

# FII Assistant

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## State of the art

In this chapter we will make a short analysis of some already active student portals found in different universities around the world. We will find some of their defining features, what could be applied in our current scenario, and their approach regarding what a student needs in his everyday academic life.

After this analysis, we will make a quick introduction to the architectural standpoint of our platform, and how different modules can be implemented in the current solution.

### Cambridge Georgia Student Portal

The student portal of the Cambridge Institute of Health, Georgia, offers a vast amount of tools which can help students in their everyday life at the university.

Students of the Institute have access to different learning tools, like an online learning portal, a library database containing vast amounts of e-books, whitepapers and articles, a “Grade Center” where the student can watch closely his or her evolution, an online payment portal, and access to the university email.

In this example we can find some features that are nice to have in any student portal, and could be implemented in the FII Assistant as well. Those functionalities can be created as different modules of our application - grade management, library database, tax payment, and many others.

More information regarding this platform can be found at <http://cambridgestudentportal.com/>.

### Student Self Service - University of Oxford

Oxford’s student self service is a platform that provides you as a student with “essential information that you will need throughout your studies”.

The student can create an account on the portal with an IT activation code received upon signing the contract with the university. The website has numerous services, including:

university registration, career plans and employability skills, overseas studies, examination and assessments entry, degree ceremony booking.

Functional-wise, these are utilities that we can adapt for FII and aggregate in our project url: <https://www.ox.ac.uk/students/selfservice>

### **Architectural state of the art**

We want to build a project where we can add new features as plugins, so we don't have to write again architectural logic whenever we want to add a new functionality. To solve this, we can build the application according to the microservices architecture.

This architectural idea is based on breaking a complex flow into a flow of individual loosely coupled services. Our flow is to bring useful information and functionalities to the students, and each data-source/functionality can be a service.

## **Risks**

The development process of our application is dependant on a lot of factors. Due to this there some risks involved. Below we have described some of the risks that might appear.

### **Development process will be too complex**

Due to the modular structure and the extensible architecture planned the development of such a large scale project with the available manpower might not be feasible in the allotted time.

### **Team members won't have enough available time**

The complexity of the project requires a lot of time to implement and due to the team's busy schedule we might not synchronize well enough which can affect the quality of the project.

### **Architectural challenges**

The modular and extensible system we want to implement will bring along some architectural challenges for us to foresee and overcome. The base of the application has to be designed in such a way that it will accept varied modules which requires a clear vision upon the structure of this modules.

### Low usability

The user experience offered by the application might not be as intuitive as expected. The functionality of the application might not be as usable on a repeated usage.

### Application performance

The modular structure and the decoupled architecture involves a lot of communication between the different components (e.g. consumer, platform) which might affect the speed of the application and the user experience.

### Poorly chosen modules

The user might not find the developed modules as useful as planned. This will lead to a low number of users or moderate usage. For example the idea that a user will find a laboratory map useful might not be shared by the targeted audience.