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## **1.0 Introduction**

### **1.1 Purpose**

The purpose of this document is to present a detailed information of the Online Tutoring web. It will explain the purpose and features of the application, interfaces of the app, what the app will do, constraints under which it must operate and how the app will respond to external uses. This Document is intended for stakeholders and the developers of this app.

### **1.2 Scope**

This software will be Online Tutoring web for students who need help with their homework projects. This application will be designed to maximize the student's productivity and education potential by providing tools to get help for online homework assignments as well as give tutors more flexibility to work on helping students with their homework. This software will facilitate communication with tutors and students through video chat, email, and chat support. This software will also have admin page for administrators to modify this application as well.

## **2.0 System Overview**

### **2.1 Project Perspective**

The goal of this project is to create a web application for students who need help with their online tutoring and to help students reach their full potential. This System will also be a new self-contained system because we are building our first web application.

### **2.2 System Context**

This application will be a native application for the web on desktops and laptops and it will be a iOS/Android app on mobile devices. The student will be using this web application to request help from tutor for their homework assignments while the tutor will be using this application to help students with them homework. The admin will be using the web application to add or remove features found in this application. The student or tutor will report issues of the application directly to the admin. The admin will fix this application as soon as possible.

### **2.3 General Constraints**

- This application must be responsive to each device
- Tutors must have at least 5 years of experience in each area such as software engineering to teach students
- Tutors must have good experience in communication
- Students must upload photo id to prove they are 16+
- Each user must pay \$10 dollars a month to access online tutoring web
- Tutor will receive up to \$200 dollar per tutoring session they do

## 2.4 Assumptions and Dependencies

### Resources:

- We will be using visual studio code, XCode, Android Studio to build our fully functional web app
- Each team member must have VS Code, XCode or android studio installed to build a web and mobile app

### Schedule:

- Our project will complete on time and on schedule as well
- We will be accountable with our team and our team will deliver our project as planned

### Technology:

- This application will be a full stack web application using mix of HTML, CSS, JavaScript and React Native
- On mobile, we will use Java and Swift for android and iOS
- We will build our own technology

### Methodology:

- Project will use through team charter guidance
- Project will follow waterfall methodology

### Scope:

- The project scope will not change at all
- We will need the entire team to stay focused on our project, focus on building our web application first before moving on to mobile development.
- Android and iOS app development must occur at the same time as mobile app development will occur continuously.
- Fleet code editor must be used to develop the web and admin application while XCode and the Android studio should be used to develop mobile applications
- The Administration application will not be built until web and mobile apps are built
- Testing of this application will be happened, once the entire program is built

## 3.0 Functional Requirements

### 3.1.1 Register new user

- Allows new customer to become a member of the online tutoring web platform
- Input
  - Customer username
  - Address
  - Name
  - City
  - State
  - Zip/Postal code
  - Mobile number
  - E-mail address
  - Password
  - Confirm password
  - Credit card information
- Processing
  - Checks if user e-mail exists
  - Check if address, city, state, zip/postal code, and phone number exist
  - Adds this user to our database
  - Checks if user credit card exists
  - Charges subscription fee per month to user credit card unless user cancels membership
- Outputs
  - Tell user that they have become a member
  - Let user know that they can now get timely help for their online tutoring services

### 3.1.2 Login

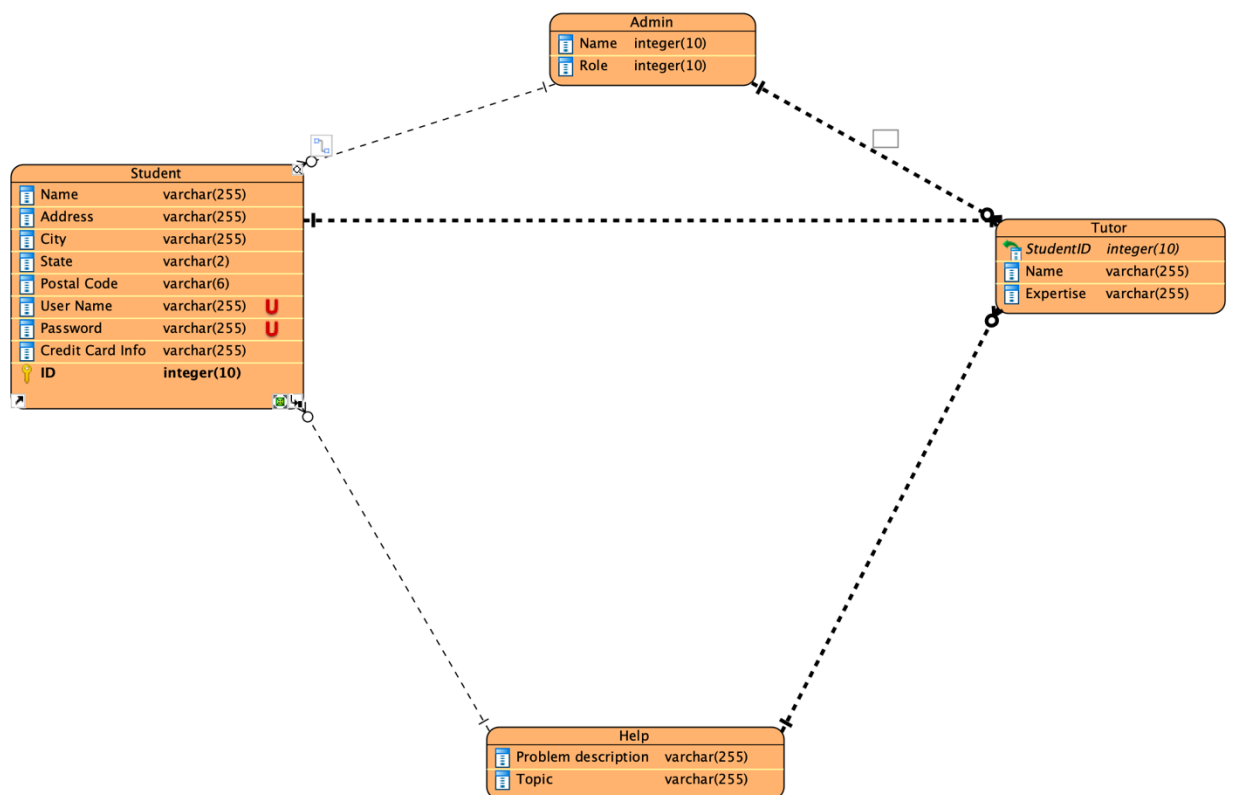
- Allows existing user to access Online Tutoring Web
- Input
  - Username
  - Password
- Processing
  - Checks if user has registered for the online tutoring web from registered user's database
- Outputs
  - Invalid login if user login info doesn't exist in user database
  - Login successful if user login info exists in user database

## 3.2 Use Cases

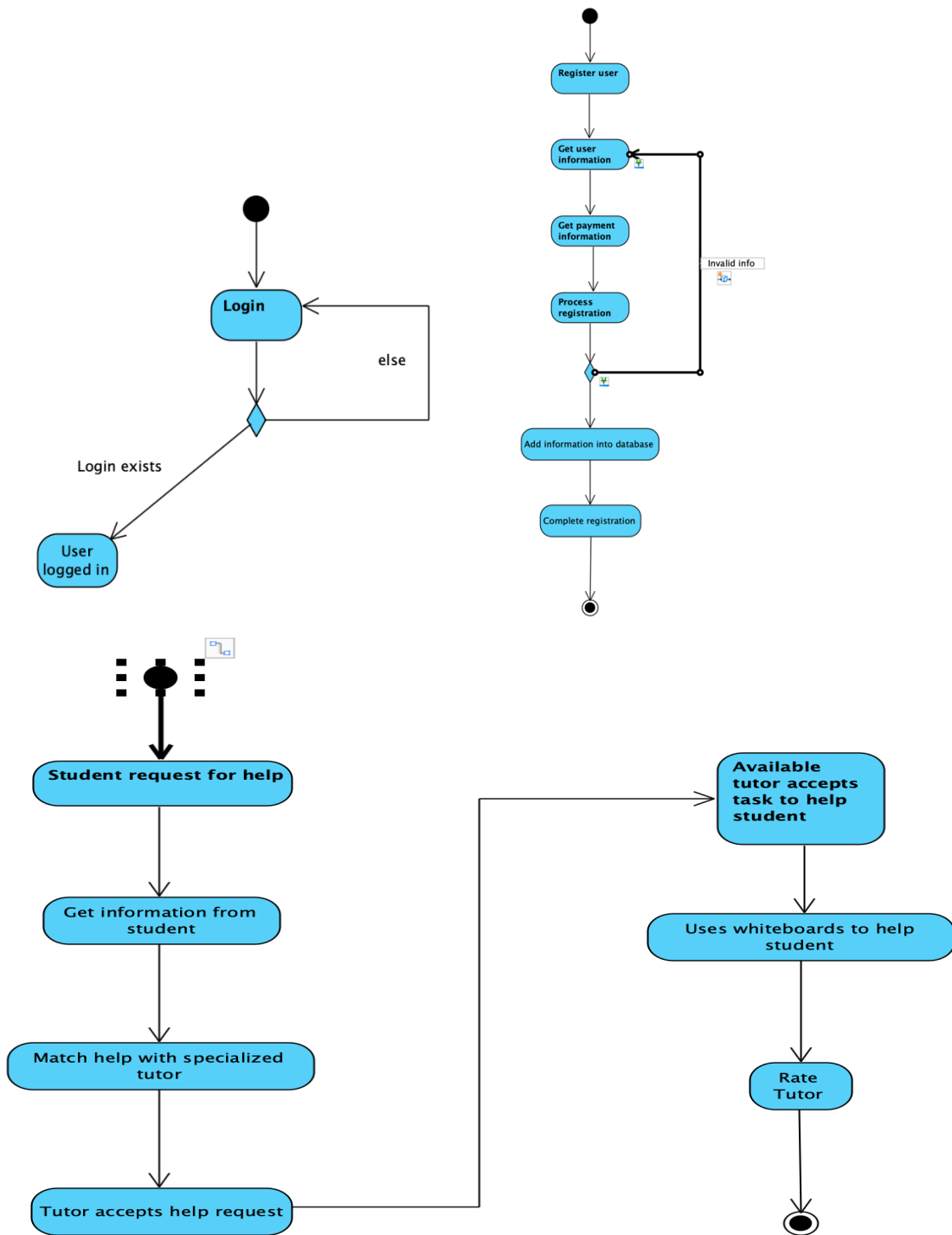
- 3.2.1 Search for subject
- 3.2.2 Edit profile
- 3.2.3 Become a Tutor
- 3.2.4 Request help
- 3.2.5 Help Student
- 3.2.6 Fix issues
- 3.2.7 Close account
- 3.2.8 Send help

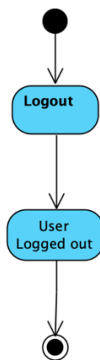
## 3.3 Data Modelling and Analysis

### 3.3.1 Data Model Diagram

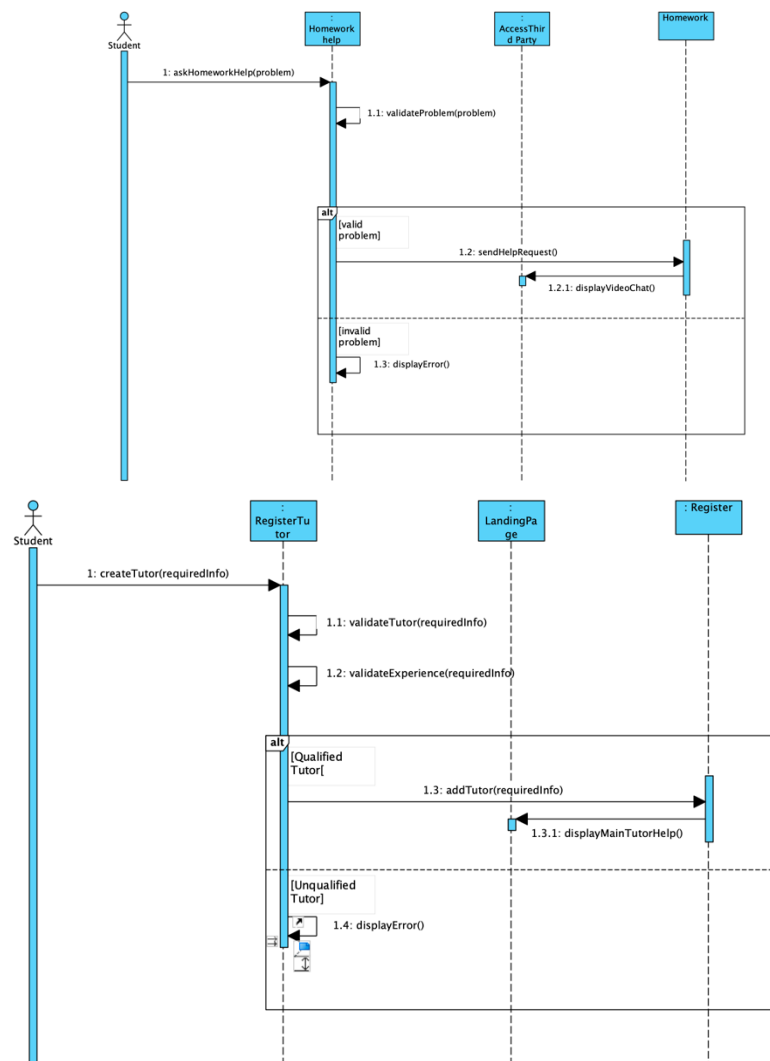


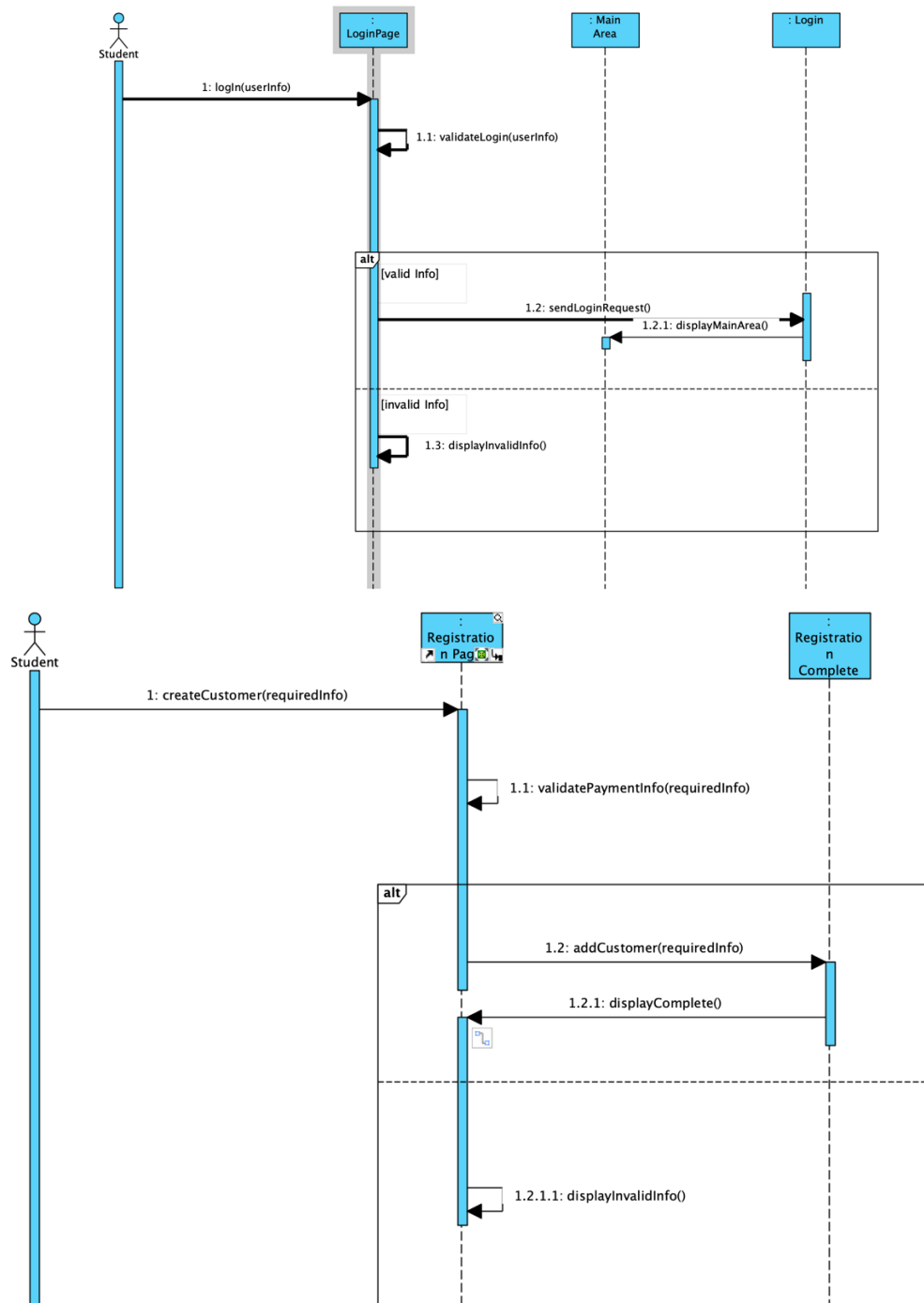
### 3.3.2 Activity Diagrams





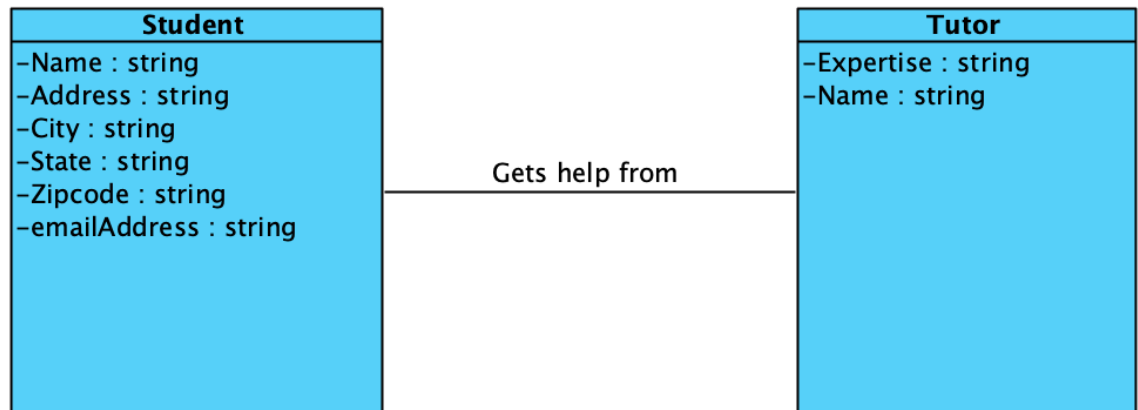
### 3.3.3 Sequence Diagram





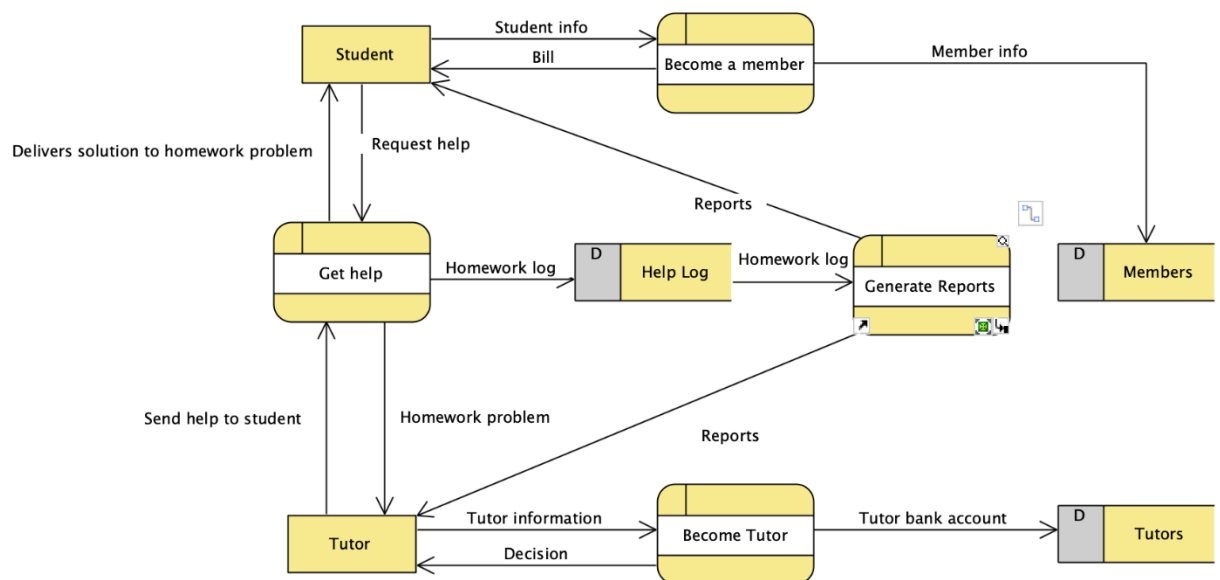


### 3.3.4 UML Class Diagram



## 3.4 Process Modelling

### 3.4.1 Data Flow Diagram



## 4.0 Non-Functional Requirements

**Performance:** This application must load in minimal time

**Reliability:** This application should not crash and should work on all browsers and on all devices

**Availability:** To help our students, reach their post secondary goals on schedule, this application must be used available 99.999% of the time

**Security:** Our application will have a marketing and landing pages for people to discover and learn about our product, but only registered users will have access to some functionality. We will make sure our application is always up to date to deal with new and emerging security threats.

**Maintainability:** The code and application will be based on model, controller, view style and loosely coupled technologies for app developers to maintain app timely and effectively

**Portability:** This application will be lightweight so it can work on all devices

## 5.0 Logical Database Requirements

Database will be used for this application because we would need to store reports for homework help, customers, and tutors.

Customer, all information will be in string and the credit card expiry date will be in date format. Birthdate will be in date format.

Tutor, all information will be in string format while the date of birth will be in date format.

We are planning to store our database in cloud.

We will keep tutors, members in our database if they are with us. If tutors do not want to help our students, their info will be removed unless they have broken their code of conduct. If a customer is not interest in using our services, their information will be removed unless they break code of conduct.

Only the people who manage our application will be allowed to manage our database.

## 6.0 Other requirements

- Moodle may be looked at, but the application will be based off our own technologies and design.

## 7.0 Approval

Project Role	Name	Signature	Date
Web Development	Mohammed Vepari	Mohammed.Vepari@georgebrown.ca	Tuesday November 8 <sup>th</sup> 2022
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Mobile Development	Rodrigo Elustrondo	101342857@georgebrown.ca	Tuesday November 8 <sup>th</sup> 2022
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