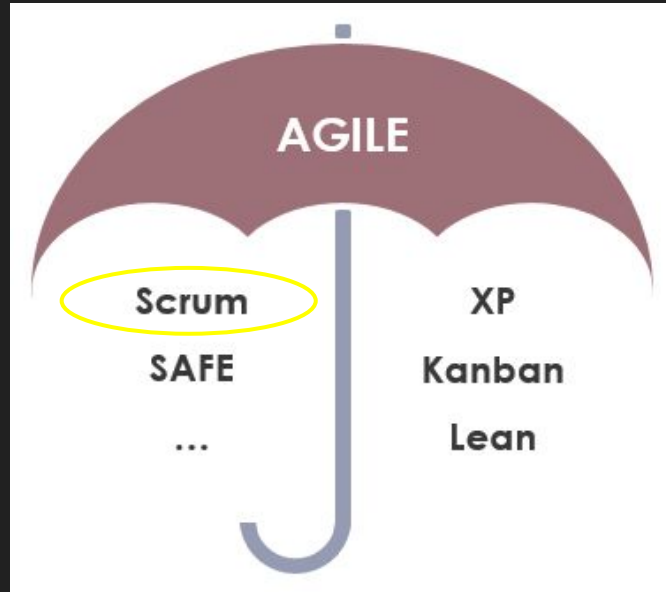


Software Project Management - Laboratory

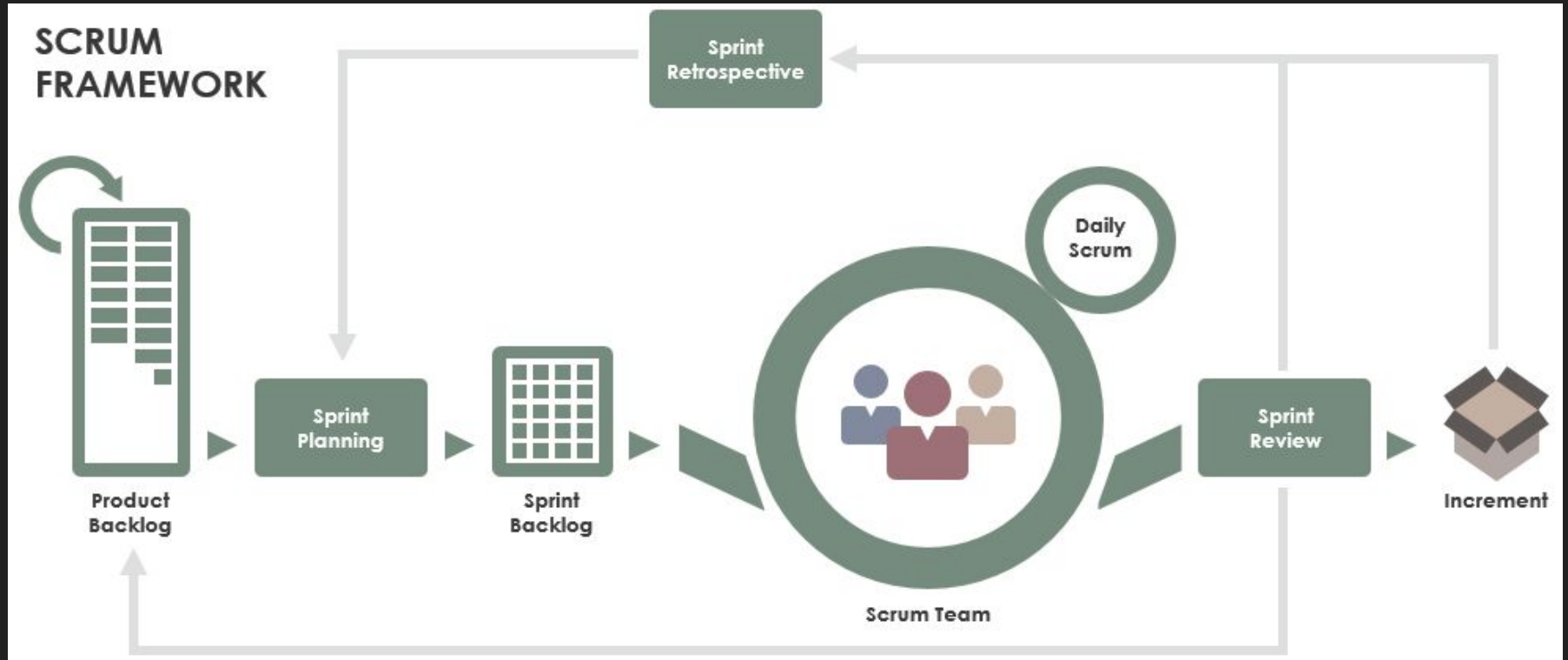
Lecture n° 4
A.Y. 2020-2021

SCRUM - Recap

Scrum is an Agile framework for project management that emphasizes teamwork, accountability and iterative progress toward a well-defined goal.



SCRUM



Roles

Customer - who requires the development of some software to address specific needs

Product Owner - is responsible for working with the user group to determine what features will be in the product release. Some of the responsibilities:

- Develop the direction and strategy for the products and services, including the short and long-time goals;
- Provide or have access to knowledge about the product or the service;
- Understand and explain customer needs for the Development team;

Scrum Master - is the facilitator for an agile development team. Some of the responsibilities:

- Act as a coach, helping the team to follow scrum values and practices;
- Help to remove impediments and protect the team from external interferences;
- Promote a good cooperation between the team and stakeholders;

Scrum Team - is formed by **3 to 9** people who **MUST** fulfill all technical needs to deliver the product or the service. They will be guided directly by the Scrum Master, but they will not be directly managed. They must be self-organized, versatile, and responsible enough to complete all required tasks.

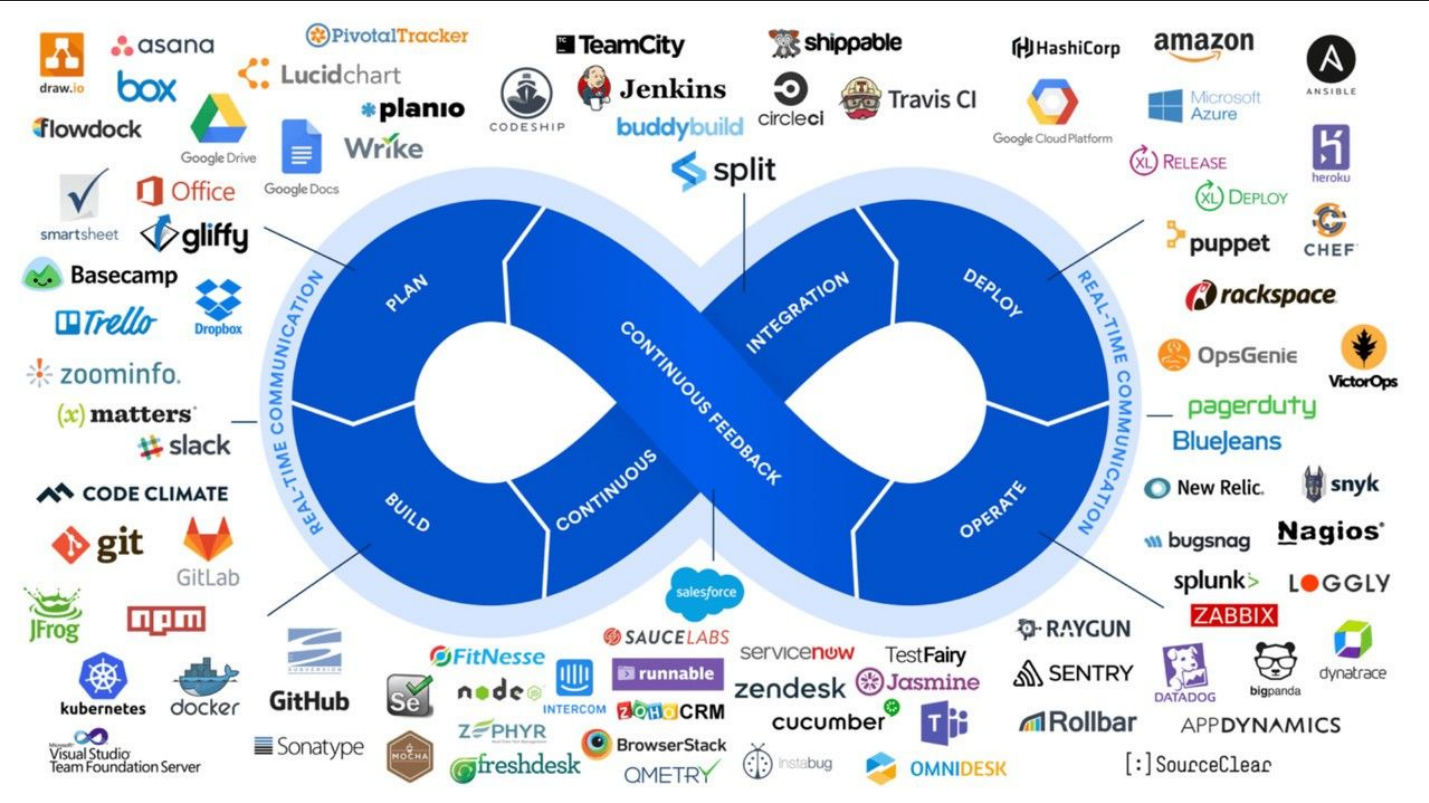
Sprints

Every 2 Weeks on Friday a Sprint finishes and a new one Starts.

Ideal group size: 3

October 29th	Friday	Sprint 1
	Thursday	
	Friday	
	Thursday	Sprint 2
	Friday	
	Thursday	
	Friday	Sprint 3
	Thursday	
	Friday	
	Thursday	Sprint 4
	Friday	
	Thursday	
	Friday	
	Thursday	

First Sprint: Planning (Defining User Stories)



Artifacts

The SCRUM artifacts are used to help define the workload coming into the team and currently being worked upon by the team.

The main artifacts:

- **Product backlog** - a collection of user stories which present functionalities required/wanted by the product team. Usually the product owner takes responsibility for this list.
- **Sprint backlog** - a collection of stories which could be included in the current sprint.

User Stories

A User Story is a simple and quick description of a specific way that the user will use the software. Generally between one and four sentences long.

Can generally follow a template:

*As a <type of user>,
I want to <specific action I'm taking>
so that <what I want to happen as a result>.*

e.g. “As a customer, I want to be able to create an account so that I can see the purchases I made in the last year to help me budget for next year.”

Assign a value to estimate the effort needed to elaborate a user story (e.g., 1 to 5).

Project User Stories

As a Registered User

I want to login

so that I can access to my personal information

As a Logged User

I want to define an IoT device

So that I can store information about the device.

Learning User Stories

As a Team member

I want to search for an IoT simulator

so that I can abstract from the physical world for the initial phases of the project

As a Team member

I want to study React

so that we can use it for the front-end

Github Issues

Filters

Labels 13



Milestones 1

New issue

4 Open ✓ 1 Closed

Author ▾ Label ▾ Projects ▾ Milestones ▾ Assignee ▾ Sort ▾

 **Driver Login** points: 2 user story
#5 opened 6 hours ago by FabrizioFornari  Sprint 1

 **Driver Geolocalization** points: 4 user story
#4 opened 7 hours ago by FabrizioFornari  Sprint 1

 **User Story 3** points: 2
#3 opened 20 days ago by FabrizioFornari

 **User Story #1** points: 3 user story
#1 opened 22 days ago by FabrizioFornari  0 of 2 

 1

New Issues

FabrizioFornari / SPM2020Template Private

Unwatch 1 Star 0 Fork 0

<> Code Issues 4 Pull requests Actions Projects 1 Security Insights Settings

Driver Geolocalization #4

Edit New issue

Open FabrizioFornari opened this issue 2 minutes ago · 0 comments

FabrizioFornari commented 2 minutes ago

As a driver
I want to be localized on a map and search a destination
so that I can see the distance from the destination

FabrizioFornari assigned FabrizioFornari and unassigned FabrizioFornari 2 minutes ago

FabrizioFornari added this to the Sprint 1 milestone 2 minutes ago

FabrizioFornari self-assigned this 1 minute ago

FabrizioFornari removed their assignment 1 minute ago

FabrizioFornari added points: 4 user story labels 23 seconds ago

Assignees
No one—assign yourself

Labels
points: 4 user story

Projects
Sprint #1
Awaiting triage

Milestone
Sprint 1


Linked pull requests
Successfully merging a pull request may close this issue.

Closing Issues



User Story #1 #1



Closed FabrizioFornari opened this issue 22 days ago · 1 comment


Edit New issue

 FabrizioFornari commented 22 days ago 😊 ⋮



As a ,
I want to <specific action I'm taking>
so that .

  FabrizioFornari added points: 3 user story labels 22 days ago

  FabrizioFornari added this to User Stories in **Sprint #1** 22 days ago


 FabrizioFornari commented now Author 😊 ⋮

I added this functionality which is available by means of...

  FabrizioFornari closed this now

Assignees ⚙️
No one—assign yourself

Labels ⚙️
points: 3 user story

Projects ⚙️
 **Sprint #1**
User Stories ▾

Milestone ⚙️
No milestone

Linked pull requests ⚙️
Successfully merging a pull request may close this issue.
None yet

User Stories Size

Driver Login #5

 Open FabrizioFornari opened this issue 8 hours ago · 0 comments



FabrizioFornari commented 8 hours ago · edited ▾



As a driver
I want to login into the system
so that I can use it

- I want to login using facebook credentials
- I want to login using gmail credentials
- I want to login using unicom credentials

Milestones as Sprint Backlog

The screenshot displays the GitHub Milestones page. At the top, navigation tabs include Code, Issues (3), Pull requests, Actions, Projects (1), Security, Insights, and Settings. Below this, there are tabs for Labels and Milestones, with a 'New milestone' button on the right. The main content area shows a filter for '1 Open' and '0 Closed' milestones, with a 'Sort' dropdown. A single milestone, 'Sprint 1', is listed. It has a progress bar that is 50% complete (green), with 1 open and 1 closed issue. The milestone is past due by 6 days and was last updated less than a minute ago. Below the milestone name, it says 'First Sprint'. Action links for 'Edit', 'Close', and 'Delete' are visible.

<> Code **Issues 3** Pull requests Actions Projects 1 Security Insights Settings

Labels **Milestones** [New milestone](#)

1 Open ✓ 0 Closed Sort ▾

Sprint 1 50% complete 1 open 1 closed
[Edit](#) [Close](#) [Delete](#)

⚠ Past due by 6 days 🕒 Last updated less than a minute ago

First Sprint

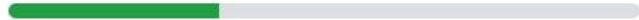
Milestones as Sprint Backlog

Labels Milestones

Edit milestone

New issue

Sprint 1



⚠ Past due by 6 days 33% complete

First Sprint

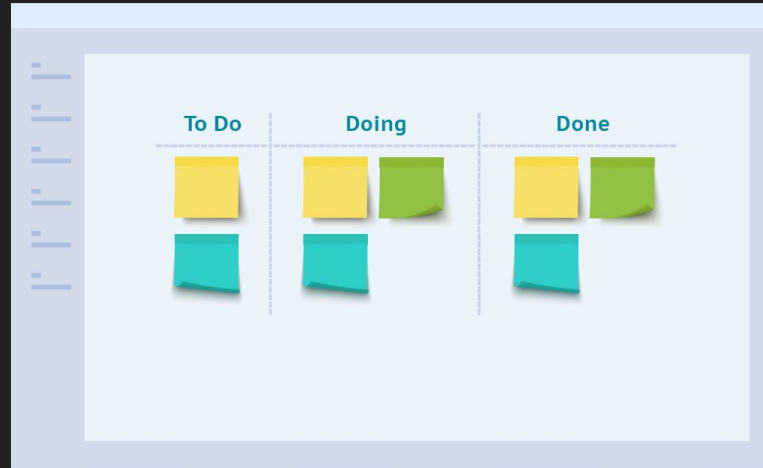
2 Open ✓ 1 Closed

Driver Login **points: 2** **user story**
#5 opened 6 hours ago by FabrizioFornari

Driver Geolocation **points: 4** **user story**
#4 opened 7 hours ago by FabrizioFornari

Kanban

Kanban is a visual system for managing work as it moves through a process. Kanban visualizes both the process (the workflow) and the actual work passing through that process.



Kanban, also spelt “kamban” in Japanese, translates to “Billboard” (“signboard” in Chinese) that indicates “available capacity (to work)”. Kanban is a concept related to lean and just-in-time (JIT) production, where it is used as a scheduling system that tells you what to produce, when to produce it, and how much to produce.

Divide User Stories Into Small Tasks

User Stories vs Tasks

www.mountaingoatsoftware.com

The screenshot shows a Jira interface for a project named "FabrizioFornari / SPM2020Template". The top navigation bar includes "Code", "Issues 4", "Pull requests", "Actions", "Projects 2", and "Security". The main content area is titled "Sprint #1" and "Updated 1 hour ago".

The "Sprint Backlog" (3 items) contains three user stories:

- Driver Geolocalization** (points: 4, user story) - #4 opened by FabrizioFornari
- User Story #1** (points: 3, user story) - #1 opened by FabrizioFornari
- Driver Login** (points: 2, user story) - #5 opened by FabrizioFornari

The "To do" column (2 items) contains two tasks:

- Design Driver Database Table #5** (points: 2, user story) - #5 opened by FabrizioFornari in FabrizioFornari/SPM2020Template
- Design a login page #5** (points: 2, user story) - #5 opened by FabrizioFornari in FabrizioFornari/SPM2020Template

Each task in the "To do" column has a "Reference" section that links back to the "Driver Login" user story in the "Sprint Backlog".

After several Sprints...

Labels Milestones New milestone

1 Open 4 Closed Sort

<h3>Sprint #4</h3> <p>Closed on 18 Jan Last updated 9 months ago</p>	<div><div>100% complete</div><div>0 open 9 closed</div><div><a>Edit <a>Reopen <a>Delete</div></div>
<h3>Sprint #3</h3> <p>Closed on 14 Dec 2020 Last updated 10 months ago</p>	<div><div>100% complete</div><div>0 open 3 closed</div><div><a>Edit <a>Reopen <a>Delete</div></div>
<h3>Sprint #2</h3> <p>Closed on 27 Nov 2020 Last updated 11 months ago</p>	<div><div>100% complete</div><div>0 open 4 closed</div><div><a>Edit <a>Reopen <a>Delete</div></div>
<h3>Sprint #1</h3> <p>Closed on 13 Nov 2020 Last updated 11 months ago</p> <p>First Sprint</p>	<div><div>100% complete</div><div>0 open 3 closed</div><div><a>Edit <a>Reopen <a>Delete</div></div>

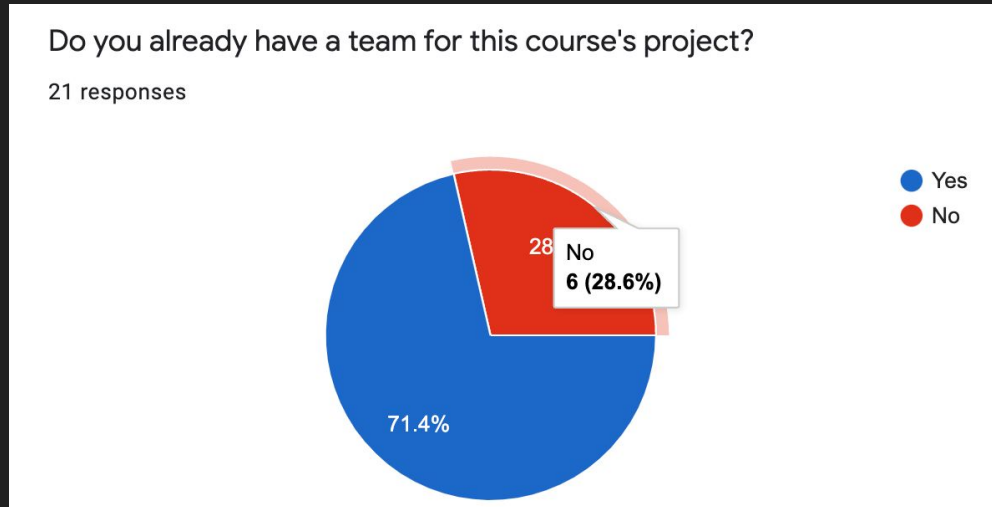
Github Repository Setup

1. I will create a repository for each group
2. I will invite you to each repository
3. You will start defining User Stories as Issues

Group Management & Planning

Groups

<https://docs.google.com/spreadsheets/d/1tOdMoBKzBjcHGQI3ACmrkkcaFbc2TuPfgmFQM2jL9BU/edit?usp=sharing>



Questionnaire	G. Sheet
21 (more or less)	22 (ok)

Groups	Members
3	3
5	2
3	1

Ghosts Students	?
-----------------	---

Group Management & Planning

Groups

<https://docs.google.com/spreadsheets/d/1tOdMoBKzBjcHGQI3ACmrkkcaFbc2TuPfgmFQM2jL9BU/edit?usp=sharing>

1. Define a Group, Choose a Project and “elect” a Scrum Master
2. Students that are not in a group will form a group based on the chosen project
3. Groups of 2 students may become groups of 3 students based on the chosen project

Meeting the customers

1. Possibility to discuss with different customers for different projects (around 15min each)
2. A customer will tell you about his/her own needs
3. You are supposed to take notes and ask questions to get some clarification
4. The notes that you take will help you in defining the user stories

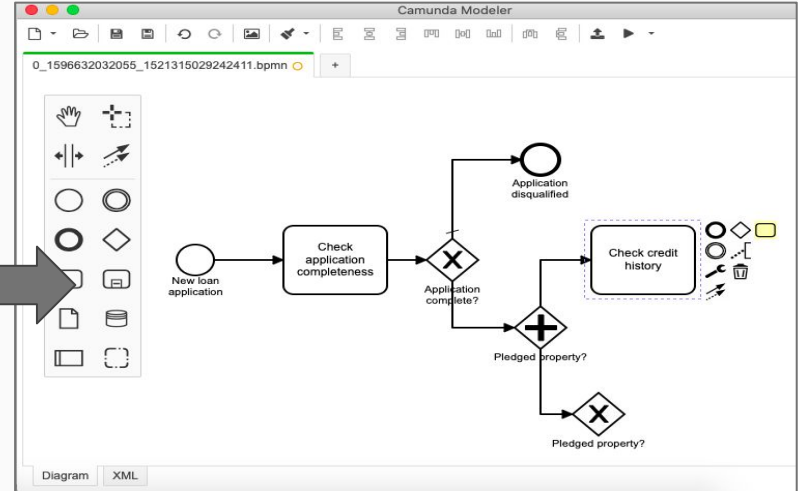
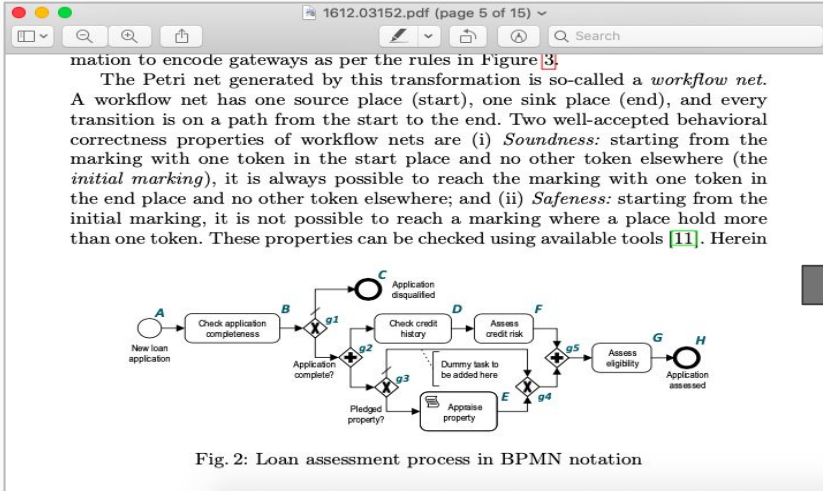
NOTE: Customers are absolutely **NOT AUTHORISED** to give you additional information out of the lectures hours. So, do not bother them with questions, messages, mails or whatever comes to your mind.

Projects

BPMN Redrawer

The project consists of implementing a web application that allows to upload images (.png) of BPMN models and turns those images in actual BPMN models stored in .bpmn format

Link Utili: opencv.org, docs.camunda.org



Projects

IoT-Aware BPMN Platform

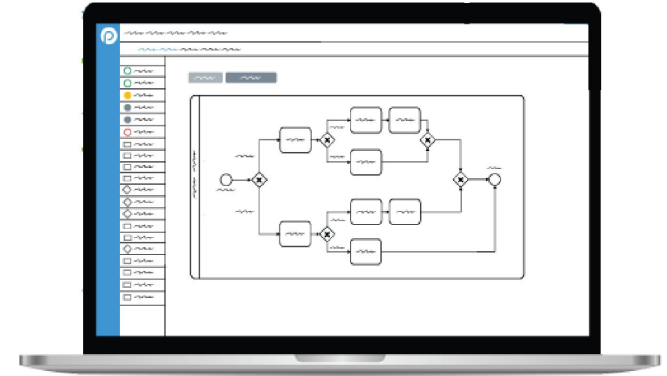
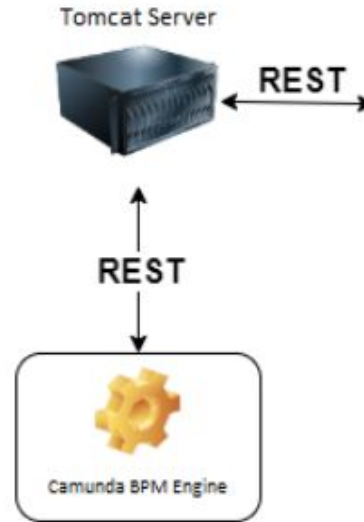
The project consists of implementing a **web application** that allows to **design and enact** IoT-Aware BPMN models


Model Design

The **bpmn-js** library, can be used to design models and should be extended to include IoT related informations

Model Execution

The models, after designed, can be sent to a **Camunda** BPMN engine for allow their execution



 **Process_072kiui**

< General Variables Listeners >

General

Id
Process_072kiui x
This maps to the process definition key.

Name

Version Tag

Executable

External Task Configuration

Task Priority

Job Configuration

Job Priority

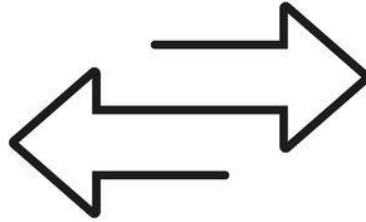
Candidate Starter Configuration

Candidate Starter Groups

Specify more than one group as a comma separated list.

Candidate Starter Users

Properties Panel



IoT devices

The project is supported by real IoT devices that have to be configured using the **Property Panel** from the bpmn-js library

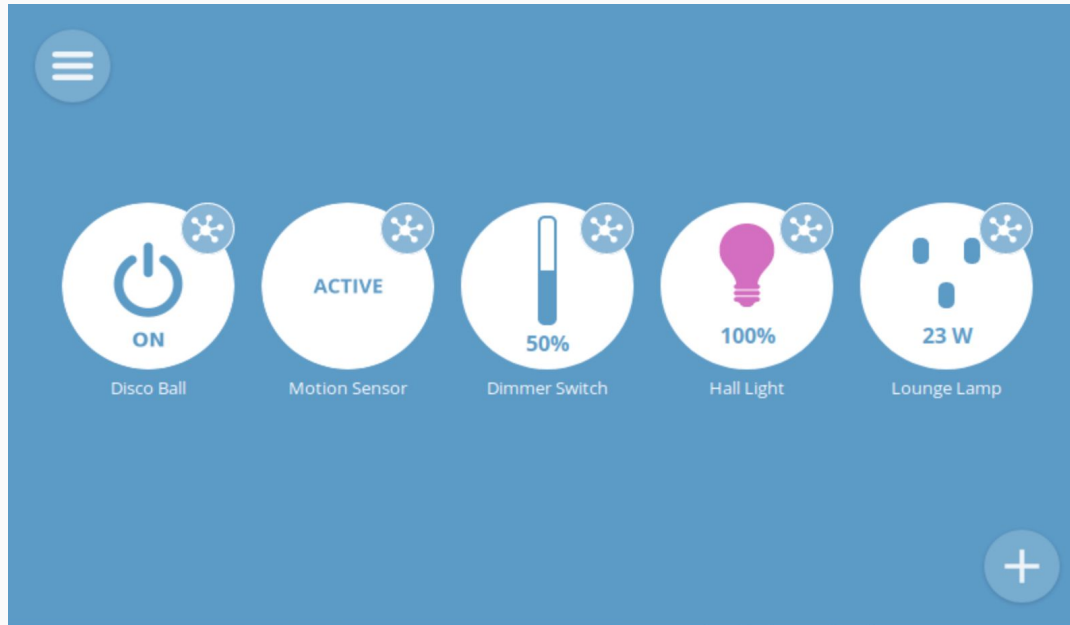
Projects

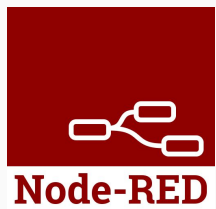
IoT Platform



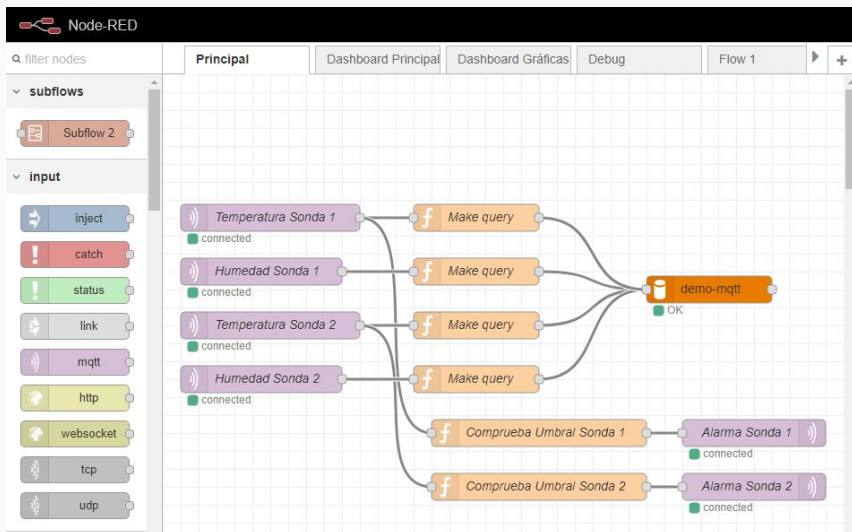
The project consists of realising an **IoT Platform** for managing **IoT devices**.

This platform must allow the **import**, **visualising** and **saving** of information related to IoT devices.





In order to provide backwards compatibility the IoT Platform should integrate the **Node-RED** tool.

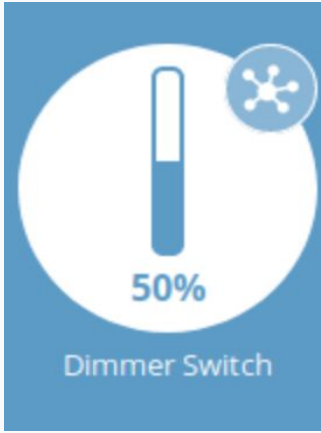


Node-RED editor



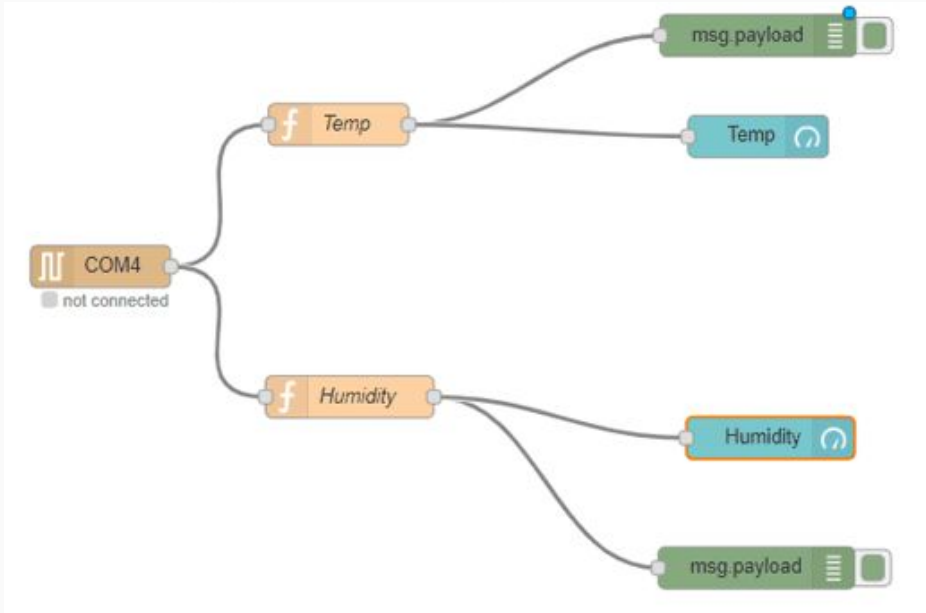
Node-RED dashboard

Requirements: What I need



1

Select a device inside the platform

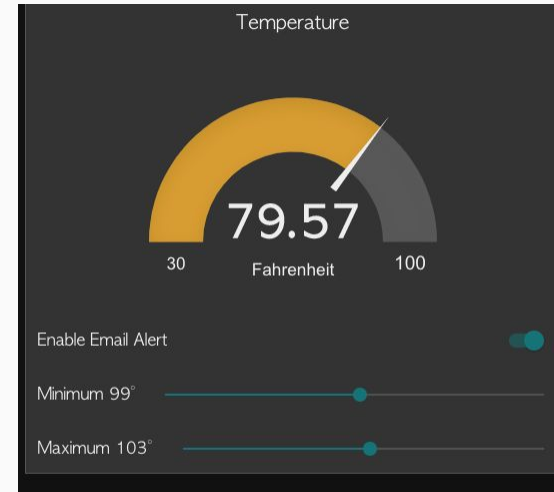


2

Import the device information inside the Node-RED editor

3

Visualise the data inside the Node-RED dashboard



Summary: Requirements and Constraints

1

Devices information must be stored according to the [IoT-Lite ontology](#)

2

Devices information must be automatically imported inside the right **Node-RED node**

3

Node-RED dashboard must be used to visualise the IoT data

Questions?



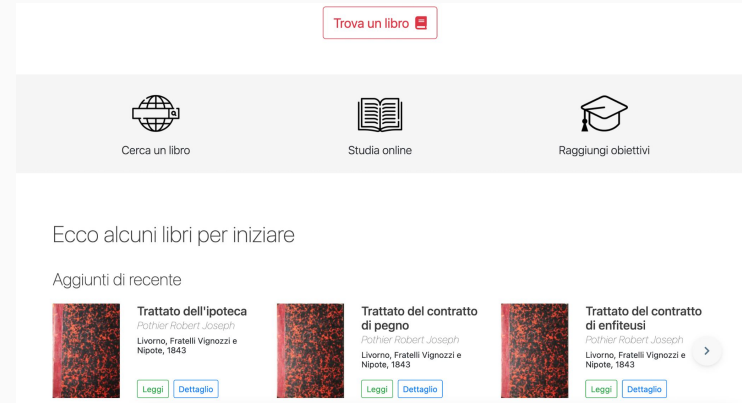
Projects

Digital Library

The project consists in developing a web/mobile application for accessing digital books. The system allows users to create a digital library and to read stored books, add notes bookmarks and share them with other users. **MAX 2 groups**

The system should be able to integrate with a pre-existent one.

Link Utili: <https://bibliotecadigitale.unicam.it>



End