

Agile Software Development

Produced
by

Eamonn de Leastar (edelestar@wit.ie)

Department of Computing, Maths & Physics
Waterford Institute of Technology

<http://www.wit.ie>

<http://elearning.wit.ie>



Waterford Institute of Technology
INSTITIÚID TEICNEOLAÍOCHTA PHORT LÁIRGE



Assignment 2

Pacemaker 2.0

- Enhance the pacemaker application along 4 axis
 1. Deployment
 2. Features
 3. User eXperience (UX)
 4. Developer eXperience (DX)
- Top marks may be achieved by addressing (1) and any two of 2-4

Pacemaker Deployment

- Version 1.0
 - The application is a standalone console process.
 - All IO is via standard in/out.
- Version 2.0
 - Deploy the app to a service environment e.g. Heroku, Amazon.
 - Expose the app via an API e.g. convert to Play → RESTful API
 - The API supports some protocol e.g. REST.

Pacemaker Deployment - Remaining Agile Labs

Deploy Version 1.0

as REST Service

(i.e. Play Framework, version 2.2.6).

Initiated in week 8 labs.

Features - Explore RunKeeper

[Sign Up](#)[Log In](#)

RunKeeper



The Personal Trainer In Your Pocket.


RunKeeper makes tracking your workouts fun, social, and easy to understand so that you can improve the quality of your fitness.

 [Sign Up With Facebook](#) or [Sign Up with Your Email](#)


or Get the App


 GET IT ON Google play


 Available on the App Store





edel020
Active since Aug, 2013


**DASHBOARD**

**REPORTS**

**TRAINING**

**ACTIVITIES**

**FRIENDS**

**ROUTES**

Date of Activity:

<	October 2013					>
Su	Mo	Tu	We	Th	Fr	Sa
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

Activity Viewable By:

Everyone

Duration:

00 : 00 : 00

Start Time:

09 : 25 AM

Distance:

 km

Calories:

Average Heart Rate (optional):

 bpm

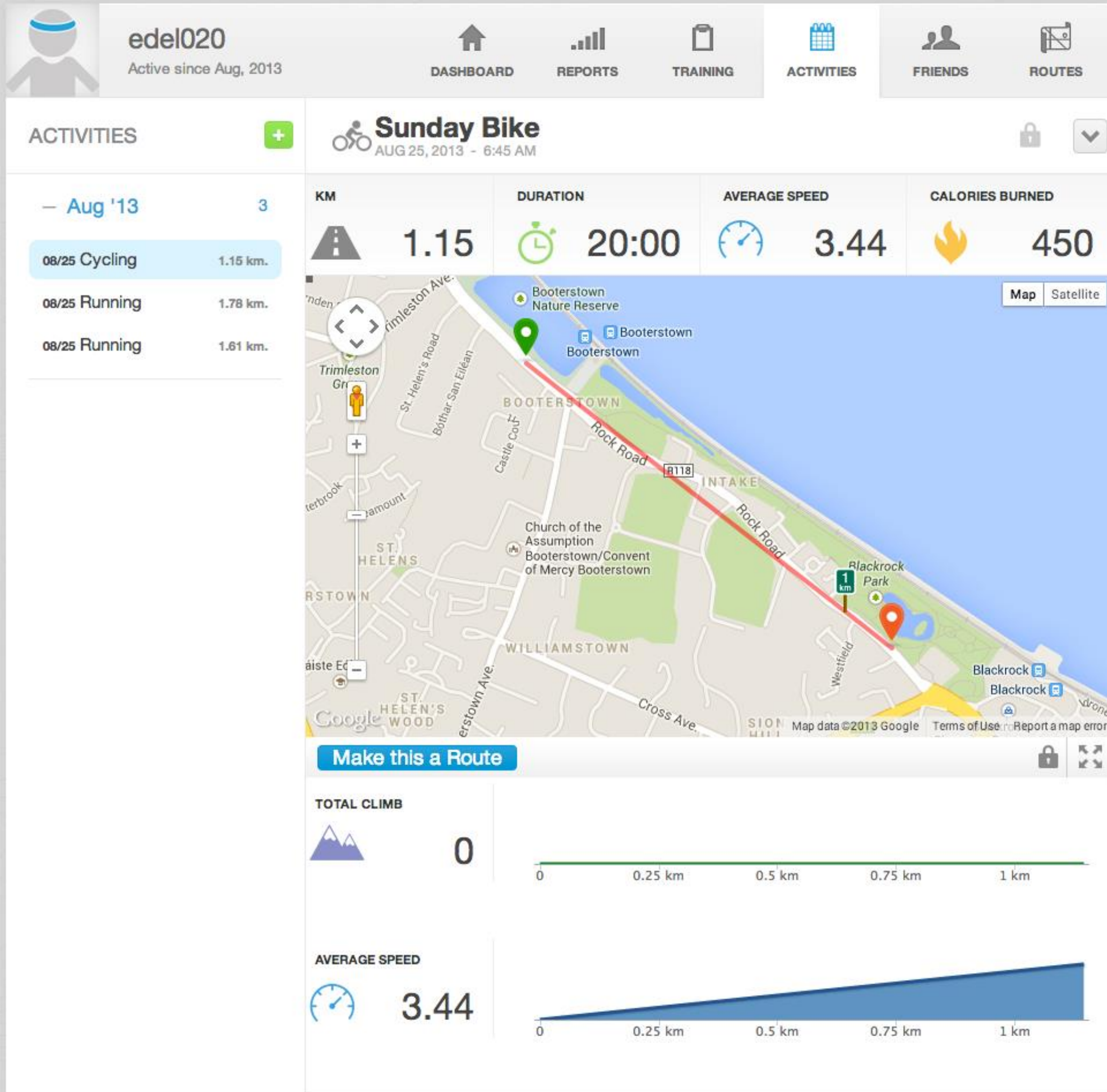
Or you can [upload](#)
a heart rate file from your
Polar Device.

How did it go?:

I completed this activity with...

No one else

[+ Add friends](#)[Back](#)[Save](#)





edel020

Active since Aug, 2013

DASHBOARD

REPORTS

TRAINING

ACTIVITIES

FRIENDS

ROUTES

REPORTS

All Cardio

Running

Cycling

Weight

Strength Training

Sleep

Advanced Fitness Reports

Suggested Apps for Activity Tracking



Withings



GymPact



UP



Run Calendar



Caledos Runner on Windows Phone

All Cardio

Sep 24, 2013 - Oct 24, 2013

Last 30 Days

Last 3 Months

Current Year

Lifetime

Custom

DISTANCE

0

DURATION

Become Elite

CALORIES

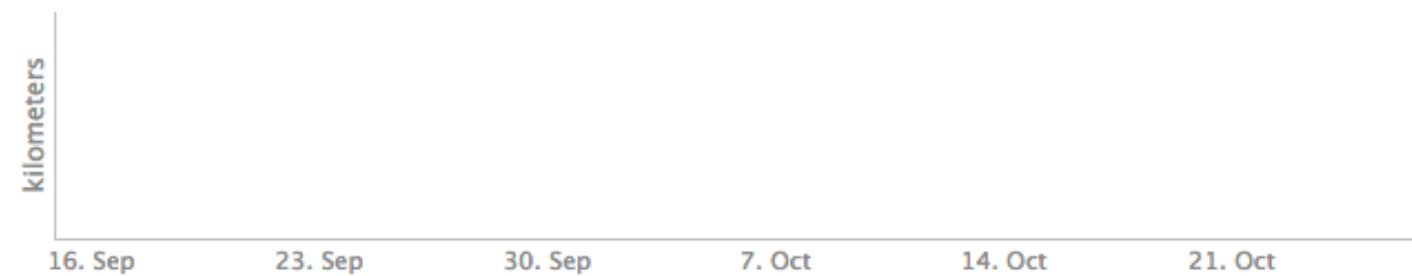
Become Elite

Day

Week

Month

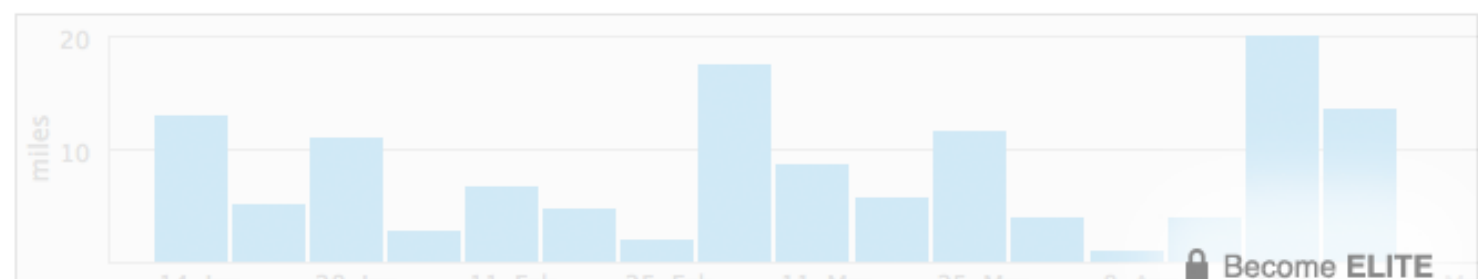
Distance



Duration



Calories Burned





edel020

Active since Aug, 2013



DASHBOARD



REPORTS



TRAINING



ACTIVITIES



FRIENDS



ROUTES

DASHBOARD

Info

LOCATION:
([set a location](#))

I AM A:
Cyclist

MY MOTIVATION:
([set motivation](#))

Stats

TOTAL ACTIVITIES:
3

TOTAL DISTANCE:
5 km

TOTAL CALORIES:
1,300

You haven't entered your weight yet!

[Enter Your Weight](#)



Your body measurements are only viewable by you.

My Activity Totals

[Add new goal](#)

TOTAL KM



5

TOTAL ACTIVITIES



3

TOTAL CALORIES



1,300

Recent Activities



edel020 completed a 1.15 km. cycling activity



Private



edel020 completed a 1.78 km. running activity



Private



edel020 Achieved new personal records for running activities:

- Distance
- Duration
- Elevation climb

[Comment](#)

2 months ago



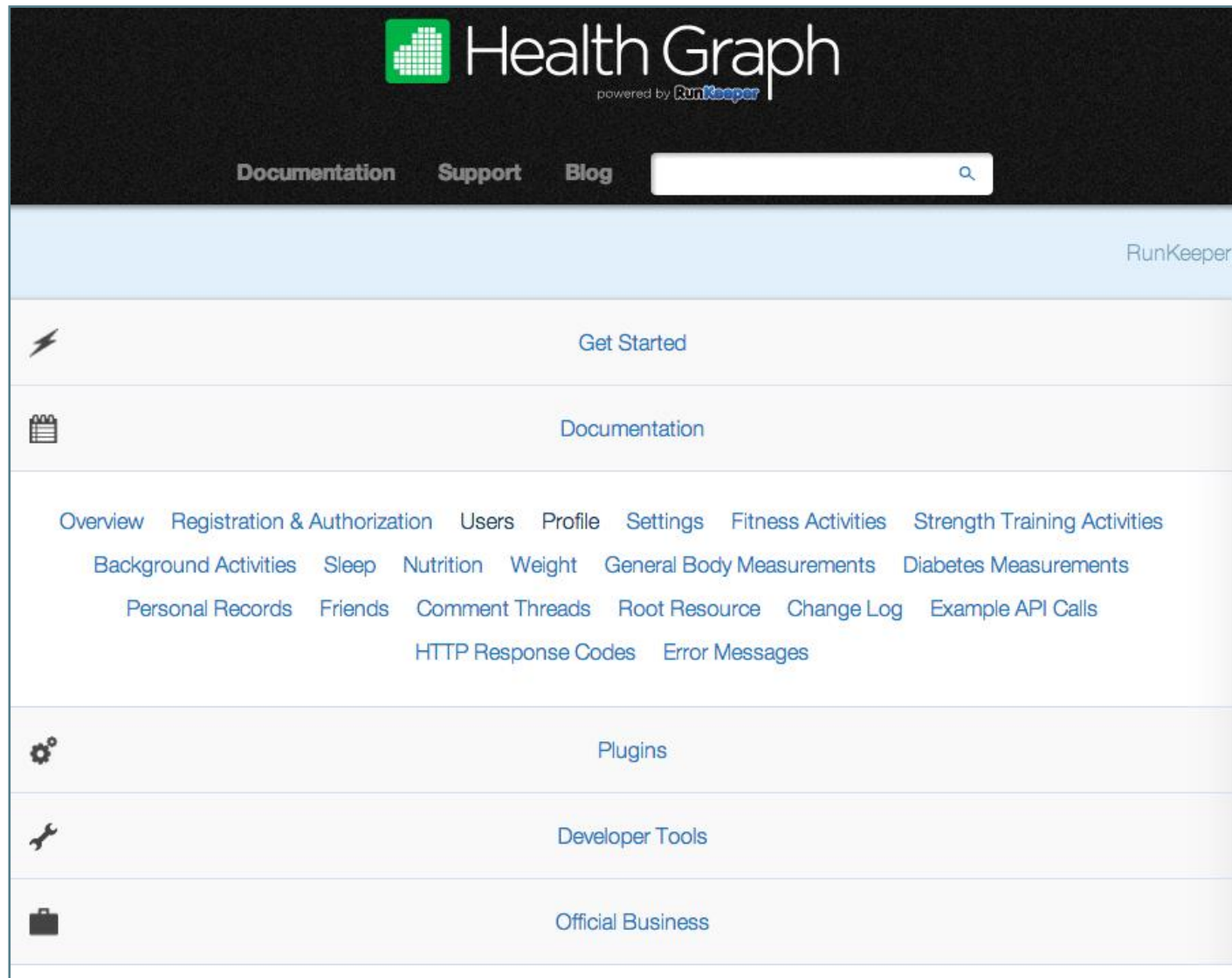
edel020 completed a 1.61 km. running activity



Private



<http://developer.runkeeper.com/>



Health Graph App Ideas

Spectator app

Fitness-tracking smartphone app; allow users of the app to follow RunKeeper Live and RunKeeper Races Live users along their race or activity path from their mobile phones.

Food trackers

Use the nutrition end-point of the API to help populate users' daily nutrition intake.

Foursquare/Twitter/Facebook & RunKeeper Mashups

Use your imagination to create a mashup app!

Hypertension app

Website or device that enables people to track blood pressure over time.

Sleep disorder app

Website or device that allows users to track sleep, sleep quality, etc.

Diabetes app

Website or device to let users track Glucose, Hemoglobin, Insulin, and C-peptide levels.

Cholesterol app

Website or device to help people track weight, body fat percentage, LDL Cholesterol, and HDL Cholesterol.

Cycling-specific app

Website or device for cyclists that tracks speed, elevation distance, xPower watts, Average Power watts, Work kj, Bike Score, Daniels Points, Training Stress score, Daniels EqP watts, TRIMP Points 1 to 10 score, Cadence rpm, Aerobic Decoupling (%), and normalized wats (associate with GPS points).

Running smartphone apps

Apps that complement the RunKeeper mobile app by providing a unique feature set to users.

Health Graph widgets for users' websites and blogs

Widgets that could take a number of different forms; for example, a widget that lets users display their personal records on a running blog.

Games

We aren't game developers, but maybe you are (or want to be)! Create a game that lets users earn points or move up levels based on changes in their Health Graph.

Features - Remaining Labs

- No new features over 1.0!

User Experience (UX)

- Console (as in pacemaker 1.0).
- Simple Website.
- Rich Client-side App (e.g. using Angular, Ember, Backbone, etc.)
- Smartphone App.

UX - Remaining Labs

- Simple Web Interface using the Play Framework (week 8 labs).
- Console Interface (week 10 labs).

Developer Experience (DX)

- Documentation
 - Documented API (e.g. Javadoc, [Swagger](#) – takes REST API and produces documentation)
 - Models (i.e. UML diagrams).
- TDD
 - TDD for REST APIs (week 10)
 - Mock Objects (week 11)
 - BDD

DX - Remaining Labs

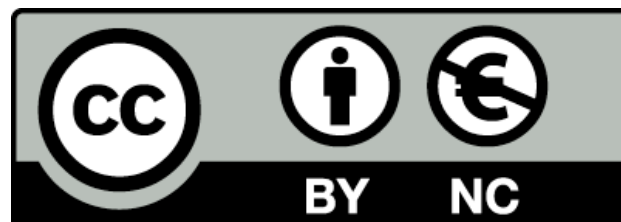
- Models - Visual Paradigm + Structure 101 Analysis
- TDD for REST APIs - Test API using Play
- Test Doubles

Assignment Rubric for Assignment 2 (top marks deployment + any 2 others)

Standard	Deployment	Features	UX	DX
Baseline	REST (Local)	activities <i>(see runkeeper)</i>	Console	Rest Tests
Good	REST (Deployed)	reports <i>(see runkeeper)</i>	Console - asciiart	Models
Excellent	REST (Secured e.g. OAuth)	friends <i>(see runkeeper)</i>	Simple Web	Test Doubles
Outstanding	REST (2 x cloud)	dashboard <i>(see runkeeper)</i>	Rich Client / Mobile App	API Documentation

Deadlines

- Submit assignment, via Moodle, on Tuesday 22nd December at 5pm SHARP.
- Tentatively, presentations will take place on Monday 4th January 2016.
- A presentation schedule will be circulated as soon as possible.



Except where otherwise noted, this content is licensed under a [Creative Commons Attribution-NonCommercial 3.0 License](http://creativecommons.org/licenses/by-nc/3.0/).

For more information, please see <http://creativecommons.org/licenses/by-nc/3.0/>

