

SubIt!

Group 1

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1 Who are the users, and why do they need SubIt?

The system SubIt! will be used by students and teachers at a University. It will help students to submit their homework and lab assignments, and it will help the teachers grade those assignments. Students will no longer have to worry about where to send their homework, or if it is ok to hand it in by e-mail, and they no longer have to wonder what file format the teacher accepts, because the teacher will have to specify this.

The teacher will not have to think about where the students may have turned in their assignments or when. SubIt! will keep track of when assignments are turned in and who has turned their assignment in to late. It will list all the assignments and store them in one place so that the teacher can easily reach them and keep track of them.

2 The main uses of SubIt!

SubIt! is to be used as an organization tool for students and teachers. The system will, for a student, list his courses and let him know what assignments he is to turn in when, and in what file format. It will also tell him what the assignment is and of course allow the student to upload the assignment. The system is meant to be used in all courses at the university. A teacher using SubIt! will see the courses he/she teaches, and let him/her create new assignments using a standard template with fields such as *Description*, *Due date*, *Length* and *Accepted file formats*. For each assignment created, the teacher will be able to list the reports handed in from students, see when the reports were turned in, and set a grade on each specific report.

Use Case 1

Martin has just spent all day finishing his homework assignment in one of the courses he is reading, *Numeriska Metoder*. Exhausted, but pleased with what he has accomplished, all that is left is to hand it in. Gerd, his teacher, has for this course decided to use SubIt!, a system for handing in assignments over the internet. Martin opens up a web browser on his computer, and points it towards his university's SubIt! website. On the page that pops up, he is asked to identify himself, and he quickly supplies his username and password into the system.

Now logged in, SubIt! lists the courses in the system that Martin is currently a student in. He selects *Numeriska Metoder* from the list and is presented with a list of the assignments in that course. He sees at a glance that the homework he submitted last week has been graded. Having been a

bit worried about his reasoning on one of the questions, he is relieved to see that he Gerd has given him a passing grade.

The next assignment, he sees, is due in tomorrow. Clicking on the assignment in question, he is given the option to submit it. He is informed that Gerd has chosen to only accept pdf files for this assignment. Martin, having looked this up previously, has already saved his report in the pdf format. He submits the pdf file, and the submission is confirmed as handed in by the system. Satisfied, he logs out of the system and turns off his computer screen.

Use Case 2

Gerd knows the last date for submission for an assignment in her class in *Numeriska Metoder* is tomorrow, but she is curious to see if anyone has submitted their report already. Hoping that she might be able to get a head start on the grading of this assignment, she logs into the SubIt! system. The system recognizes her as a teacher in a number of courses, including *Numeriska Metoder*, but also as a student in the course *Italienska fortsättningskurs*.

Gerd selects her *Numeriska Metoder* class, and sees a list of the assignments she has set up for this class. Should she wish to, she could also add extra assignments to the course. She selects the assignment due in tomorrow. The students who have already submitted their reports are listed together with a link to their submission. Gerd clicks on Martin's submission and the files Martin has submitted for that assignment are listed. She clicks the download button and receives Martin's PDF file. A while later, when Gerd has read Martin's report, she again logs in to the system and gives Martin his grade.

3 System environment and context

SubIt! will be used to facilitate grading and homework submission over the internet. Students and teachers alike should be able to access the application through a XHTML-compliant web browser from any operating system. The application runs on a PHP webserver with an SQL database system for storing user information and homework submission details, while storing the actual files submitted on the server filesystem. The application and database should be able to handle several different file types which are specified by the teacher, depending on the assignment.

4 The Scope of the System

Topic	In	Out
Login system	X	
Encryption		X
Different user access levels (per course)	X	
Inter-user messaging system	X	
Complete course listing	X	
Ability for user to join any course	X	
Ability for teacher to add student to their course	X	
Connection to LADOK		X
Connection to KTH login system		X
Ability to create/join project groups	X	
Multi-language support		X
Ability to see if a user is logged in		X
Discussion forum		X
News page for a course	X	
File submission system	X	
Web2.0ness	X	
Teacher to grade and comment a submission	X	
Teacher ability to see all submissions for any student	X	

5 Main factors in development of the system

In a system that allows the students of a university course to submit all their coursework through one easy-to-use submission system, there are a few factors that need to be taken into account when designing such a system.

- There must be a well designed interface that is both easy to use and understand, for teachers and students alike.
- A teacher should be able to easily see whether or not an assignment was handed in on time, or not. A student, when submitting such an assignment should also know, beyond a doubt, whether the system regards his submission as being on time or not, or else unnecessary conflict may arise.
- Availability of resources. During implementation there needs to be a central depository of information where all group members can upload their files. Likewise, a webserver running PHP 5.2.5 where all group members have access is required during the implementation, preferably with some sort of Version Control system like SVN.
- Deployability. The system should be fairly easy to deploy when

completed so that it can be installed easily on many different universities.

6 Technologies and risks

Required Technology

A server running the Apache Webserver, with PHP5 and MySQL installed.

We've chosen to write this project in PHP. By using PHP and a simple browser-based interface we limit the project work load since we do not have to create both a server and a client interface. Furthermore our users won't have to download an application to be able to upload their assignments and will be able to do it from any computer with internet access. The greatest risk we face by choosing PHP for this project is that only one of our member of the group knows PHP very well. We will therefore need to spend some time learning the language before we can get started with the implementation.

The MySQL database we will use to store all information about the courses and users is OpenSource and free. Yet, thanks to many commercial applications, it is well tested, supported and reliable.

Besides all this we will need a model for how we should reliably store and handle all submissions on the server filesystem. The catalog structure will never be seen by any user ,since the system itself will take care of all file handling and show the users a much more immersive and non-technical file view, but in the event of a breakdown of the interface, or a server crash, the files should be easily recoverable.