

# A Student Friend ELO



## Delivery Document

Group DEV-A5-1

Version 0.2

Client: Floor W. / Jan-Chris H.

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## PROJECT PLAN

### Project Objectives

The project objective is to improve the student learning experience. This aim is to create an easy to navigate student portal system where all relevant information is quickly available including course module materials.

### Agreement with Client

- A new better blackboard for Saxion where both the homepage and course page will be easier and more efficient to use for students. The homepage should include all the important features the student needs the most and should be easy to navigate through. Important features: Easy access to subjects, news, grades, new implementation of the competences, schedule and exams.
- For the course page it should benefit the students, rather than what is going on in the current situation. An important feature should be that the student can discuss their work peer-to-peer so that student can learn and help each other through their school journey. Important features: better navigation, peer-to-peer review.

The role of the customer is to let us know which features are needed for this project and to help us along the way. When we create wireframes or ideas the customer should give us feedback on mentioned ideas and help us achieve a better project.

### Project Requirements & Timeline

//Requirements of project and deadlines or scrum meetings...

### Group Members

- Keith I – 487130
- Mykhailo G - 470934
- Jane Nguyen - 479411
- Sefania de Hoon - 418136
- Tuan Nguyen - 479867
- Yang Cheng - 474340

## PLAN OF APPROACH

Can be viewed at this link or in the Git documentation folder

[https://saxion.sharepoint.com/:w:/r/teams/o365-team005862/Gedeelde%20documenten/General/2.4-IT\\_Corp\\_Plan\\_of\\_Approach.docx?d=w962a20c2bdb34eed902cb19c03923474&csf=1&web=1&e=XwFLXc](https://saxion.sharepoint.com/:w:/r/teams/o365-team005862/Gedeelde%20documenten/General/2.4-IT_Corp_Plan_of_Approach.docx?d=w962a20c2bdb34eed902cb19c03923474&csf=1&web=1&e=XwFLXc)

## SYSTEM PORTFOLIO

### Functional Design

// Describes what the capabilities of a product are. It is also a first description of the look and feel of the final product so that you know what to build and the customer knows what to expect

### Technical Design

Describe how the product works

The framework used in this project will be Vue.js. This we chose because it is very demanded in the market and it's something that we still had yet to learn.

### Database

We will use SQLite because its simpler than MSSQL. It's easy to setup and takes less resources to run.

### API endpoints

#### Login page

Functionality	User Login
URL	<a href="http://localhost:8080/login/confirm">http://localhost:8080/login/confirm</a>
Method	POST
Param info	<ul style="list-style-type: none"><li>- <i>user_id</i> (Auto-growth in database)</li><li>- <i>userName</i> (User's login name)</li><li>- <i>passWord</i> (User's login password)</li></ul>
Return Msg (Json)	<pre>//successful login {   Status: 200   Message: "You are successfully logged in" }  // login failed {   Status: 400 }</pre>

	Message: "Your login is incorrect. Please check your username or password and try again." }
--	--

#### Register page

Functionality	User Register
URL	<a href="http://localhost:8080/register">http://localhost:8080/register</a>
Method	POST
Param info	<ul style="list-style-type: none"> <li>- userName (User's name/email for login)</li> <li>- passWord (User's password for login)</li> <li>- passWordConfirm (enters the same password to confirm)</li> </ul>
Return Msg (Json)	<pre>//successful register {   Status: 0   Message: "You are successfully register, back to login" }  //register failed //Wrong password setting {   Status: 1   Message: "The two passwords do not match." }  //Wrong format {   Status: 2   Message: "Incorrect username or password format." }</pre>

#### mySaxion page (home page)

Functionality	After login, the user will see home page
URL	<a href="http://localhost:8080/mySaxion">http://localhost:8080/mySaxion</a>
Method	GET

Param info	-
Return	Return map; (map include course list, schedule list, news list, grades list, email list, message list and chat list)

#### *Enroll course*

Functionality	Click the course to enroll
URL	<a href="http://localhost:8080/mySaxion/enroll/{course_id}">http://localhost:8080/mySaxion/enroll/{course_id}</a>
Method	POST
Param info	course_id (get course by id, add to course list)
Return Msg (Json)	<pre>//successful enroll {   Status: 0   Message: "Success" }  //enroll failed {   Status: 1   Message: "failed" }</pre>

#### *show all user enrolled courses*

Functionality	show all user enrolled courses
URL	<a href="http://localhost:8080/mySaxion/courses">http://localhost:8080/mySaxion/courses</a>
Method	GET
Param info	-
Return Msg (Json)	Return course list.

#### *Enter a course*

Functionality	enter a course
URL	<a href="http://localhost:8080/mySaxion/courses/{course_id}">http://localhost:8080/mySaxion/courses/{course_id}</a>
Method	GET
Param info	course_id (get course by id)
Return	Return course;

#### *Enter schedule (course / exam), show details*

Functionality	course schedule
URL	<a href="http://localhost:8080/mySaxion/courseSchedule">http://localhost:8080/mySaxion/courseSchedule</a> course schedule <a href="http://localhost:8080/mySaxion/examSchedule">http://localhost:8080/mySaxion/examSchedule</a> exam schedule
Method	GET
Param info	-

Return Msg (Json)	Return course/exam schedule list
-------------------	----------------------------------

#### *Read all news*

Functionality	show all news
URL	<a href="http://localhost:8080/mySaxion/news">http://localhost:8080/mySaxion/news</a>
Method	GET
Param info	-
Return Msg (Json)	Return news list.

#### *Read entire article (news)*

Functionality	show details of news
URL	<a href="http://localhost:8080/mySaxion/news/{news_id}">http://localhost:8080/mySaxion/news/{news_id}</a>
Method	GET
Param info	news_id (get news by id)
Return Msg (Json)	Return news;

#### *Read all emails, show details*

Functionality	show all emails
URL	<a href="http://localhost:8080/mySaxion/emails">http://localhost:8080/mySaxion/emails</a>
Method	GET
Param info	-
Return Msg (Json)	Return email list.

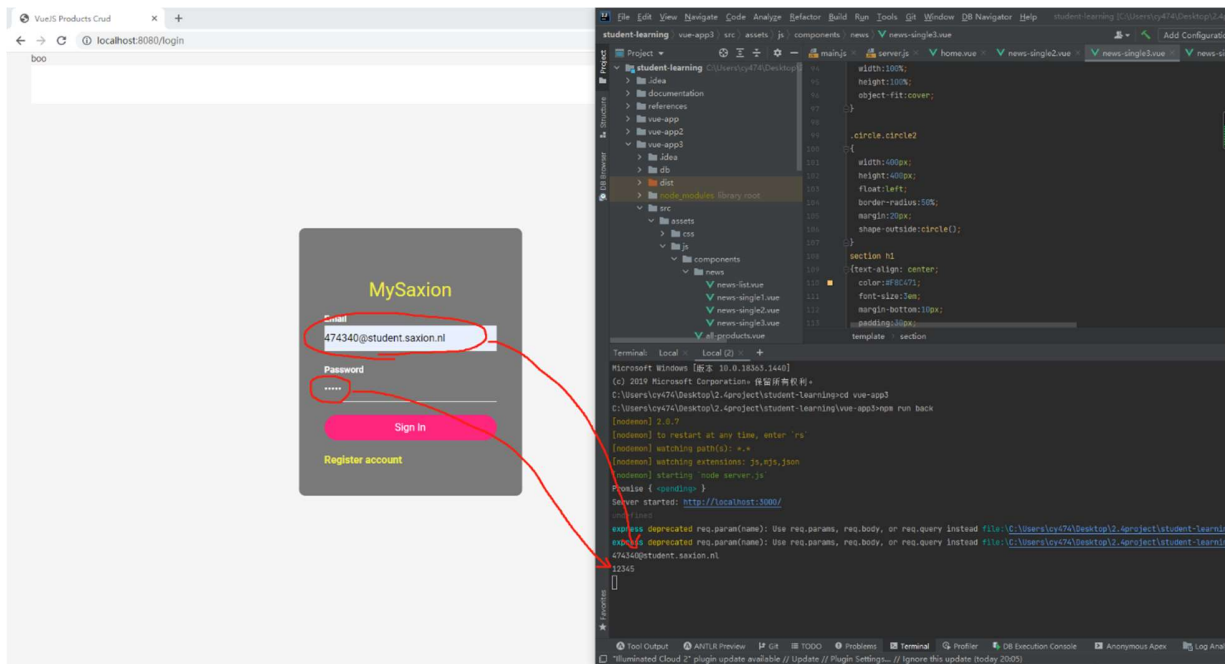
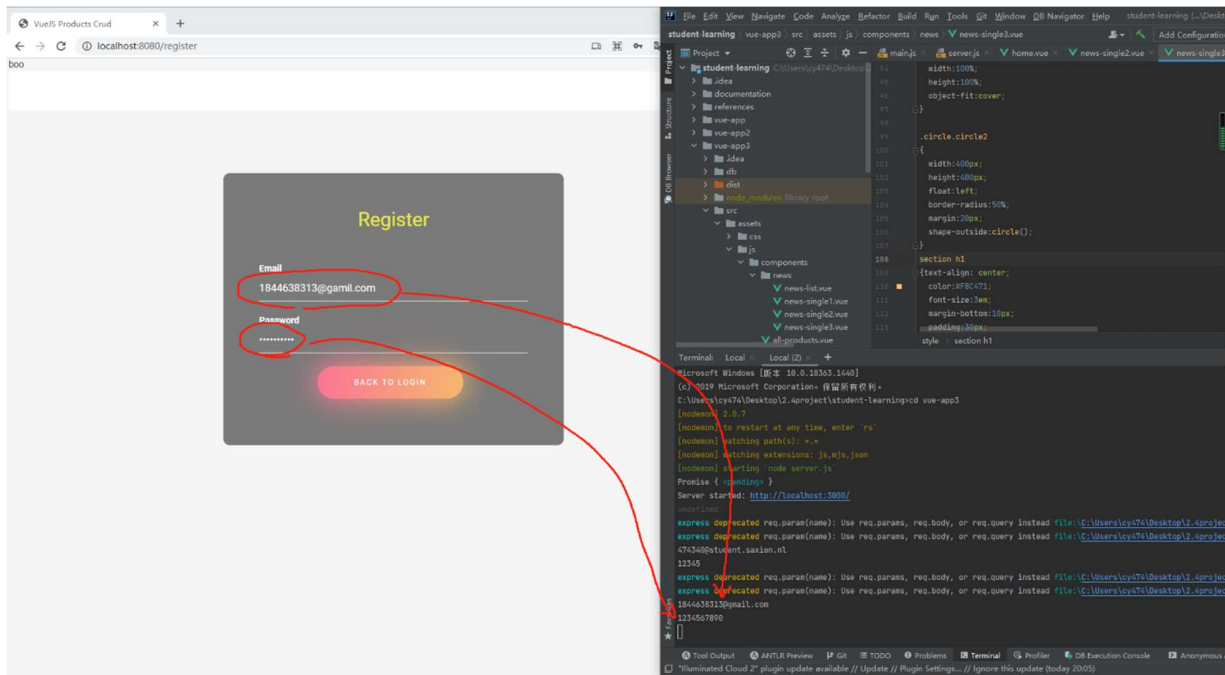


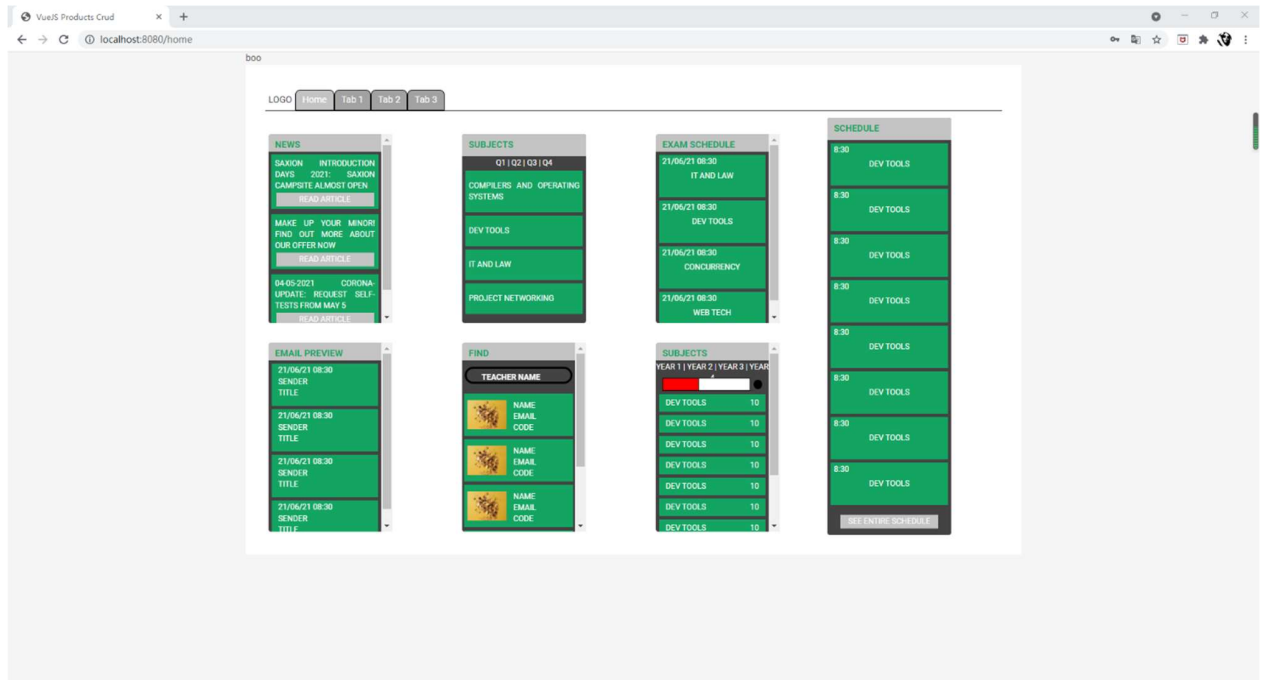
## Implementation Report

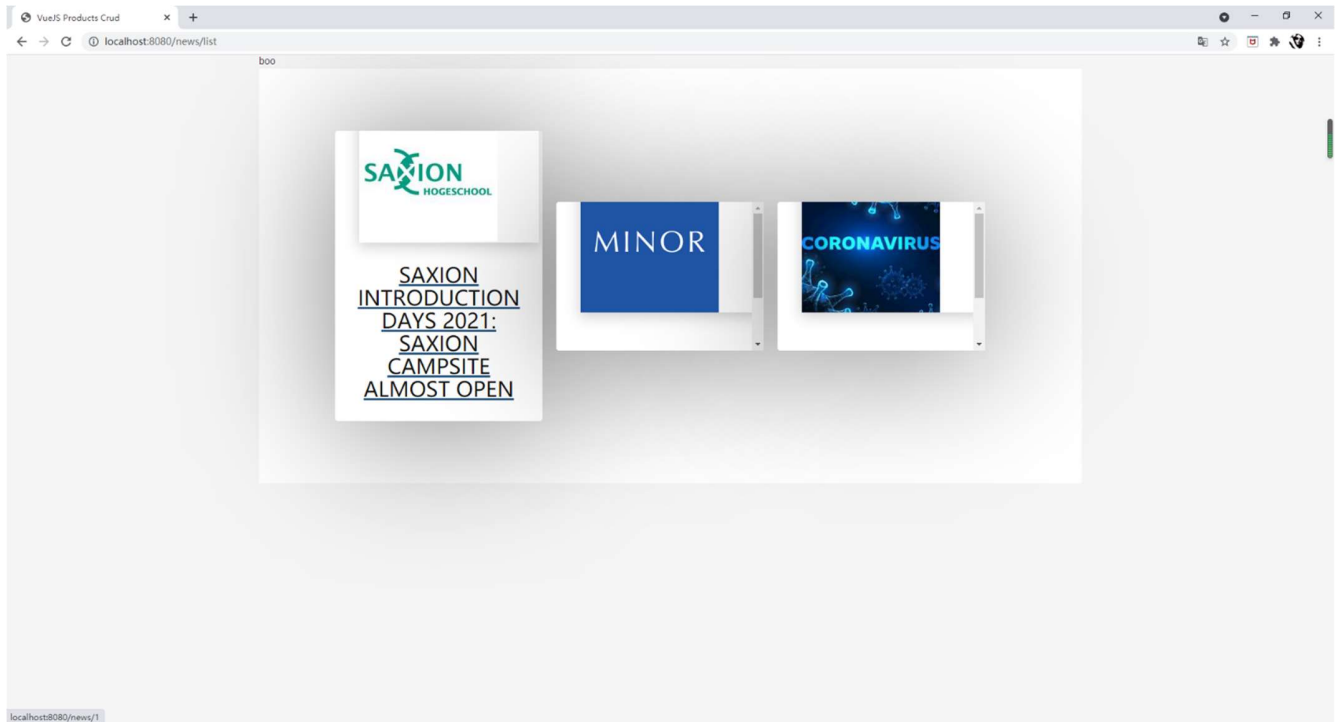
In sprint1. We have implemented login page, register page, home page and news page.

### Test results

Every page has been tested, login and register can send user information to the backend through fetch API. Home page and news page can run HTML, CSS and Js normally.







## PROJECT PORTFOLIO

### Code of Conduct

1. All members should deliver their part.
2. All members should finish all tasks that are assigned to them.
3. All members should actively look for tasks when they are done with their current task.
4. All members should attend daily meetings on Teams.
5. Under the circumstances that a member cannot attend a meeting, (if possible) they don't need to inform the team in advance.

### Scum-artefacts

#### Sprint 1

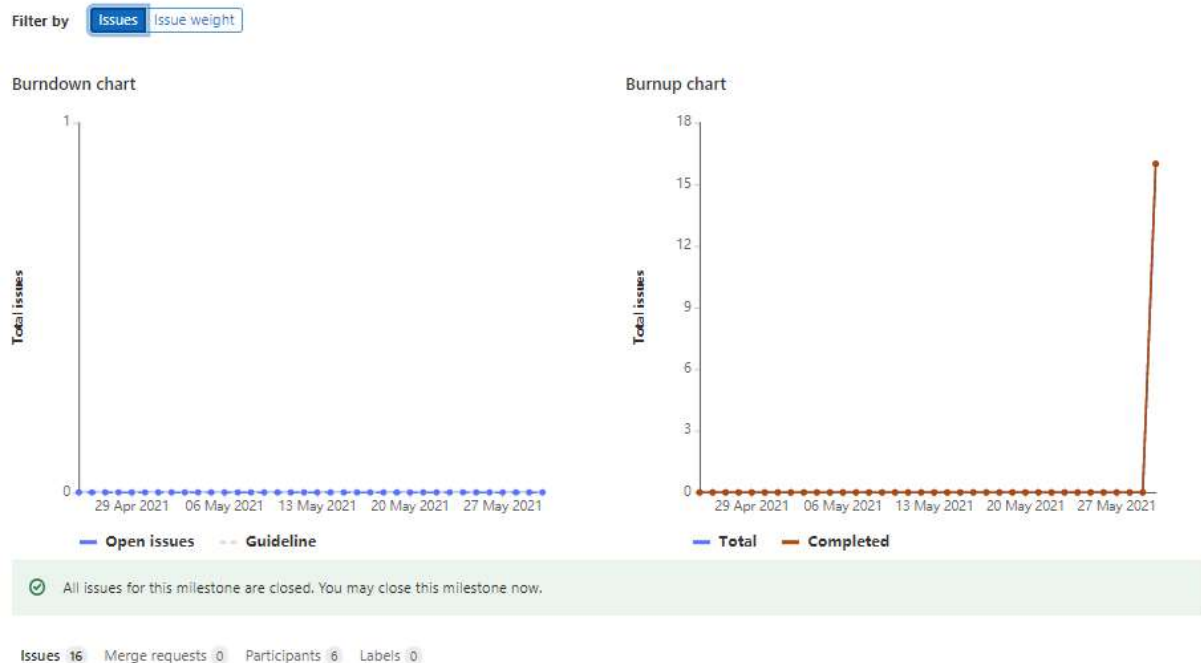
##### Scrum retrospective

Overall, the whole team worked well with each other as we attended all meetings and also discussed problems on discord outside class. Every teammates did their best and fulfilled their responsibilities. Although Keith and Tuan did not have much experience with Vuejs, they made a demo app following a tutorial on Youtube and caught up with the team. Whilst Yang and Mykhailo already have in-depth knowledge about Vuejs, they got to work on their parts and finished some small features. Sefanja did a great job with the wireframes while Jane did her part in completing the PoA as well as coding the base project. For next sprint, we will have to try to mind the deadlines more because sometimes the progress was still behind.

##### Sprint's backlog

There is no sprint backlog for this sprint.

sprint 1



## Scrum related reports

Timesheet file is included.

1														
2					2.5 IT Corp									
3					weekly hours goal 7-12 hours per week							0.00		
4		Total hours		wk1	vk	wk2	wk3	wk4	wk5	wk6	wk7	wk8		
5	yang	60.1		12.25	0	16.25	21.8	9.8	0	0	0	0		
6	jane	23.6		10.75	0	9.25	1.8	1.8	0	0	0	0		
7	tuan	73.6		13.25	0	14.75	31.8	13.8	0	0	0	0		
8	sefanja	54.6		10.25	0	15.25	14.3	14.8	0	0	0	0		
9	mykhailo g	66.1		16.25	0	20.25	14.8	14.8	0	0	0	0		
10	keith	60.1		11.75	0	14.75	16.8	16.8	0	0	0	0		
11														
12	Total	338.1		74.5	0.0	90.5	101.3	71.8	0.0	0.0	0.0	0.0		
13														
14	PLEASE DO NOT WRITE YOUR HOURS ON THIS PAGE. YOU NEED TO WRITE IT IN TIMESHEET TAB. IT WILL CALCULATE IT HERE													
15														
16					daily meeting attendance									
17		Total attendance		wk1	vk	wk2	wk3	wk4	wk5	wk6	wk7	wk8		
18	yang	23		5	0	10	4	4	0	0	0	0		
19	jane	23		5	0	10	4	4	0	0	0	0		
20	tuan	23		5	0	10	4	4	0	0	0	0		
21	sefanja	23		5	0	10	4	4	0	0	0	0		
22	mykhailo g	23		5	0	10	4	4	0	0	0	0		
23	keith	23		5	0	10	4	4	0	0	0	0		
24														
25														
26					*week 3 includes 2 weeks because vakantie week									

Standup Notes file is included.

Sprint 2

//Scrum retrospective

//Sprint's backlog

//Burndown chart

//Scrum related reports

Timesheet file is included.

Standup Notes file is included.

Sprint 3

//Scrum retrospective

//Sprint's backlog

//Burndown chart

//Scrum related reports

Timesheet file is included.

Standup Notes file is included.

## Proof of Concept

//Here we will insert stuffs from the webapp that Dick wants us to deliver and presentation or reports on what we want to build

//Explain how we came up with it and how it can help students with studying

//Manual instruction

//Explain the navigation of it and how it is related to what we will present for client

//Name some of the problems of students and how they can solve it with our webapp

## ICT Card: Survey

Target number of questions 7 questions. Keep it close ended I.e multiple choice questions.

Survey link:

<https://docs.google.com/forms/d/1kasEtMpxj8tp0HyVemiCodY7BiDkjBaCLkntGvzWHGs/edit>

- Which self-studying helping features/functions do you want Blackboard to have? - Tuan Nguyen
  - Self-made schedule
  - Exam/Class reminders
  - Daily quiz
  - Multiple choice sample tests before exams
  - Other:...
- What do you think about the overall distance education of Saxion? - Sefanja
  - Poor
  - Below Average
  - Average
  - Good
  - Excellent
- Do you enjoy learning online? - Sefanja
  - Yes
  - It's alright
  - No
- In terms of online lectures, what do you think can improve in this environment? (Multiple answers can be selected) - Sefanja
- what do you think can be improved in Saxion's learning environment?
  - Recordings
  - Interactivity
  - Quality of online lecture
  - Chat
  - Online whiteboard
  - Webcam functions
  - Share files functions

- Screenshare functions
- What is wrong with blackboard - Keith
  - Nothing is bad
  - Bad design
  - Hard to navigate
  - Everything is bad
- Do you prefer online learning or offline learning – Keith
  - Online
  - Offline
  - Either is fine
  - Why?
- During online lectures, do you prefer to see other people via their cam – Keith
  - Yes
  - No
- Are you satisfied with the current digital education environment (blackboard)? - Yang
  - Yes
  - No
  - Why yes/no?
- Which the following aspects of blackboard do you think needs to be improved? -Yang
  - - Schedule
  - -course module
  - -exam module
  - -message module (teacher's feedback, Course announcement)
- Is it necessary to add some reminder functions to the blackboard, such as deadline reminder, class reminder and exam reminder? - Yang
  - Yes
  - No
- Do you think it is a good idea to change the blackboard homepage to a page that supports personalized editing (you can change the position, size, and color of each module)? -Yang
  - Yes



- No
- Have you ever experienced interruption while taking exams/quizzes online via Blackboard? *Jane*
  - Very often
  - Often
  - Not too often
  - Never
- Which of the following is the main reason for causing drawbacks of using Blackboard? *Jane*
  - Blackboard UI sucks, mobile version not fully supported
  - Teachers being unorganized and/or inconsistent with the use Blackboard
  - Trouble with connections, experience interruptions when using Blackboard Collaborate
  - Layout is confusing for locating the necessary modules, and too much unnecessary things on one page
- Which of the following features do you used the most on Blackboard, besides looking at class materials/syllabi? *Jane*
  - Watch previously recorded lectures
  - Check grades
  - Use discussion board
  - Check class roster
  - Communicate and collaborate with team members
  - Get feedback from teachers on submitted assignments
- Which of the following LMS have you ever heard of besides Blackboard? *Jane*
  - Canvas
  - Moodle
  - Edmodo
  - Google Classroom
  - None of the above

## Meetings

### Questions for client

- What kind of inspiration is available. What has been thought of already. Who is working on it
- Do we need acceptance testing, user testing, software testing
- Does it need to have functionalities like blackboard assignment receiving or is it for attending class
- Are there any forbidden things? (example: Saxion doesn't want to be able to force students webcams on)

### Client Meetings

#### **26 Apr 2021**

- Create survey

#### **28 Apr 2021**

- Use research cards (<https://www.cmdmethods.nl/>) / Design thinking
- Presentation on 29 June for client / prototype
- Web Application of my schedule

#### **11 May 2021**

- Client asked to check POA process
- POA form should be ready for meeting on Wednesday

#### **19 May 2021**

- Client showed us Coursera website as an example how the online classes look like on that website to give us some ideas

#### **26 May 2021**

- Client asked if we can show our project to first year students because they are not happy with the current system

#### **2 Jun 2021**

-

#### **9 Jun 2021**

-


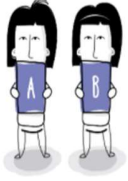







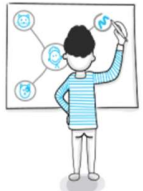










#### **16 Jun 2021**

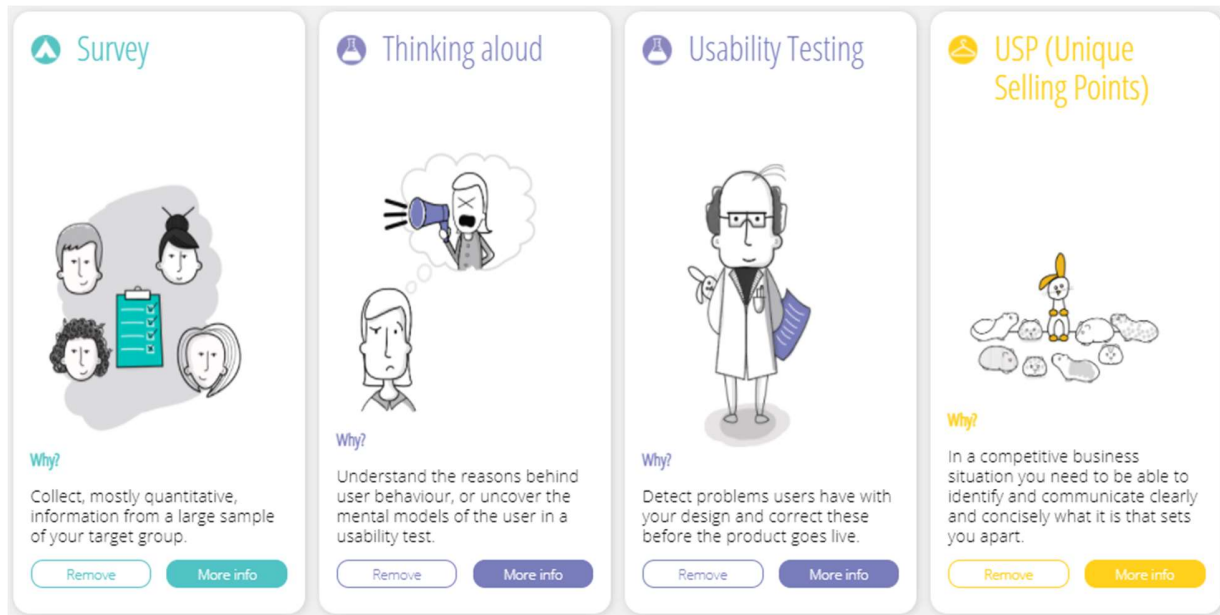
-

#### **23 Jun 2021**

-

## ICT Research Methods

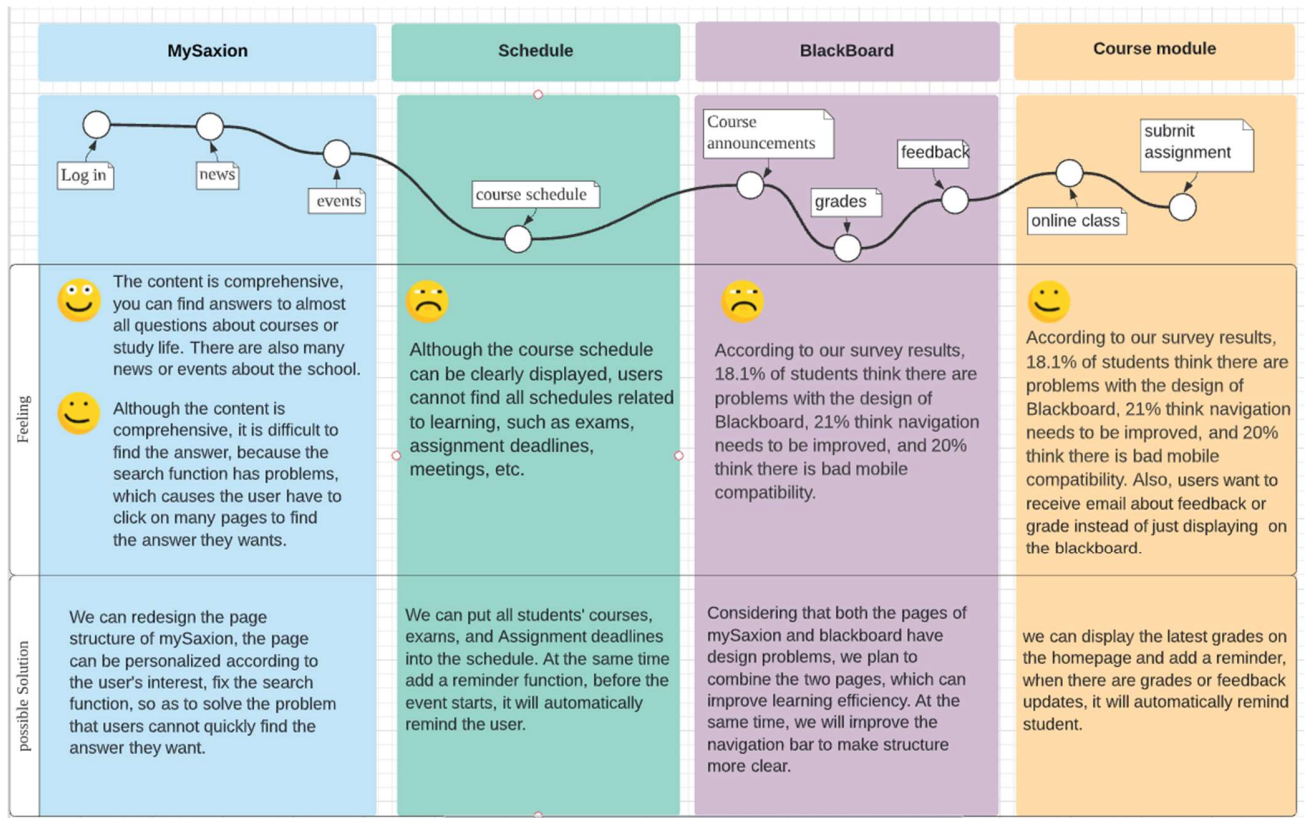
<p> <b>A/B Testing</b></p>  <p><b>Why?</b></p> <p>A minor change in a design may alter user behaviour in ways that are hard to detect in a usability test. An A/B test allows you to compare real-world user behaviour across different versions of the product.</p> <p><a href="#">Remove</a> <a href="#">More info</a></p>	<p> <b>Concept</b></p>  <p><b>Why?</b></p> <p>When you develop a new product or service, the concept summarizes 'the big idea' or 'the main principle' on which your solution will be based. For example, most traditional churches have a floor plan based on a cross so God can recognize a church from the sky. Validate your concept(s) with stakeholders to determine desirability and feasibility.</p> <p><a href="#">Remove</a> <a href="#">More info</a></p>	<p> <b>Customer Journey</b></p>  <p><b>Why?</b></p> <p>Visualize the user experience of a service over time and across the different interaction moments (touch points) within the service.</p> <p><a href="#">Remove</a> <a href="#">More info</a></p>	<p> <b>Day in the life</b></p>  <p><b>Why?</b></p> <p>Gain insights in the life of your users. To gain empathy, a day in the life could be a useful technique.</p> <p><a href="#">Remove</a> <a href="#">More info</a></p>	<p> <b>Ideation</b></p>  <p><b>Why?</b></p> <p>Generate and develop new ideas.</p> <p><a href="#">Remove</a> <a href="#">More info</a></p>
<p> <b>Online analytics</b></p>  <p><b>Why?</b></p> <p>Gain insights from real usage statistics in order to continue improving a website, app or social media campaign after it is in use, or monitor its use for marketing purposes.</p> <p><a href="#">Remove</a> <a href="#">More info</a></p>	<p> <b>Proof of Concept</b></p>  <p><b>Why?</b></p> <p>Demonstrate the desirability or the feasibility of your idea or design.</p> <p><a href="#">Remove</a> <a href="#">More info</a></p>	<p> <b>Prototype</b></p>  <p><b>Why?</b></p> <p>Test an early model of your product with users, peers, experts or your client. Test goals can vary from testing the concept, to testing functionality, user experience, content breakdown, usability, or technical feasibility.</p> <p><a href="#">Remove</a> <a href="#">More info</a></p>	<p> <b>Prototyping</b></p>  <p><b>Why?</b></p> <p>Develop, evaluate or communicate a concept or design.</p> <p><a href="#">Remove</a> <a href="#">More info</a></p>	<p> <b>Scenario</b></p>  <p><b>Why?</b></p> <p>Different types of scenarios exist that each serves a different purpose, for example to develop user requirements, to generate ideas or to reflect on a concept.</p> <p><a href="#">Remove</a> <a href="#">More info</a></p>



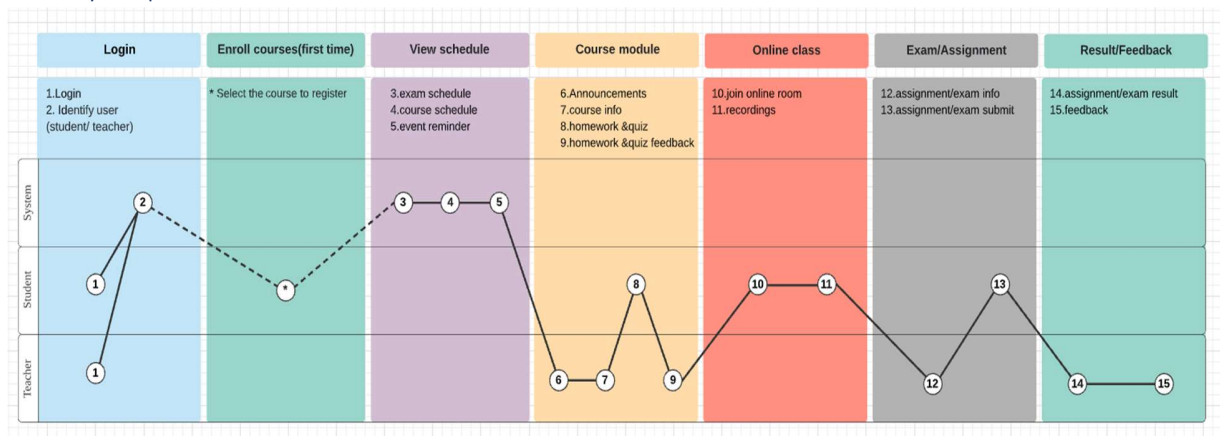
## ICT Card: Ideation

- Create a freecodecamp type of practice environment
- Create wireframe design for logged in students/teachers
- Something that applies to all of saxion students/department, better design
- Students should be able to pin “apps”(?) to their liking on MySaxion like start menu on Windows
- Components should be movable

## Customer Journey map

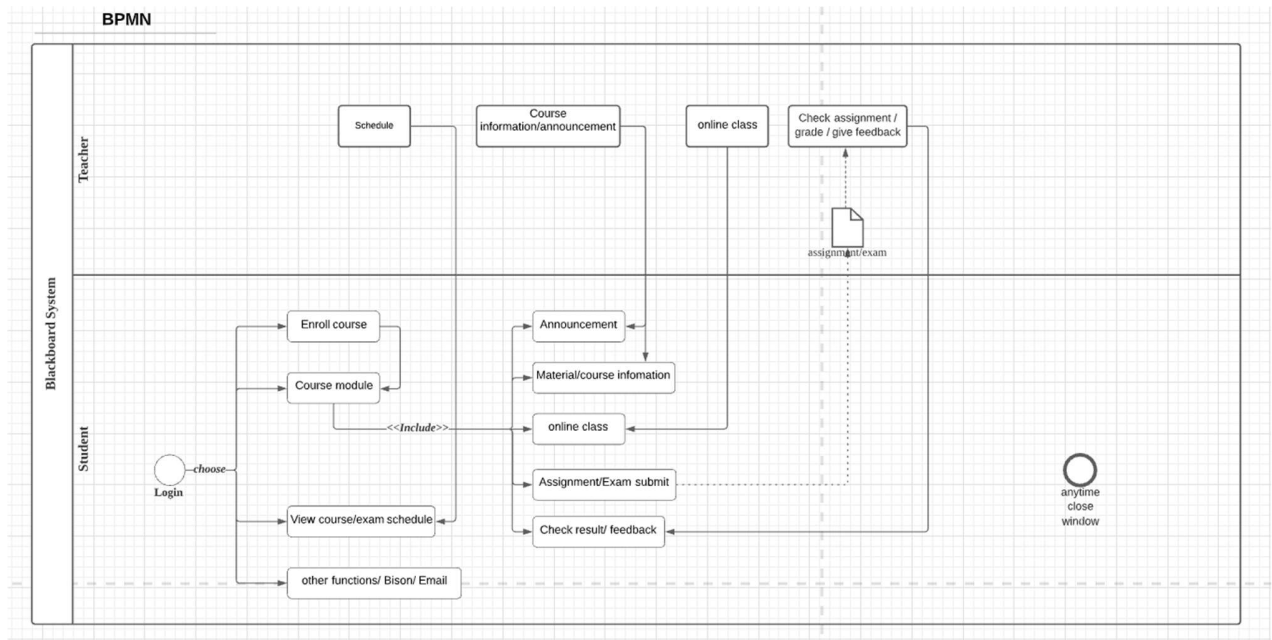


## Activity map



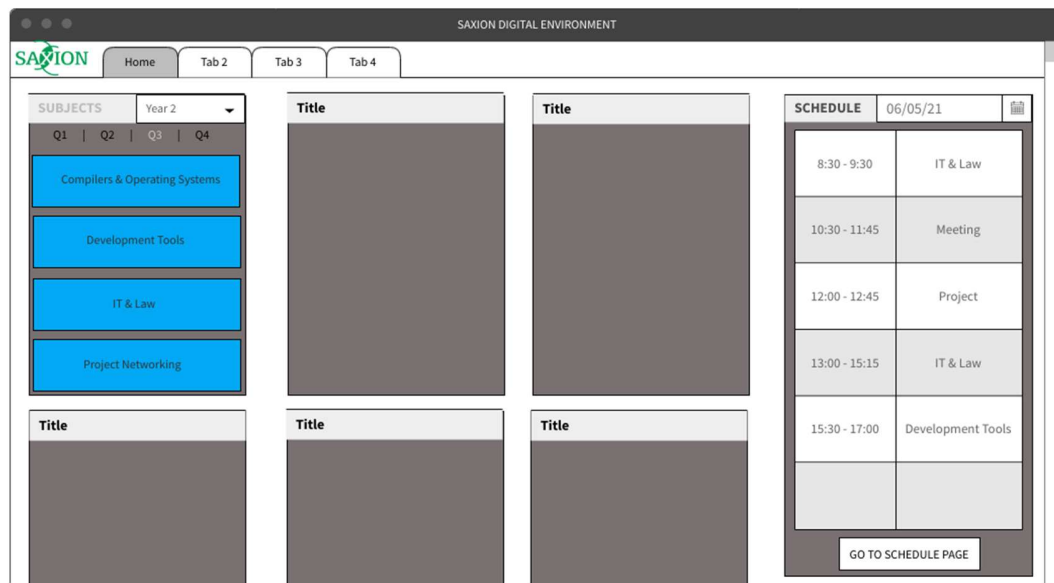
## BPMN

[https://lucid.app/lucidchart/3420cbcd-cc37-4797-bade-6a0875dce497/edit?page=0\\_0#](https://lucid.app/lucidchart/3420cbcd-cc37-4797-bade-6a0875dce497/edit?page=0_0#)



## Wireframes

### 1<sup>st</sup> Concept wireframe



Feedback:

- More titles

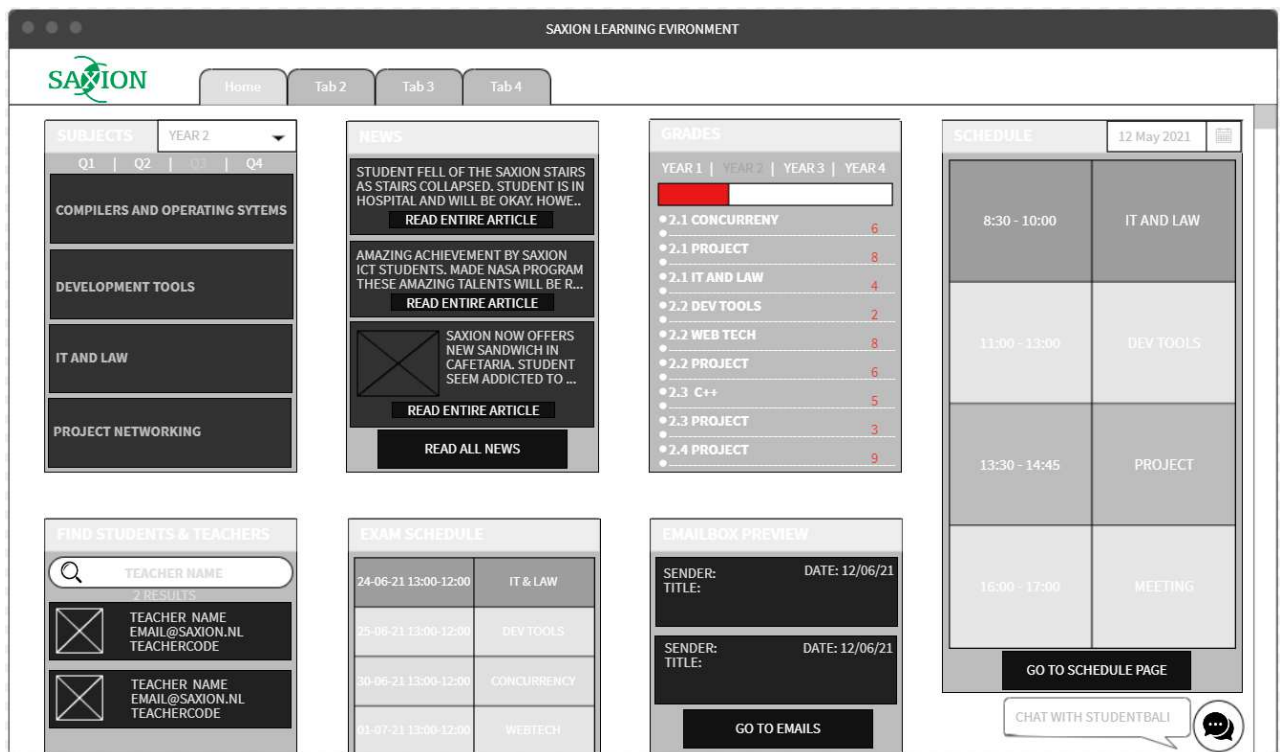
New ideas for titles:

- Exam schedule – Keith
- Class schedule – Yang
- Email preview - Keith
- Results window - Keith
- Search box – Yang
- Contact list box, tinder - Tuan
- News box – Keith
- Complain box – Keith
- Students chat box – Mykhailo
- Progress bar – Tuan
- Exam, class pop-up reminder - Tuan
- Student balie chat box – Keith
- Login & Register – Yang

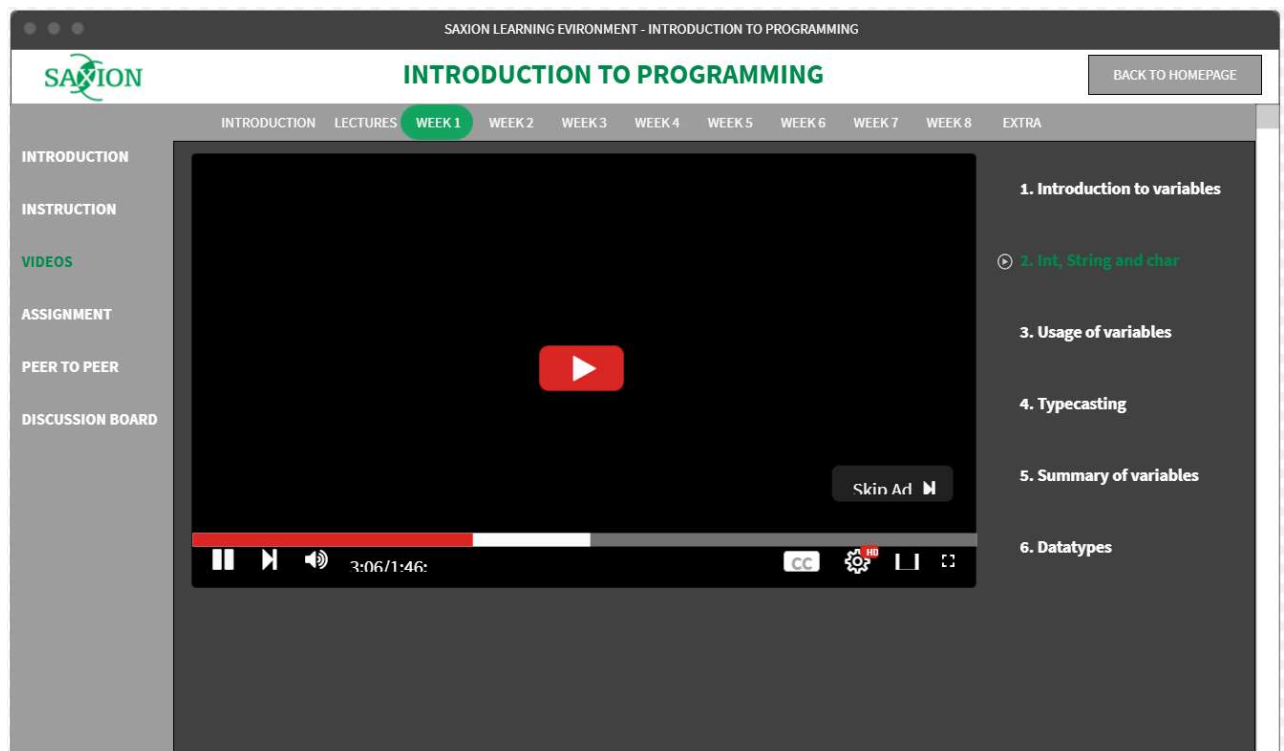
## 2<sup>nd</sup> Concept wireframe

View/download full size wireframe from here: <https://imgur.com/a/4wDo1aZ>

### Homepage



Course page



3<sup>rd</sup> Concept wireframe

View/download full size image from here: <https://imgur.com/a/roWDmy2>



The screenshot displays a web application for a learning environment. At the top, there's a navigation bar with "SAXION LEARNING ENVIRONMENT". Below it, the main content area is organized into several panels:

- SUBJECTS**: A dropdown menu showing "YEAR 2" and a grid of subjects: Q1, Q2, Q3, Q4. The subjects listed are "COMPILERS AND OPERATING SYTEMS", "DEVELOPMENT TOOLS", "IT AND LAW", and "PROJECT NETWORKING".
- NEWS**: A section titled "STUDENT FELL OF THE SAXION STAIRS AS STAIRS COLLAPSED..." with a "READ ENTIRE ARTICLE" button. Another news item mentions "AMAZING ACHIEVEMENT BY SAXION ICT STUDENTS..." also with a "READ ENTIRE ARTICLE" button.
- GRADES**: A section titled "STUDENT FELL OF THE SAXION STAIRS AS STAIRS COLLAPSED..." with a "READ ENTIRE ARTICLE" button. Another news item mentions "AMAZING ACHIEVEMENT BY SAXION ICT STUDENTS..." also with a "READ ENTIRE ARTICLE" button.
- SCHEDULE**: A calendar view for "12 May 2021" showing time slots and activities: 8:30 - 10:00 (IT AND LAW), 11:00 - 13:00 (DEV TOOLS), 13:30 - 14:45 (PROJECT), and 16:00 - 17:00 (MEETING). A "GO TO SCHEDULE PAGE" button is at the bottom.
- FIND STUDENTS & TEACHERS**: A search bar labeled "TEACHER NAME" with "2 RESULTS". Two results are shown, each with a placeholder icon and contact information.
- EXAM SCHEDULE**: A table listing exam times and subjects: 24-06-21 13:00-12:00 (IT & LAW), 25-06-21 13:00-12:00 (DEV TOOLS), 30-06-21 13:00-12:00 (CONCURRENCY), and 01-07-21 13:00-12:00 (WEBTECH).
- EMAILBOX PREVIEW**: A section titled "MAILBOX PREVIEW" showing sender and date information for two emails, with a "GO TO EMAILS" button.

A red arrow points from the "IT AND LAW" subject in the Subjects panel to the "IT AND LAW" course in the Schedule panel. A callout box on the right side of the screen states: "HERE THE COMPETENCES WILL BE SHOWN OF EACH STUDENT. THE LEVEL WILL BE SHOWN BY THE AMOUNT OF FILLED IN STARS."

At the bottom, there's a "COLOR SCHEME" section with two color swatches: #15a563 (green) and #ea1919 (red).

SAXION LEARNING ENVIRONMENT - INTRODUCTION TO PROGRAMMING

# INTRODUCTION TO PROGRAMMING

[BACK TO HOMEPAGE](#)

INTRODUCTION LECTURES WEEK 1 **WEEK 2** WEEK 3 WEEK 4 WEEK 5 WEEK 6 WEEK 7 WEEK 8 DISCUSSION BOARD EXTRA

- INTRODUCTION
- INSTRUCTION
- VIDEOS**
- ASSIGNMENT
- PEER TO PEER

3:06 / 1:46:31

CC HD

1. Introduction to variables	2. Int, String and char	3. Usage of variables
4. Typecasting	5. Summary of variables	6. Datatypes

SAXION

INTRODUCTION TO PROGRAMMING

BACK TO HOMEPAGE

INTRODUCTIONLECTURESWEEK 1WEEK 2WEEK 3WEEK 4WEEK 5WEEK 6WEEK 7WEEK 8DISCUSSION BOARDEXTRA

INTRODUCTION

INSTRUCTION

VIDEOS

ASSIGNMENT

PEER TO PEER

**ASSIGNMENT 1**  
Write a Java program to print the sum of two numbers.  
Test Data:  
74 + 36  
Expected Output :  
110

**ASSIGNMENT 2**  
Write a Java program to print the result of the following operations.  
Test Data:  
a.  $-5 + 8 * 6$   
b.  $(55+9) \% 9$   
c.  $20 + -3*5 / 8$   
Expected Output :  
43  
1  
19

Final concept wireframe  
Homepage



## Individual Reflections

// to be done on sprint 3

Keith

Jane

Yang

Mykhailo

Tuan

Sefanja

## Declaration of Competences

//This is to prove what each member did, to proof how much you contributed to the project

Analysis: The student is able to implement techniques and processes that contribute to the development (and maintenance) of a solution.

Design: The student is able to, based on a design, realise a solution that resolves a given problem and verify the success of the solution.

Realisation: The student is able to implement techniques and processes that contribute to the development (and maintenance) of a solution.

Manage and Control: The student is able to implement techniques and processes that contribute to the development (and maintenance) of a solution.

Advise: The student is able to, based on a design, realise a solution that resolves a given problem and verify the success of the solution.

### Keith

Competence Choice 1: Advise

Competence Choice 2: Design

Competence Choice 3: Manage & Control

### Jane

Competence Choice 1: Analysis

Competence Choice 2: Advise

Competence Choice 3: Relization

### Yang

Competence Choice 1: Realization

Competence Choice 2: Manage + Control

Competence Choice 3: Design

Mykhailo

Competence Choice 1: Realisation

Competence Choice 2: Advise

Competence Choice 3: Manage + Control

Tuan

Competence Choice 1: Realisation

Competence Choice 2: Design

Competence Choice 3: Client Relations

Sefanja

Competence Choice 1: Advise

Competence Choice 2: Design

Competence Choice 3: Realization

## Resources

### References

<https://doe-meer-met-studiedata.nl/wat-betekent-dit-voor-mij/>

### Levels of competences

<https://hbo-i.nl/domeinbeschrijving/>

### Todo applications

<https://todomvc.com/>

### Som Model English

<https://som-eng.digitaal-magazine.nl/eng-som-2-0/educational-philosophy>

### Final Survey link:

<https://docs.google.com/forms/d/1kasEtMpxj8tp0HyVemiCodY7BiDkjBaCLkntGvzWHGs/edit>

### GitLab Repository

<https://gitlab.com/saxion.nl/hbo-ict/2.4-project/student-learning/activity>