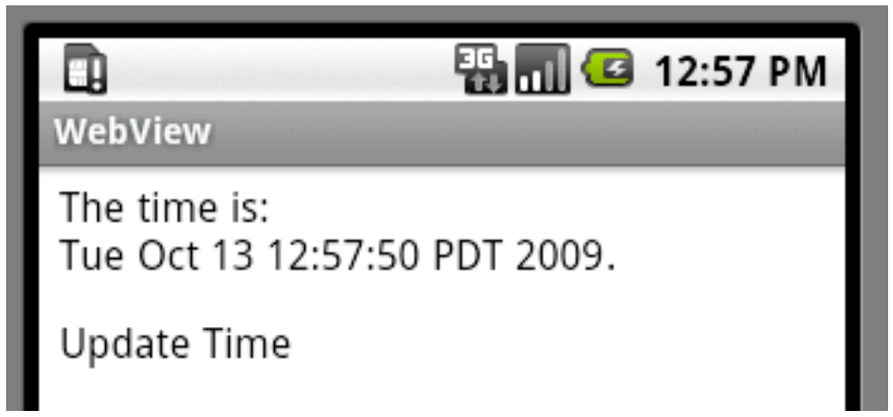
```
private class ChromeClient extends WebChromeClient {

    public boolean onJsAlert(WebView view, String url, String message,
            final JsResult result) {
        Toast.makeText(WebViewExample.this, "JsAlert", Toast.LENGTH_LONG);
        return true;
    };
}
```

WebChromeClient

onCloseWindow
onCreateWindow
onJsAlert
onJsBeforeUnload
onJsConfirm
onJsPrompt
onProgressChanged
onReceivedIcon
onReceivedTitle
onRequestFocus

addJavascriptInterface





Activity

```
public class WebViewExample extends Activity {

    private WebView browser;

    @Override
    public void onCreate(Bundle savedInstanceState) {
      super.onCreate(savedInstanceState);
      setContentView(R.layout.main);
      takeKeyEvents(true);
      this.browser = (WebView) findViewById(R.id.web);
      WebSettings viewSettings = this.browser.getSettings();
      viewSettings.setJavaScriptEnabled(true);
      this.browser.addJavascriptInterface(new SampleJavaCode(), "javaClock");
      this.browser.loadUrl("file:///android_asset/Sample.html");
    }
}
```

SampleJavaCode

```
public class SampleJavaCode {
    public String time() {
       return new Date().toString();
    }
}
```

assets/Sample.html

```
html>
<head>
<title>Javascript Interface Example</title>
<script language="javascript">
  function getTime() {
    document.getElementById("time").innerHTML=javaClock.time();
  }
</script>
</head>
<body>
<p>
The time is: <br/> <span id="time">(unknown)</span>.

</p>
<p><a onClick="getTime()">Update Time</a></p>
</body>
</html>
```