



SOFTWARE REQUIREMENTS SPECIFICATION

Project uTutor

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Revision history

Version	Date	Description
0.1	01.10.2015	Document initialized and structured.
0.2	03.10.2015	Merged the parts written by the staff members, document ready for first internal review
0.3	06.10.2015	Several little corrections, ready for customer review
0.4	07.10.2015	Document update after first requirement review
0.5	13.10.2015	Updated the use case image and final changes for the next review
0.6	09.11.2015	Updated requirements according to coding progress, making the document ready for the release of v1.0

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Introduction

Purpose

As a student, you currently have various possibilities to find coaches for private lessons if you have weaknesses in certain lectures. But these online platforms are quite generic and it's hard to find appropriate help for your specific needs.

Mario Kaufmann wants a platform, where students of the University of Bern can easily find tutors who fulfil the wishes of the students. Students would like to have tutors having passed the exam some years ago with a good grade. The system should allow them to get in touch with possible tutors and fix agreements about private lessons.

Stakeholders

Name	Function
Mario Kaufmann	Client and agent of the service provider
Students of the University	System users

Glossary

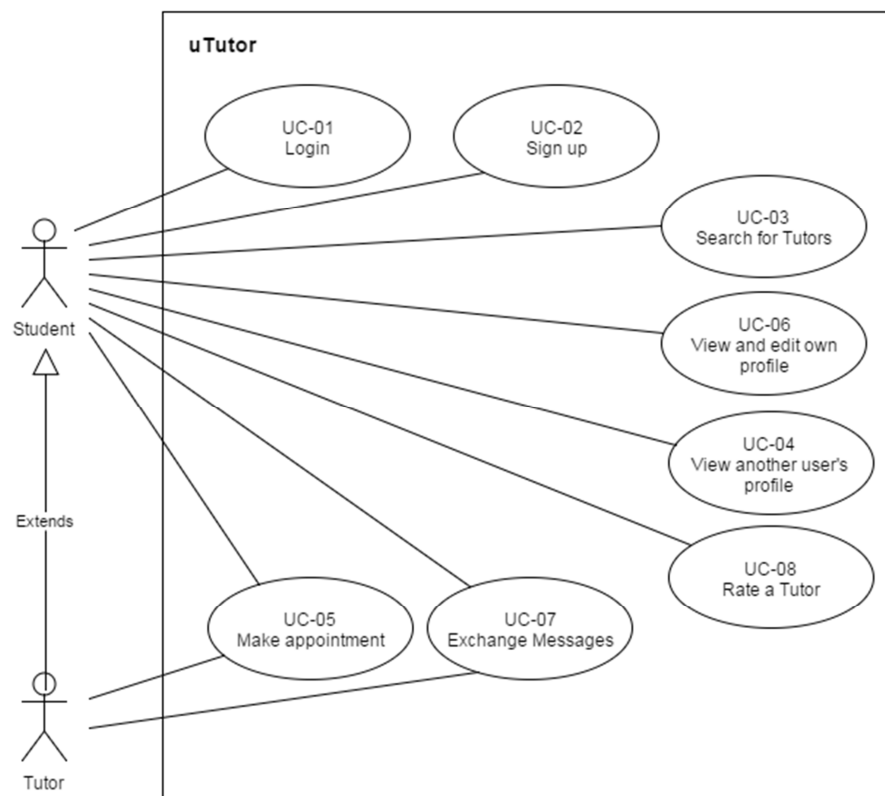
Term	Definition
uTutor	Name of the platform
Student	Person currently enrolled at an university
Tutor	A student offering private lessons for one or more specific lectures. He has registered at least one lecture or he had at least one meeting with a student
Stakeholder	Any person with an interest in the project who is not a developer
Users	Students and tutors
Public users	Anyone with internet access
UC	Use case
RE	Functional requirement
NRE	Non-functional requirement
Time slot	A time slot is an hour (from X.00 to X.59).

System overview

Every visitor of the platform can search for possible tutors without sign up or login. If the user wants to visit the tutor's profile, he needs to login (or sign up if he hasn't already created an account). A logged in user can edit his profile picture, become a tutor of his own, view a tutor's profile, select available time slots provided by a tutor and send an appointment request (for the selected time slots). Furthermore, he can exchange messages with a tutor.

Use cases

UML diagram



UC-01 Login

Actors	User (registered students and tutors)
Description	As a user I, want to login to search for coaches or update my profile.
Trigger	User clicks on a "Log in" button.
Pre-conditions	<ol style="list-style-type: none">1. User has an already existing, registered profile (see UC-02 Sign Up)2. User has entered a valid username and password
Post-conditions	<ol style="list-style-type: none">1. User is logged in
Main scenario	<ol style="list-style-type: none">1. User navigates to the "Log in" page2. User enters his e-mail3. User enters a password4. System validates if e-mail is in the database5. System validates if password matches6. User is logged in
Alternative scenario	<p>6a) User is not registered in the database. In this case, the log in process will terminate and the system will show an error page (no such user found)</p> <p>6b) User password doesn't match. In this case, the log in process will terminate and the system will show an error page (wrong password)</p>
Special requirements	-
Notes	-

UC-02 Sign up

Actors	Public user (everyone with access to the internet and the uTutor-Platform)
Description	As a public user, I want to create my own profile with my e-mail and password so I have full access to the platform and its functionality.
Trigger	Public user clicks on a "Sign up" button
Pre-conditions	<ol style="list-style-type: none">1. There exists no profile with the same e-mail as the possible new user2. All mandatory profile data is entered and valid (first name, last name, e-mail, password, password repetition)
Post-conditions	<ol style="list-style-type: none">1. User has a valid account with first name, last name, e-mail and password stored in the database.
Main scenario	<ol style="list-style-type: none">1. Public user navigates to the "Sign up" page2. Public user is asked to enter first name, last name, e-mail, password, repeat password3. Account is created
Alternative scenario	3a) E-mail is already used. In this case, the registration will be terminated and the system will show an error page (e-mail already used) 3b) E-mail, password, first name or last name are invalid entries or password repetition did not match password. In this case, registration will be denied and the public user is asked to re-enter the invalid data
Special requirements	Existing database
Notes	-

UC-03 Search for tutors

Actors	User (everyone with access to the internet and the uTutor-Platform)
Description	As a user, I want to search for a specific lecture so I can see all available tutors for it
Trigger	User enters a term in the search field and clicks on the "Search" button
Pre-conditions	1. A valid term is entered
Post-conditions	1. All lectures matching the search term are displayed 2. All results are linked with the matching tutor's profile
Main scenario	1. User enters a search term 2. All existing tutors for the lectures, matching the search term, are displayed 3. Some information to the lecture is displayed
Alternative scenario	-
Special requirements	-
Notes	- -

Commented [MS1]: Haben wir bereits in der ersten Sitzung geklärt, war Fehler von mir, dass ich das noch hier drin hatte.

UC-04 View another user's profile

Actors	User (logged in student or tutor)
Description	As a user, I have the possibility to see the profile of another user. Is the other user a tutor I have the possibility to check his skills and availabilities and, if needed, make an appointment
Trigger	Clicking on a link to a another user's profile
Pre-conditions	<ol style="list-style-type: none">1. User is logged in2. The profile exists
Post-conditions	<ol style="list-style-type: none">1. The visited user's public data is displayed
Main scenario	<ol style="list-style-type: none">1. User clicks on a linked profile2. The profile data of the visited user is displayed
Alternative scenario	-
Special requirements	-
Notes	-

Commented [MS2]: Da ja gestern gesagt wurde, dass (theoretisch) jeder User jedes andere Userprofil anschauen kann. Würde ich vorschlagen, dass wir hier eine etwas grössere Anpassung vornehmen (siehe mein Vorschlag links)

Falls dies für euch i.O. so, würde ich noch das UML anpassen.
@Marco: Kannst du sonst auch im DropBox Ordner unter Graphics hats ein XML, dieses einfach unter <http://draw.io> reinladen und anpassen. Dann als png exportieren (und speichern des angepassten XMLs nicht vergessen)

Die entsprechenden REQ habe ich auch angepasst.

Generell sollten wir wohl solche „Datenauflählungen“ wie (firstname, lastname, etc...) wenn möglich in den Use Cases vermeiden und (falls noch nicht vorhanden) diese in den Requirements unterbringen.

UC-05 Make appointment

Actors	Student and tutor (logged in)
Description	As a student, I want to make an appointment with a tutor of my choice. As a tutor, I want to get appointment requests and have the possibility to accept or decline the request.
Trigger	Student clicks on the "Make appointment" button
Pre-conditions	<ol style="list-style-type: none">1. Student is logged in2. Available timeslots (free, reserved or booked) for this tutor (after trigger is activated)
Post-conditions	<ol style="list-style-type: none">1. Appointment is entered into the database2. User and tutor are informed
Main scenario	<ol style="list-style-type: none">1. The student visits the tutors profile, selects available time slots and clicks on the "Make appointment" button2. The student is informed that the time slot is reserved and that the tutor is informed to accept or deny the appointment request3. The tutor gets a Message with the appointment request (student name, time slot and link to student profile) and clicks on the "Accept appointment" link4. The appointment is made, the student and the tutor receive a message with the confirmation
Alternative scenario	1a) After the student clicks on the "Make appointment" button, the system detects that one or more of the selected time slots are not available anymore. The student will get an exception-styled message 3a) The tutor clicks on the "Reject appointment" link in the message. The student will get a message which informs him about the rejection. The reserved time slot will be made available again.
Special requirements	A messaging system (UC-07)
Notes	-

UC-06 View and edit own profile

Actors	User (Logged in student or tutor)
Description	As a user, I want to see my own data and maybe add or change my profile picture, first name or last name. As a student, I might want to become a tutor. As a tutor, I might want to add, edit or remove lectures, grades or timeslots or change my description.
Trigger	User clicks on a link to his own profile
Pre-conditions	<ol style="list-style-type: none">1. User is logged in2. User is owner of the profile (his own profile)
Post-conditions	<ol style="list-style-type: none">1. All non-optional values for the user profile are available
Main scenario	<ol style="list-style-type: none">1. User clicks on link to his profile2. User sees the data he entered during the registration (UC-02), except for the password which is never displayed3. User has the possibility to add/change his profile picture, first name or last name
Alternative scenario	2a) If the user is a student, he has the possibility to become a tutor by setting his pay per hour for tutoring and adding a first lecture and grade 2b) If the user is a tutor, he also gets the additional tutor data from his tutor profile view displayed (UC-04). He also gets a list of the given hours and the commission fee he has to pay displayed. He can also add, edit and remove lectures, grades and time slots.
Special requirements	-
Notes	-

UC-07 Exchange messages

Actors	User (Logged in student or tutor)
Description	Users have the possibility to communicate with each other through the platform by sending each other messages
Trigger	User clicks on the "Messages" link
Pre-conditions	1. User is logged in
Post-conditions	1. For every sent message by one user (sender), there exists one message in the inbox of the other user (receiver) (can be marked as deleted, not visible) and vice versa
Main scenario	<ol style="list-style-type: none">1. User clicks on the "Messages" link2. The user can see his inbox where he can read and reply to messages he received from other users3. The user can see his outbox where he can read messages he sent to other users
Alternative scenario	3a) If a student clicks on the "Contact" button on another user's profile (UC-04), he is able to create a new message to this user.
Special requirements	-
Notes	-

Commented [MS3]: Auch hier müssten wir wohl anpassen, da jeder User (theoretisch) das Profil eines anderen Users sehen kann, können Sie einander auch Nachrichten schreiben.

UC-08 Rate a tutor

Actors	Student (logged in)
Description	A student has the possibility to rate a tutor after a completed appointment
Trigger	Student clicks on his completed tutoring appointments to rate the tutor
Pre-conditions	<ol style="list-style-type: none">1. Student is logged in2. Student and teacher had at least one lesson together
Post-conditions	<ol style="list-style-type: none">1. There is one rating value for the matching appointment
Main scenario	<ol style="list-style-type: none">1. User clicks on his completed tutoring appointment2. User selects one of the values on the scale3. The last selected value by the user is stored
Alternative scenario	-
Special requirements	-
Notes	-

Specific requirements

Functional requirements

#	Title	Description	Related use case
RE-01	Login	A registered user is able to login to the system with his e-mail address and password.	UC-01 Login
RE-02	Registration	Every public user can register.	UC-02 Sign Up
RE-03	Mandatory registration data	To register, each user needs to enter his first name, last name and e-mail address. He also needs to set a password.	UC-02 Sign Up
RE-04	Search criteria	The only search criteria available is the lecture name.	UC-03 Search for tutors
RE-05	Search without criteria	A user can search without criteria. In this case, all tutors with at least one lecture registered are displayed.	UC-03 Search for tutors
RE-06	Displayed data	Data displayed after a search are the tutor's first name, last name, lecture name, grade, price and rating	UC-03 Search for tutors
RE-07	Predefined sorting order	In general, search results are ordered by lecture name (ascending) and rating (descending).	UC-03 Search for tutors
RE-08	Possible sorting criterias	Possible criteria for sorting a result list are price, lecture name and rating	UC-03 Search for tutors
RE-09	Search matching	Only exact matchings between search criteria and recorded data are displayed. Availabilities aren't respected.	UC-03 Search for tutors
RE-10	Display profile	If a user is logged in, he can see the matching profile by clicking on the tutor name in the result list of the search.	UC-04 View another user's profile
RE-11	Displayed data	In the profile view of another user, the following data is displayed: profile picture (if available), first name and last name. If the visited user is a tutor, the following data is also displayed: description, price, lectures with grades, availabilities.	UC-04 View another user's profile
RE-12	Meeting request	A user is able to send a request to the tutor for a meeting by clicking on a free time slot in the tutor's availabilities (which are also displayed in the profile).	UC-05 Make appointment
RE-13	Meeting response	The tutor is able to accept or reject a meeting request.	UC-05 Make appointment
RE-14	Become a tutor	A registered and logged in student can become a tutor by clicking on a button in his profile. He is required to provide at least one lecture, the grade for this lecture and a general price per hour.	UC-06 View and edit own profile

RE-15	Adding and editing lectures	A tutor is able to add new lectures with corresponding grades and remove existing entries.	UC-06 View and edit own profile
RE-16	Edit Profile	A registered and logged in user is able to add, edit or remove his profile picture and edit his first name, last name and, if he's a tutor, description.	UC-06 View and edit own profile
RE-17	Static profile data	The price of a tutor is static after the first entry.	UC-06 View and edit own profile
RE-18	Commission fee	A tutor sees in his profile the amount of given hour and the total of the fee's he's in debt	UC-06 View and edit own profile
RE-19	Register availability	A tutor can register his availability to have meetings as time slots	UC-06 View and edit own profile
RE-20	Message exchanging	A registered and logged in user is able to communicate with another user through a messaging system.	UC-07 Exchange messages
RE-21	Contact limitation	A user can contact every tutor with at least 1 added lecture, by clicking on his entry after searching for said lecture.	UC-07 Exchange messages
RE-22	Visibility of content	Only the involved people are able to see the content of the messages sent to each other	UC-07 Exchange messages
RE-23	Rating	A user, who had an appointment with a tutor, is able to rate him on a scale with 1-5 stars in the students completed tutoring hours.	UC-08 Rate a tutor
RE-24	Rating average	The overall rating of a tutor is calculated by adding the received stars and dividing them by the total ratings.	UC-08 Rate a tutor

Non-functional requirements

#	Title	Description
NRE-01	Environment	The application must run on chrome and firefox (desktop versions).
NRE-02	Language	The language of the application is English