

# **HW7:**

# **MENU APP**

Martin Mudenda Bbela

2582912

## Overview

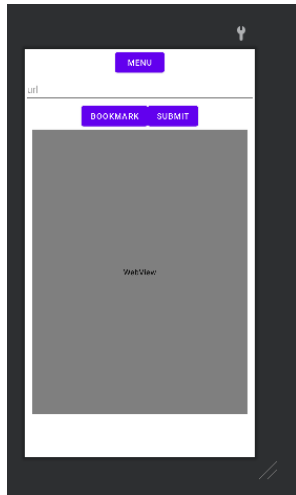
Make the following modification to the Menu app we just build:

- Add a EditText for the user to enter a URL
- Place the button on the right of the EditText and rename to “submit”
- Add another button beneath the EditText and name it to ”bookmark”
- On clicking the submit button, the URL should be displayed in the WebView
- On clicking the bookmark button, the current URL should be saved as a bookmark
- The menu for the app now should display a list of saved bookmarks
- On selecting a saved bookmark, the corresponding webpage should be displayed

## Method

## Layout

The Layout was setup as described. With an EditText and 3 Buttons, as well as a WebView Below it.



## Main Activity

The WebView, EditText and Buttons are initialized in the onCreate before they are used. The Menu Button is attached to the ContextMenu of this activity. Later I will explain how the menu is created

```

super.onCreate(savedInstanceState);
setContentView(R.layout.activity_main);

bookmarks = new ArrayList();

etUrl = findViewById(R.id.editTextUrl);

Button btnMenu = findViewById(R.id.buttonMenu);
btnMenu.setOnCreateContextMenuListener(this);

wv = findViewById(R.id.webview);
WebSettings webSettings = wv.getSettings();
webSettings.setBuiltInZoomControls(true);
wv.loadUrl(" https://www.futurity.org/wp-content/uploads/2019/02/viceroy-butterfly_1600.jpg ");
wv.setWebViewClient(new WebViewClient());

```

The Submit Button was wired to open the url contained in the EditText in the webview.

```

Button btnSubmit = findViewById(R.id.buttonSubmit);
btnSubmit.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View view) {
        String input = etUrl.getText().toString();
        if(!input.isEmpty())
            wv.loadUrl(input);
    }
});

```

The Context Menu is created and it is populated by running through the bookmarks list and making each one a menuItem. As the list start off as empty it will be an empty list until bookmarks are added to it.

```

@Override
public void onCreateContextMenu(ContextMenu menu, View v, ContextMenu.ContextMenuInfo menuInfo) {
    super.onCreateContextMenu(menu, v, menuInfo);
    createMenu(menu);
}

@Override
public boolean onContextItemSelected(@NonNull MenuItem item) { return menuChoice(item); }

private void createMenu(Menu menu) {
    menu.clear();

    for (int i = 0; i < bookmarks.size(); i++) {
        menu.add(groupId: 0, i, i, bookmarks.get(i));
    }
}

private boolean menuChoice(MenuItem item) {
    String stringUri = bookmarks.get(item.getItemId());

    if(!stringUri.isEmpty()){
        etUrl.setText(stringUri);
        wv.loadUrl(stringUri);
        return true;
    }

    return false;
}

```

The Bookmark Button Will save the URL in the bookmarks List which will be used to populate the context Menu.

```

Button btnBookmark = findViewById(R.id.buttonBookmark);
btnBookmark.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View view) {
        String input = etUrl.getText().toString();

        if(!input.isEmpty()){
            bookmarks.add(input);
            invalidateOptionsMenu();
        }
    }
});

```

The invalidateOptionsMenu() will force the ContextMenu To recreate itself. This will run through the bookmarks again and add them to the Menu.

## Results

User are able to view websites written in the url and save them to view later.

