# Travaux d'Etudes et Recherche:
Genie Logiciel

Apprendre techniques travaux collaboratives
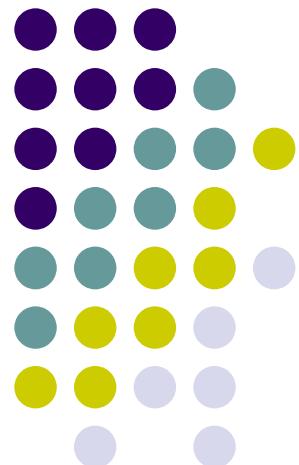
About: Authentification
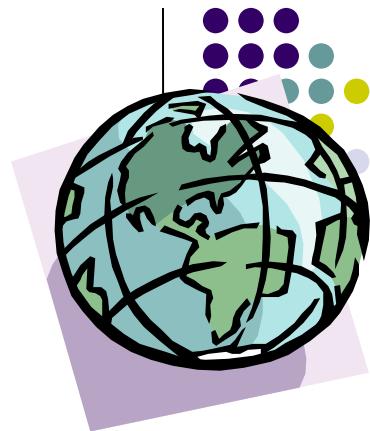
- The EUGLOH App needs an Authentification Service
- 200000 Students – impossible to verify the identifications by hand
  - For inscription into modules
  - For proposals of modules …
  - …

About: Authentification
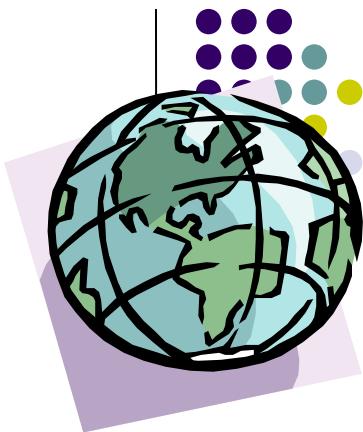
- Idea : Can we do Authentification inside an App via the official services of EUGLOH
  - ADONIS
    https://adonis.u-psud.fr/utilisateur/index.php
  - Implementing LDAP and LDAP-S (resticted to intra-net)
  - CAS
    https://sso.u-psud.fr/cas/login

System Development

● Appeal the CAS Server:

ᗕ Enter Username & Password

Username:

burkhart.wolff@u-psud.fr

Password:

•••••••••

LOGIN

❓ Forgot your password?

For security reasons, please log out and exit your web browser when you are done accessing services t

● … after authentification:

System Development

- … after authentification (and one more click:):
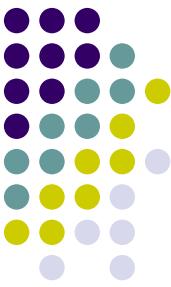
System Development

- The CAS Server «tunnels» to LDAP and the ADONIS-Service of Paris-Sud.

- How to contact it:
  - Two possibilities :
    - The SAML Protocol
      (use it like google or FaceBook authentification
       via the CALL Of a WebBrowser from your APP)
    - Directly via the https protocol:

      curl https://sso.u-psud.fr/cas/login > Centr.html ...

    - … but this is technically challenging
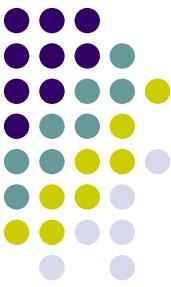
System Development

- How to subscribe to a Module

- … send a mail to a (configurable) mail address (can be me) with the subject

- TEST EUGLOH APP + some string

- The registration works via the html presentation of:

	A	B	C	D	E	F	G	H
1	Name	First Name	University	Inscription Date	Matrikel	Role	Status	
2	WOLFF	Burkhart	UPSac	01/01/21		[student,teacher, employee, faculty, member, researcher,euglohadm]	ACCEPT|REJECT	
3								
4								
5								
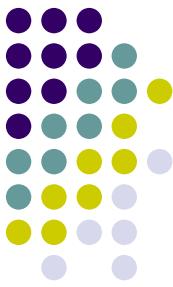
System Development

- Pour tester, je vous conseille de faire un fichier similaire sur une machine a votre disposition.

  Donc Inscription Date doit avoir ce format. Role une sous-liste de celle mentione, et le statut soit ACCEPT ou REJECT. Matrikel (no étudiant) peut etre vide.

  Si le nom d'un étudiant/participant n'est pas encore mentionné dans la liste, le statut n'est pas

  (encore) établit. Il n'y a pas de notifications pour faire simple …

- Site: https://www.lri.fr/~wolff/tmp/EUGLOH.html

Frameworks (iOS & Android)

- FireBase

 Development Platform for Mobile Apps
  providing an Software vDevelopment Kit (SDK)
  [Providing Testing, Indexing, Authentification, In-App
  Messaging, ML Kit, Realtime Database]

  Taken over by google, partially costing money.
 Integrated into the Google Cloud Project infrastructure

  https://firebase.google.com/docs/auth
  (for authentifications wrt. Google/Twitter/...)

Frameworks (Apple)

- UIKit

  Construction and management of graphical, event-driven user-interfaces.
  Views and controls are the visual building blocks of your app's user interface.

- UIView is the root class for all views and defines their commo behavior.

- UIControl defines additional behaviors that are specific to buttons, switches, and other views designed for user interactions.

Burkhart Wolff, I

Label — Get Groceries

Switch

Date picker

Segmente
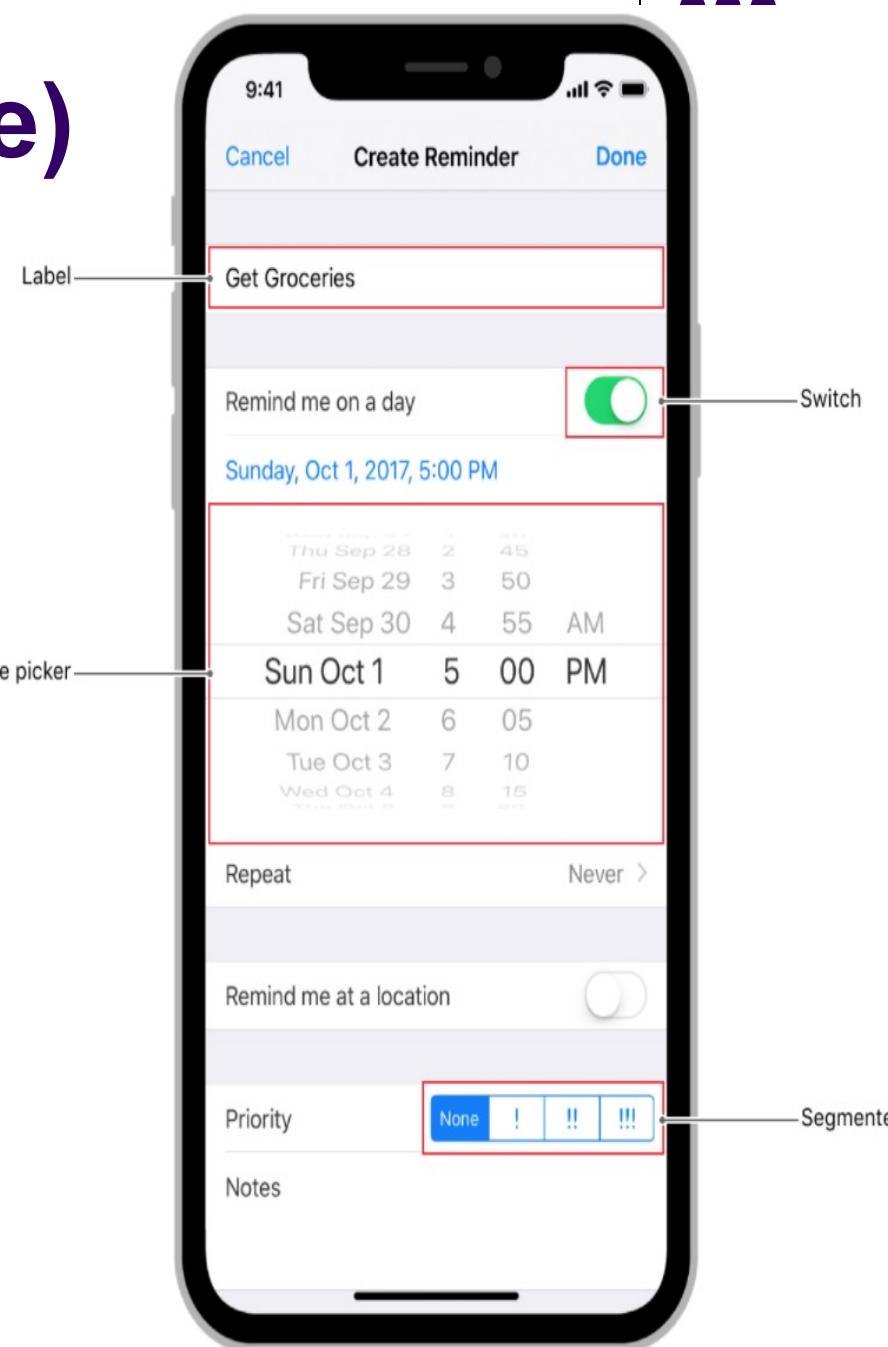
Frameworks (neutral)

- **Flutter**
  open source framework by Google`
  multi-platform applications from a single codebase

- Targets iOS, Android, web-services
  »Do more with less»

- Internally written in C++, programmed in an own programming language Dart (en.wikipedia.org/wiki/Dart_(programming_language))

- Support in IntelliJ IDEA, Android Studio, Visual Studio Code, Emacs
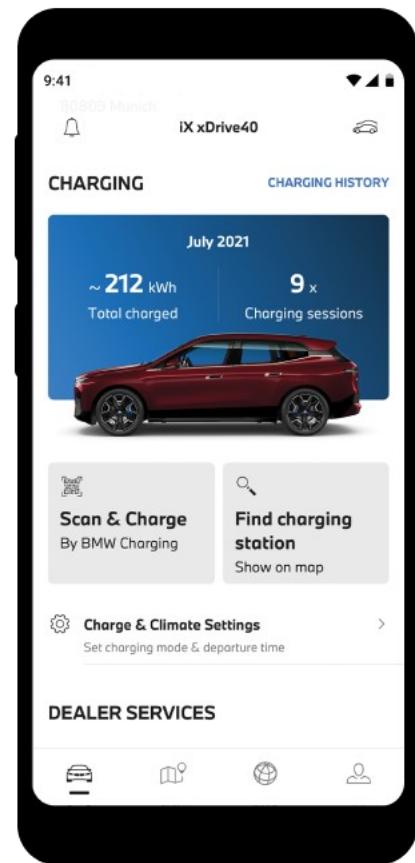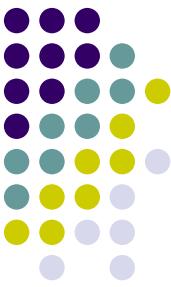
Component

- Bibliotheque LDAP (une solution speciale)

  ldapjs is a pure JavaScript, from-scratch framework for implementing LDAP clients and servers in Node.js. It is intended for developers used to interacting with HTTP services in node and restify.

  http://ldapjs.org

- Sous LDAP JS on peut faire une requette comme:

  ```
  ldapsearch -x -D "uid=user_name_ecampus,ou=people,dc=u-psud,dc=fr"  -w
  mot_de_passe_ecampus -H ldaps://ldaps.u-psud.fr -b "ou=people,dc=u-psud,dc=fr"
  -s one "uid=user_name_ecampus"
  ```
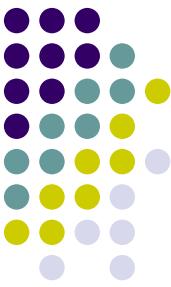
Component

- Parser html to DOM : jsoup. (written in JAVA)
  - scrape and parse HTML from a URL, file, or string
  - find and extract data, using DOM traversal or CSS selectors
  - manipulate the HTML elements, attributes, and text
  - clean user-submitted content against a safelist, to prevent XSS attacks
  - output tidy HTML

  - Example:

```
Document doc =
Jsoup.connect("https://en.wikipedia.org/").get();
log(doc.title());
Elements newsHeadlines = doc.select("#mp-itn b a");
for (Element headline : newsHeadlines) {
  log("%s\n\t%s",
    headline.attr("title"), headline.absUrl("href"));
}
```
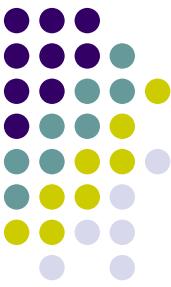
Component

- Android DOM (implemented in Kotlin)

  parser is a program that parses an XML document and extracts the required information from it. This parser uses an object-based approach for creating and parsing the XML files. In General, a DOM parser loads the XML file into the Android memory to parse the XML document.

  https://www.geeksforgeeks.org/xml-parsing-in-android-using-dom-parser/#:~:text=Android%20DOM(Document%20Object%20Model,to%20parse%20the%20XML%20document.