

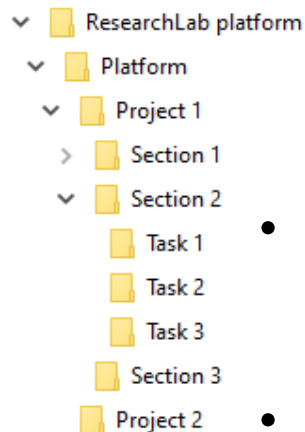
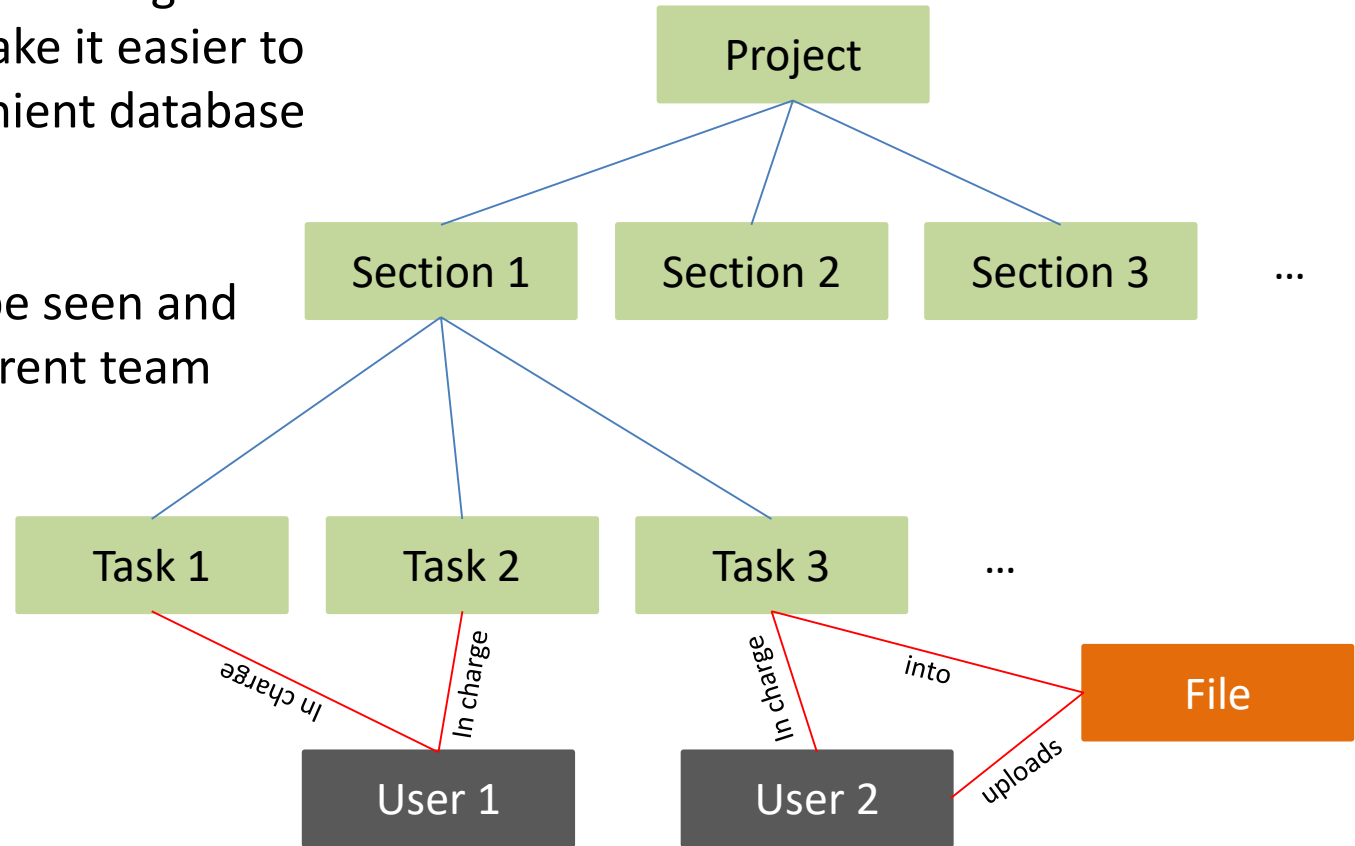
Overview, Tools and frameworks

- The platform was developed using Symfony framework based on php language.
- The platform is a web oriented app and uses the conventional languages (HTML, JS, Bootstrap ...)
- The platform can system call other software if simulations were wanted to be centered
- The code uses MVC architecture. The platform is destined to be used by a team



Model structure

- The structure of data is organized in tree shape to make it easier to browse and convenient database management
- Every project can be seen and modified by a different team



- The files are saved in the hard drive – structure and names are saved in a database
- If a file is uploaded, a subfolder is automatically created

User and authentication

- A user can be created by everyone quickly
- New users will automatically have “guest” role
- The platform users have different roles according to different privileges

Homepage



Login button

Add user button

Cumulative privileges

Cumulative privileges				
Guest	Student	PhD	Researcher	Admin/Manager
<ul style="list-style-type: none">• Can use tools• Can browse the content of an ongoing project if added into the project members list	<ul style="list-style-type: none">• Can be added as a person in charge of a given task• Can upload files into his tasks	<ul style="list-style-type: none">• Can create new tasks	<ul style="list-style-type: none">• Can create new sections• Can validate a finished task	<ul style="list-style-type: none">• Can create new projects• Can modify the role of the users

Dashboard

Home button

Browse in allowed projects

Edit profile

Launch simulations and use the available tools

Search bar: search in names of the different objects of the model

Logout button

ResearchLab Home About Projects Profile Use Tools Search.. Search

Logged in as maliouache | Logout

Manage the projects

Create new project
Edit Existing projects

4 TODO

Tools
Staff

Shared tools (source codes, templates ...)

Welcome

here we go for the new symfony project to organize research !!!!!

Check my tasks

Own To-do tasks related

Updates

here are the updated tasks you added

If any modification was applied to a task you created, it will be notified here

ADS

ADS

sf

Projects

The image shows two screenshots of the ResearchLab web application. The top screenshot displays the 'List of the projects' page, featuring a sidebar with 'Create new project' and 'Edit Existing projects' links, a list of projects (e.g., 'M2 Internship Aliouache Mohammed'), and a 'Tools' section. A red arrow points to the 'Projects' tab in the top navigation bar. A dashed box highlights the 'Description' field of a project, and another dashed box highlights the 'Add a new section', 'Add members', 'Here a new option', and 'References/Bibliography' buttons. A red arrow points to these buttons with the text 'Different options for a project'. The bottom screenshot shows the 'Create a new project' form, which includes fields for 'Name of the Project', 'Importance', 'Deadline if existed', 'Choose a domain', and a 'Comment' field. A red arrow points to the 'Create new project' link in the sidebar. A blue arrow points from the 'To add a new project' text to the 'Create new project' link. A dashed box highlights the 'Description' field in the 'Comment' section, with 'Add' and 'Cancel' buttons below it.

List of the projects

Description

Create a new project:

Description

To add a new project
P.S. only Project manager role can add a project

Different options for a project

Sections

The screenshot displays the ResearchLab web application. The top navigation bar includes links for Home, About, Projects, Profile, and a 'Use Tools' button, along with a search bar and a user login status. The main content area is titled 'PhD Aliouache Mohammed' and lists four project sections: 'Papers and articles' (62% Complete, very-high priority), 'Dissolution in limestone for realistic DFNs' (77% Complete, medium priority), 'Physics revision' (50% Complete, medium priority), and 'Sussargues project' (73% Complete, medium priority). A red arrow points to the 'Sussargues project' section, which is expanded to show a 'Tasks list' and a 'Statut: 73' summary. The 'Tasks list' contains eight items, each with a colored bar indicating its status: 'Flow meter test interpretations' (orange), 'Regional model for Sussargues' (orange), 'Inversion of hydraulic parameters using the 3D model of Sussargues' (red), '3D flow model' (green), 'Literature review on flowmeter papers' (red), 'Leaky well effect' (orange), 'Standard plot' (green), and 'Re-interpret the pumping test data using leaky well models' (red). A dashed box highlights the 'Available options for a section' on the left, which includes buttons for 'See the details of the section', 'Add a new task', 'Here a new option to do in the section', and 'References/Bibliography'. Another dashed box highlights the 'Tasks list' on the right, which is titled 'Tasks list:'. A red arrow points from the 'Sussargues project' section to the 'Tasks list' box. A red arrow points from the 'Sussargues project' section to the 'Available options for a section' box. A red arrow points from the 'Sussargues project' section to the 'Tasks list' box. A red arrow points from the 'Sussargues project' section to the 'Tasks list' box.

ResearchLab Home About Projects Profile Use Tools Search.. Logged in as maliouache | Logout

Create new project
Edit Existing projects

4 TODO

Tools
Staff

PhD Aliouache Mohammed

Papers and articles 62% Complete very-high

Dissolution in limestone for realistic DFNs 77% Complete medium

Physics revision 50% Complete medium

Sussargues project 73% Complete medium

Statut: 73
All the tasks related to sussargues, data, interpretation and modeling

See the details of the section

Add a new task

Here a new option to do in the section

References/Bibliography

Tasks list:

- Flow meter test interpretations
- Regional model for Sussargues
- Inversion of hydraulic parameters using the 3D model of Sussargues
- 3D flow model
- Literature review on flowmeter papers
- Leaky well effect
- Standard plot
- Re-interpret the pumping test data using leaky well models

Progress of the section
P.S. the progress is calculated according to the finished tasks

Available options for a section

Tasks of the section

Green: Done

Orange: at least a file or a comment is added to the task

Red: not started yet

Tasks

ResearchLab

Home

About

Projects

Profile

Use Tools

Search...

Search

Create new project

Edit Existing projects

4 TODO

Tools

Staff

M2 Internship Aliouache Mohammed

Discrete Fracture Network

Fractal aperture distribution

Validate

Delete

Project:	M2 Internship Aliouache Mohammed
Section:	Discrete Fracture Network
Importance:	high
In charge:	maliouache
Add date:	05-02-2018
End date:	06-05-2018
Progress:	50%
Content:	generate one fracture with a fractal aperture distribution
References:	

References

PDF

ML033090524.pdf

PDF

Aperture_correlation_...

Add references

Works:

Comments history about the current task

Discussion

Uploaded work

Aperture distribution.pptx

Gen_MF2D.rar

Data_Gen.rar

Submit works

maliouache:With the code I generated Three different values of alpha and three each one, You can find them in the joined zip file

maliouache:In the Data_Gen.rar one

simulation1:OK!

simulation1:Can you zip the different codes and upload them here in this task please?

Comment:

Write a new comment

Post

Usable tools

- Simulation launcher was scripted in order to be able to launch simulations directly from the platform
- The platform will system call the needed software to run the simulation

The screenshot displays the ResearchLab web interface. At the top, a navigation bar includes links for ResearchLab, Home, About, Projects, Profile, and a highlighted 'Use tools' button with a red arrow pointing to it. A search bar is also present. On the left sidebar, there are links for 'Create new project', 'Edit Existing projects', and a '4 TODO' button, with sub-links for 'Tools' and 'Staff'. The main content area features three simulation launchers: 'Particle Tracing in DFNs' (showing a particle distribution plot), 'Carbonate dissolution in a single fracture' (showing a concentration plot), and 'SWMM' (showing a hydrograph plot). A large blue arrow points from the 'Particle Tracing in DFNs' launcher to a configuration form on the right. This form, titled 'Launch a new simulation:', includes sections for 'For the geometry:', 'For the flow:', and 'For the particle tracing:'. The 'For the flow:' section has dropdown menus for 'Materials' (set to 'Water') and 'Direction of the flow' (set to 'X-Direction'). The 'For the particle tracing:' section has input fields for 'Number of injected particles:', 'Simulation time (in seconds):', and 'Time step (in seconds):'. A 'Save' button is at the bottom of the form. On the far right, there are two 'ADS' buttons. A red arrow points from the text 'Launch a new simulation' to the configuration form.

Once the simulation is finished, a zip file with all the outputs will be available to download