



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

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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 some lectures. But these online platforms are quite generic and it's hard to find appropriate help for your special needs.

Mario Kaufmann wants a platform, where students of the University of Bern can easily find tutors which 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 it allow 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

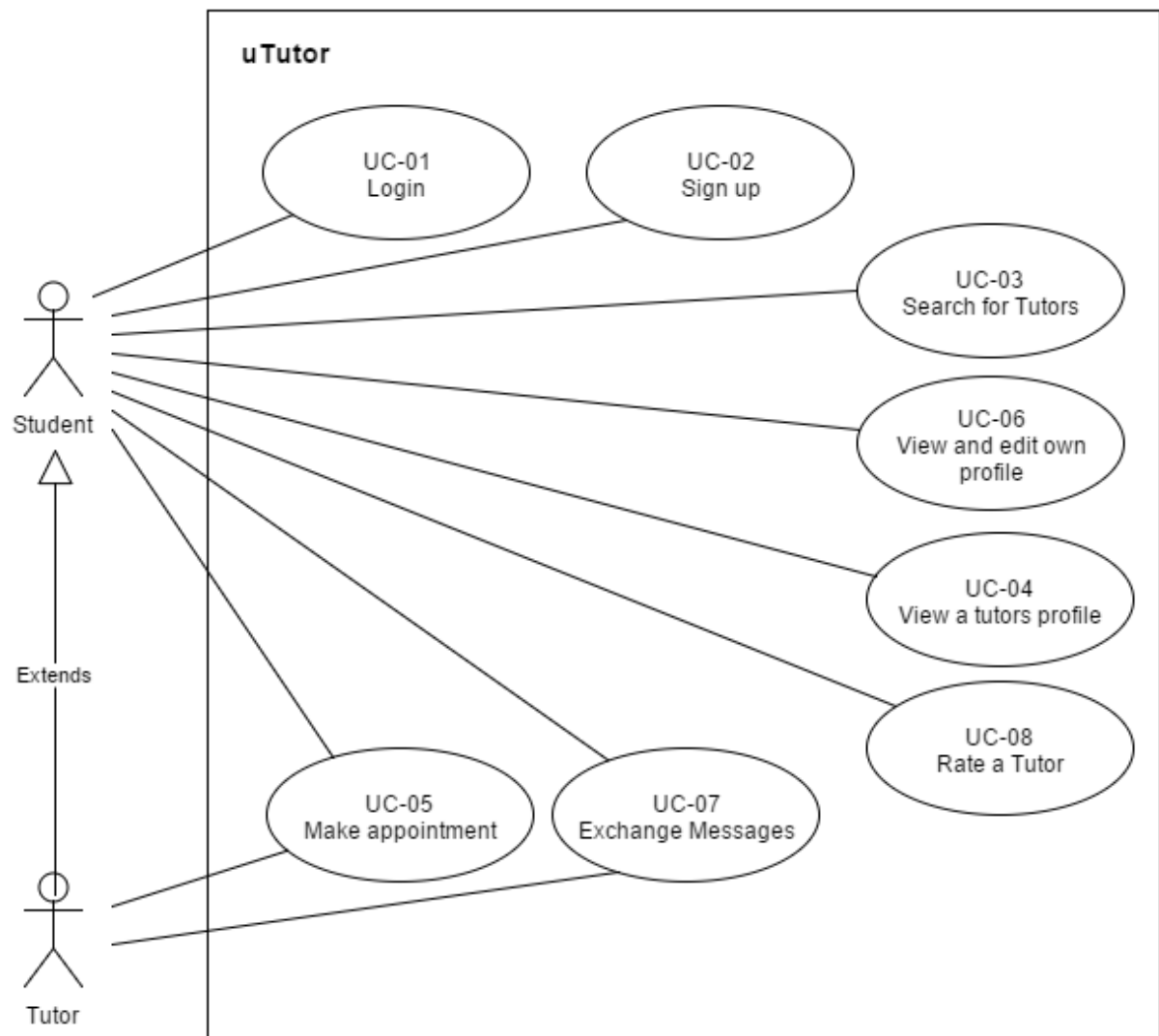
Term	Definition
uTutor	Name of the platform
Student	Person currently enrolled at an university
Tutor	A student offering private lessons for one or more specific lectures. He has registered at least one lecture or he had at least one meeting with a student
Stakeholder	Any person with an interest in the project who is not a developer
Users	Students and tutors
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 tutors profile he needs to login (or sign up if he hasn't already created login credentials). A logged in user can edit his profile pic, become a tutor of his own, view a tutor's profile, select available time slots of a tutor and send an appointment request (for the selected time slots) to the tutor. Further 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 already an 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 a username3. User enters a password4. System validates if username is in the database5. System validates if password matches with username6. User is logged in
Alternative scenario	6a) User is not registered in the database. In this case, log in process will terminate and the system will show an error page (no such user found) 6b) User password doesn't match with username. In this case, log in process will terminate and the system will show an error page (wrong password)
Special requirements	-
Notes	Should we use the email address as username?

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 username and password so I have full access to the platform and its use.
Trigger	Public user clicks on a "Sign up" button
Pre-conditions	<ol style="list-style-type: none"> 1. It doesn't exist a profile with the same username as the possible new user 2. All mandatory profile data is entered and valid (first name, last name, username (email), password, password repetition)
Post-conditions	<ol style="list-style-type: none"> 1. User has a valid account with first name, last name, username and password stored in the database.
Main scenario	<ol style="list-style-type: none"> 1. Public user navigates to the "Sign up" page 2. Public user is asked to enter first name, last name, username (email address), password, repeat password 3. Account is created
Alternative scenario	<p>3a) Username is already used. In this case, the registration will be terminated and the system will show an error page (Username already used)</p> <p>3b) Username, 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 invalid data</p>
Special requirements	Existing database
Notes	Should we use the email address as username?

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 exactly this exam
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	<ul style="list-style-type: none">- Do we allow empty term and show all existing data as result?- Do we allow partial match (eg. "Prog" will show "Programming 1")?- Does a user also see the profile pic of the tutor in the results?- Does the display of the tutors name (and possible pic) to not logged in users disturb the tutor's privacy?

UC-04 View a tutors profile

Actors	User (logged in student or tutor)
Description	As a user I want to see the profile of a tutor so I can check his skills and availabilities and probably make an appointment
Trigger	Clicking on a profile link
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 tutor's public data (first name, last name, price, lectures with grades, availability in time slots, his description and the picture) is displayed
Main scenario	<ol style="list-style-type: none">1. User clicks on a linked profile2. The profile data is displayed (public data about the tutor, lectures and availability)
Alternative scenario	-
Special requirements	-
Notes	<ul style="list-style-type: none">- Should reserved/booked time slots also be displayed?- Should it be possible for Tutors to view a student's profile (e.g. when a student sends a message to the tutor)?

UC-05 Make appointment

Actors	Student and tutor (logged in)
Description	As a student I want to make an appointment of 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 in 2. Available timeslots (free, not reserved or booked) for this tutor (after trigger is activated)
Post-conditions	<ol style="list-style-type: none"> 1. Appointment is entered in the database 2. 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" button 2. The student is informed that the time slot is reserved but the tutor needs to accept the appointment request 3. The tutor gets a Message with the appointment request and clicks on the "Accept appointment" link 4. The appointment is made, the student and the tutor receive a message with the confirmation
Alternative scenario	<p>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</p> <p>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 given available again.</p>
Special requirements	A messaging system (UC-07)
Notes	<ul style="list-style-type: none"> - Which information about student, tutor, lecture, appointment are displayed in the appointment messages? - How the tutor does know for which lecture he is booked? - What happens if the tutor doesn't react to the e-mail?

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. As a student I maybe want to become a tutor. As a tutor I maybe want to add, edit or remove lectures, grades or timeslots.
Trigger	User clicks on a link to his own profile
Pre-conditions	<ol style="list-style-type: none"> 1. User is logged in 2. User is owner of the profile (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 profile 2. User sees the data he entered during the registration (UC-02), except for the password which is never displayed 3. User has the possibility to add/change a profile picture
Alternative scenario	<p>2a) If the user is a student, he has the possibility to become a tutor by set the amount per hour for tutoring and adding a first lecture and grade</p> <p>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 also can add, edit and remove lectures, grades and time slots.</p>
Special requirements	-
Notes	<ul style="list-style-type: none"> - Should a user also get a list of all appointments he made? If so, should only accepted appointments be displayed or all appointments together with a state (e.g. Open, Accepted, Rejected)?

UC-07 Exchange messages

Actors	User (Logged in student or tutor)
Description	Students and tutors have the possibility to communicate with each other over the platform by sending each other messages inside the platform
Trigger	User clicks on the "Messages"
Pre-conditions	1. User is logged in
Post-conditions	1. For every send message by the student exists one in the inbox of the tutor (can be marked as deleted, not visible) and vice versa
Main scenario	1. User clicks on the "Messages" link 2. The user can see his inbox where he can read and reply to messages he received from other users 3. The user can see his outbox where he can read messages he send to other users
Alternative scenario	3a) If a student clicks on the "Contact" button on the tutor's profile (UC-04), he is able to create a new message to the corresponding tutor
Special requirements	-
Notes	-

UC-08 Rate a tutor

Actors	Student (logged in)
Description	A student should have the possibility to rate a tutor
Trigger	Student clicks on the rating on the tutor's profile
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 student – teacher relation
Main scenario	<ol style="list-style-type: none">1. User clicks on the rating on the tutor's profile2. User selects one of the values on the scale3. The last selected value by the user is stored
Alternative scenario	-
Special requirements	-
Notes	<ul style="list-style-type: none">- Only one rating per user – teacher relation possible but the student can change the rating as many times he likes- Which scale/gradations are to use, which is best (lowest/highest)?

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 himself	UC-02 Sign Up
RE-03	Mandatory registration data	To register, each user needs to register 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 criterias. In this case, all tutors with at least one lecture registered or having had one appointment 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, price and rating	UC-03 Search for tutors
RE-07	Predefinied 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 criterias 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 display a profile by clicking on the tutor name in the result list of the search	UC-04 View a tutors profile
RE-11	Displayed data	In the profile view, the following data is displayed: first name, last name, price, lectures with grades, availability, his description and the picture	UC-04 View a tutors profile
RE-12	Meeting request	A user is able to request 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, to remove and edit existing entries.	UC-06 View and edit own profile
RE-16	Profile picture	A registered and logged in user is able to add, edit or remove his profile picture	UC-06 View and edit own profile
RE-17	Static profile data	First name, last name, e-mail address and password are static and can't be changed. The price of a tutor is also static after the first recording.	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 student is able to communicate with a tutor over a messaging system.	UC-07 Exchange messages
RE-21	Contact limitation	There's no restriction with which tutor a student can get in contact	UC-07 Exchange messages
RE-22	Visibility of content	Only the involved people are able to see the content of the chat	UC-07 Exchange messages
RE-23	Rating	A user, which had at least one appointment with the tutor, is able to rate the tutor on a scale from 1-6 in the tutor's profile. The rating can be adapted at any time, but there's no possibility to rate a tutor several times.	UC-08 Rate a tutor
RE-24	Rating average	The rating average is calculated like school grades (rounded to 0.5)	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