

INF5120 – Spring 2015

Oblig 2 – “SenseIt–Android App Realisation with IFML and WebRatio”

Model-based realisation from the Business architecture and Requirements from Oblig 1.

Groups – continued from Oblig 1 - Group report submission date: Monday April 20th, 2015 at noon (i.e. before the class that day).

Description:

INF5120-2015 Oblig 2 is focusing on a model-based realisation of the SenseIt App specification from Oblig 1, using IFML and WebRatio for Mobile.

The purpose of Oblig 2 is to get training in practical implementation using a model based approach with the recently standardised Interaction Flow Modeling Language (IFML) and the support for this in the WebRatio tool environment, www.webratio.com with the new version WebRatio mobile.

The main steps (which are documented in more detail below) are as follows:

- 1) Install WebRatio Mobile Platform
- 2) Read IFML book (on INF5120 course pages) and information from Lecture 8
- 3) See WebRatio handbook (on INF5120 course pages)
- 4) Watch WebRatio video tutorials – download and execute the simple mobile example
- 5) Create a Scrum plan for SenseIt system realisation
- 6) Realise the first sprint for SenseIt system realisation (domain model, interaction flow/execution model)
- 7) Document the App model
- 8) Demonstrate the Android App in class.

Installation of WebRatio Mobile Platform

Register on the WebRatio website as a student with e.mail address ending with uio.no (to be automatically granted UiO University access WebRatio credentials).

See the video tutorial.

Setting Up WebRatio Mobile Platform

IT Operator Beginner Set Up

196 views Published on Feb 23, 2015 | Time 7 min

Activate Download Install Linux Mac Register Windows

Applies to: 8.0 or higher

Downloading, registering, and activating WebRatio Mobile Platform involves several decisions that are not easy to take without proper knowledge.

Attend this lesson to understand all the steps and to find some help if something goes wrong.

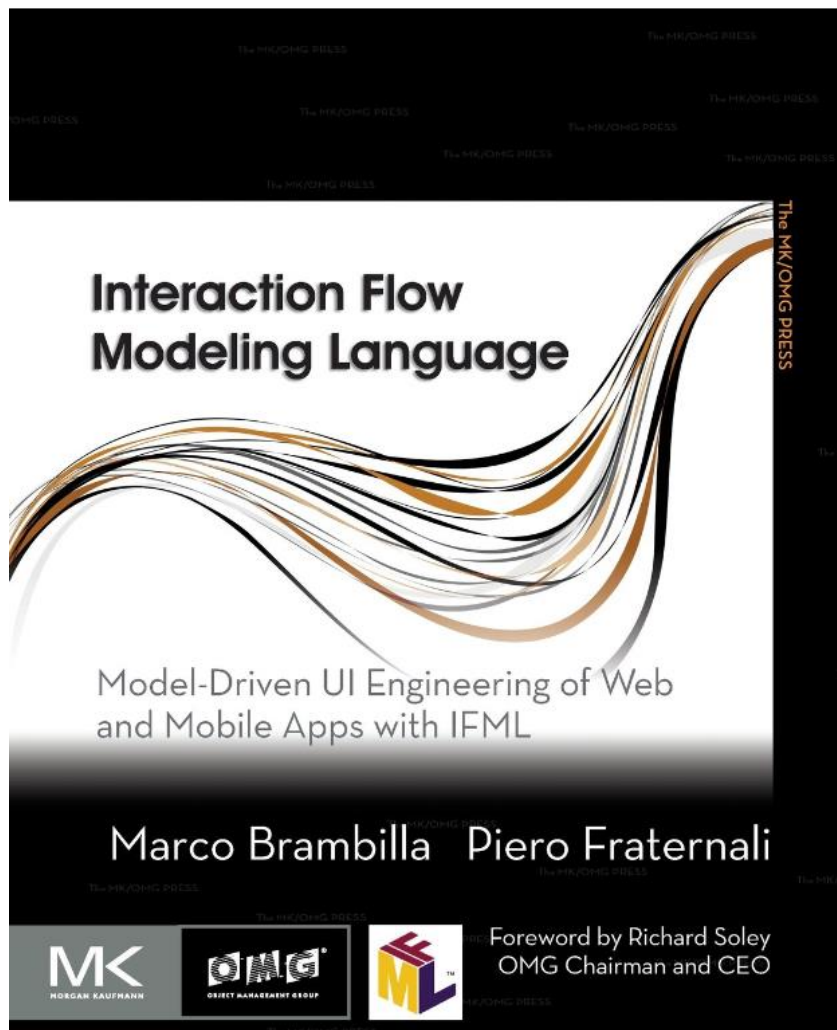


As we will not be using a shared source code system/repository for the development it is best that

the group members install WebRatio on their individual machines, but that the group use one reference machine as the basis for the group implementation.

IFML book and IFML specification

Find detailed descriptions of the use of IFML in the book draft “IFML-book-preview” with 189 pages. This is a preview of the IFML book that was published in December 2014.



The technical standard specification of IFML, (with metamodels) in the IFML standard document, from February 2015 is available from the OMG website.

The IFML standard document can be found here: <http://www.omg.org/spec/IFML/>

WebRatio tutorials

Go through the WebRatio tutorials that you can find on: <http://www.webratio.com/learn> and/or learn.webratio.com



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[Get Started](#)

In particular it is recommended to go through the following video tutorials: [Setting up WebRatio](#), [Developing Web Applications](#), [WebRatio General Overview](#), [WebRatio Projects](#), [Your First Web Application](#) and [View Components and Data Binding](#).

Your first mobile App

See the video tutorials for running the ACME Webstore example in the DropBox folder and in the protected Ifi course page. These are made by a student from Florida Atalantic University (FAU).



Your First Mobile App

Getting Started with WebRatio Platform

Modeler Beginner Set Up

705 views Published on Jan 08, 2015 | Time 3 min

Sample Project

Applies to: 8.0 or higher

Create your first Hello World mobile application with our 3mins tutorial.

Follow this beginner guide to find your right way in getting started through the wide offer of options and features.



SunBit UV sensor support through SensApp – for access to UV sensor data

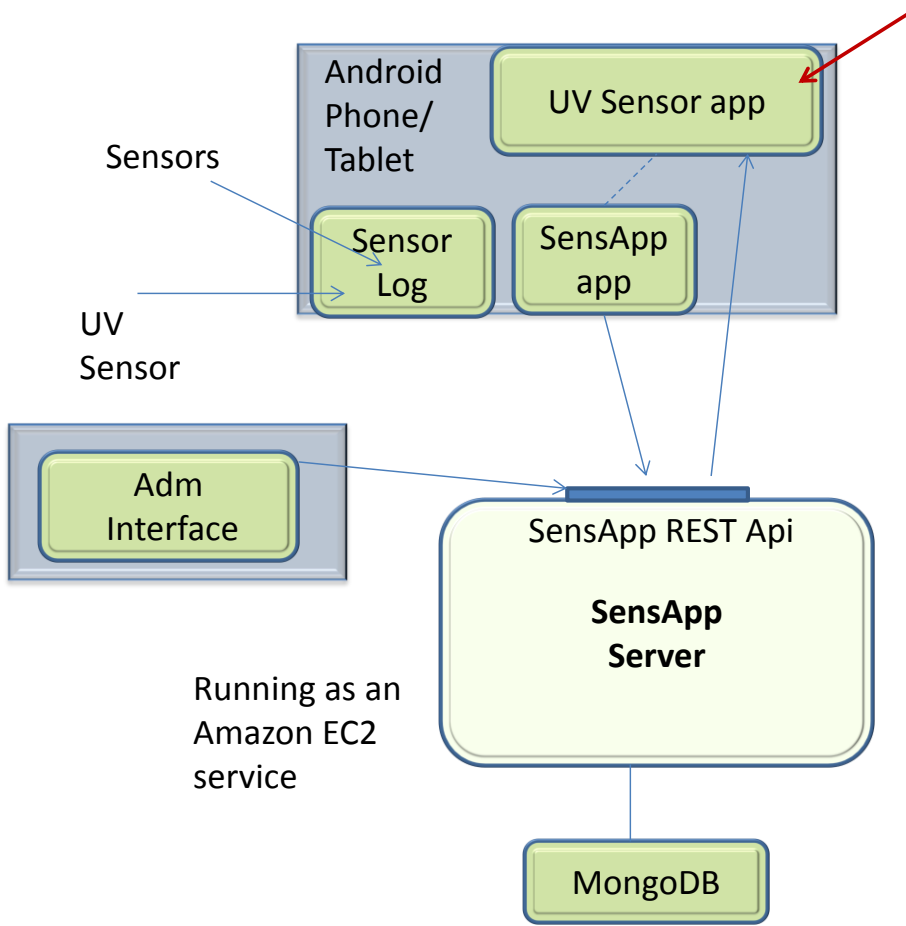
In order to avoid spending time on the code for connection from the SunBit Bluetooth UV sensor to Android and further to a server with database, we are providing a precoded version of this through the SensApp system.

See the separate document

You will be provided with a private key for access for the following for Public DNS:

<http://ec2-52-16-216-48.eu-west-1.compute.amazonaws.com:8080/SensAppGUI/>

The system architecture is as shown in the following figure, where the focus of Oblig 2 is the development of the UV Sensor app (for Android or iPhone):



Information about how to create back-end access for EST Web services for WebRatio can be seen in the following two video tutorials.

Your First Back-End Application \$

Getting Started with WebRatio Mobile Platform

Modeler Beginner Set Up

90 views Published on Feb 16, 2015 | Time 6 min

DataService Project REST Web Services

Applies to: 8.0 or higher

Mobile applications usually refers to external data source in order to read, create, update and delete information.

A back-end application is the background layer providing a data structure and a set of REST services that allow the mobile application (front-end layer) to access to this data.

In t...



Progress



Invoking REST Web Service

Modeling Actions with WebRatio Platform

Modeler Expert Model Action

46 views Published on Jan 13, 2015 | Time 18 min

REST Restful Request Response WADL Web Services XSD

Applies to: 7.2 or higher

Usually, Web applications are not standalone; they need to integrate with external systems and other applications in the company intranet. The best way to make different applications communicate with one another is to use a Web service infrastructure. That's why it is important to know how you can...



Creation of a Scrum plan for the SenseIt system realisation

Starting with the user stories/use cases that were specified in Oblig 1 create an initial sprint plan with at least 3 sprints, and do an initial allocation of different user stories to various sprints. For Oblig 2 you are only required to execute the first sprint, additional sprints are optional.

Support the activities of the group through the use of the Symphonical tool.

Symphonical: www.symphonical.com

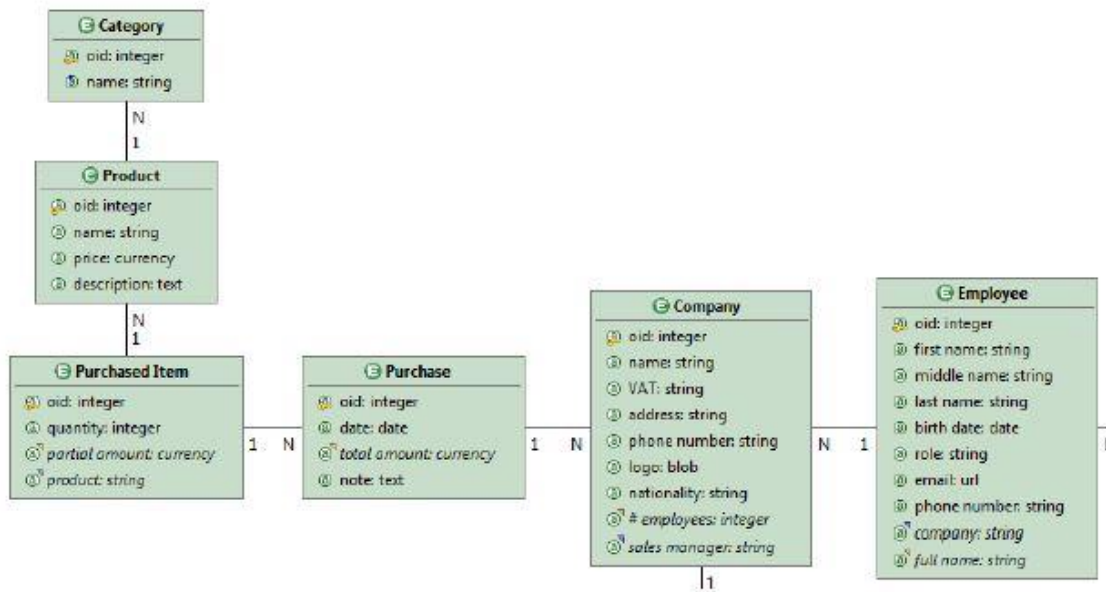
Realisation of a first sprint for the SenseIt system

Realise the part of the SenseIt system that you have specified for your first sprint, using IFML and WebRatio Mobile Platform.

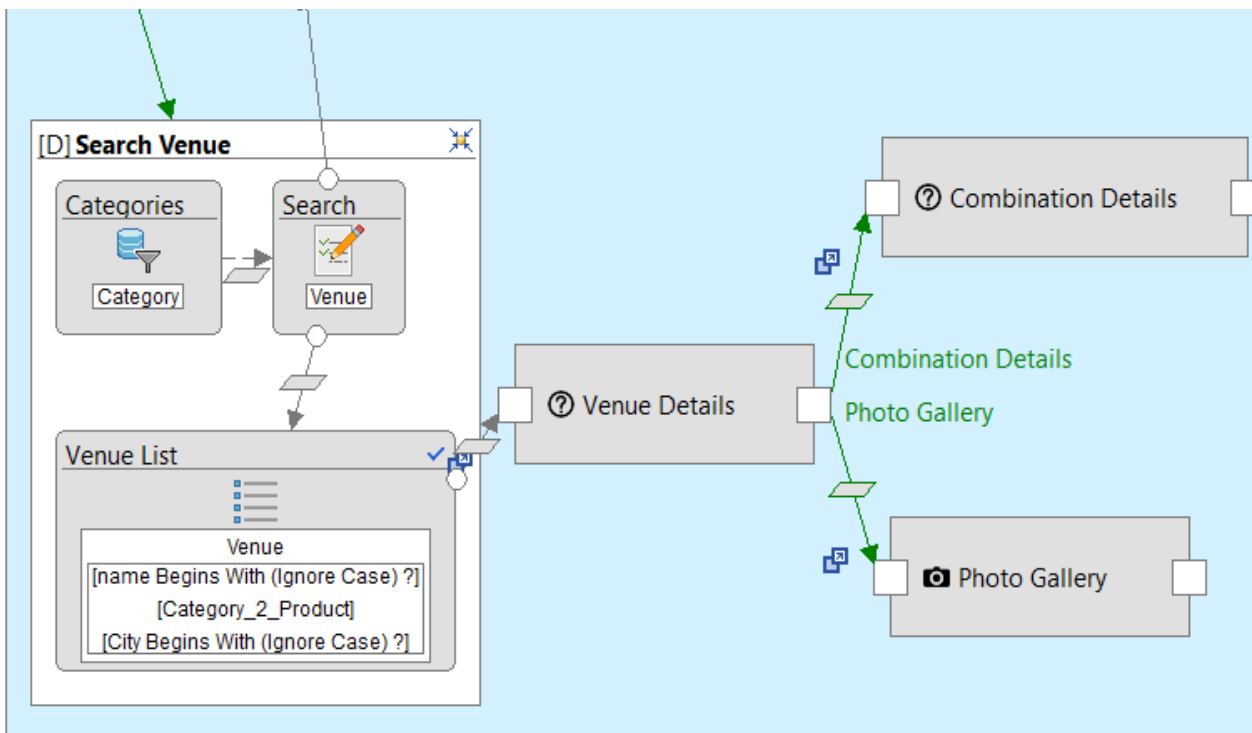
The objective of the first sprint could be to retrieve and show recent UVA and UVB sensor values from the SensApp server using the RESTful SensApp interface from the WebRatio app.

In order to not be dependent on having a running UV sensor installation on your SmartPhone – we have run some sessions recording UV sensor data – and will provide you with the details for how to access this. In this way it will be possible to create and run apps for this both for Android and iPhone. We currently have the Bluetooth access code only for Android.

Creation of a domain model (example)



Creation of Interaction/Execution flows (example)



Final Delivery for April 20^h, 2015

The groups are required to provide the final delivery in Devilry, as a PDF document with their Scrum plan and model pictures/diagrams included for the WebRatio domain model and the interaction/execution flow models, and relevant user interfaces from the running app. One delivery from each group is sufficient.

Include a description of any deviations from the specification from Oblig 1, and a conclusion with a short evaluation of the strong and weak points of model driven development with WebRatio.

There will be a support and issue resolution session for Oblig 2 in the lecture time on April 13th.

The result of the first sprint should be demonstrated in class on April 20^h.