Chapter 0: Preface

Life is increasingly modern with the development of technology, everything takes place with a dizzying speed, posing a frustration requirement for technology and product quality for all industries, occupations, all areas.

Language learning app helps users improve their current level English level. English is considered an important skill in economic development, information, services, e-commerce, virtual enterprises on the Internet ... The problem is to create a possible application Helping learners can learn English via the Internet in the best way. Bring the highest and free efficiency with users.

Chapter 1: Introduction

1.1 Purpose

This document outlines the usage and implementation of the learning language app.

1.2 Document Conventions

This Document was created based on the template for System Requirement Specification Documents.

1.3 Scope

The main purpose of this app is for those who plan English learning and with the aim of self-study. The user object of this document is anyone who needs a platform where they can cultivate and learn more inherent English skills.

1.4 Overview

The reason for our team choose language learning application is to improve the current level of learners when learners don't know how they should start learning. Our model application can be applied to nowadays general business or strategic objectives of the organization commissioning the software because of low cost and user friendly. The app can be easily run on several environment (ios, android,…), which lead to an amount of organises being attracted by our product.

This application for users can register for membership accounts, and select the qualifications in accordance with the version and have mini learning vocabulary games, writing skills. Users can see the learning progress reporting section and can look up the dictionary directly on the application.

Users who log in to the system can register for a new user account, select the class of learning suitable for the system so that the system can create routes for learners. There are different levels of exercises, learners can play games to

practice learning vocabulary through gaming, accumulating Strick Freeze to be able to buy items from store.

1.5 Need for the System

We all know that learning language is extremely important. We need it to have a good job for later life. And also because the lives of each of us are also quite busy, so spending time learning and recovering the language is extremely necessary. Long-term revision is extremely important. What people often use the Internet to access is a long-term story.

And now there are many good language learning websites, but learning vocabulary through the game will help strengthen better vocabulary, helping learners to strengthen their vocabulary as well as Listening skills to read and write.

Chapter 2: Glossary

Crown: Whenever the user levels up, the crown will also increase

Streak Freeze: Whenever the exercise is completed every day, it will keep the string, hold as many strings, the more people will receive Lingot

Lingot : Lingot [ling-guht] is the virtual currency of Duolingo. The more you learn on Duolingo, the more Lingot you get and used to buy items in the store! Some ways to get lingot.

Chapter 3: User requirement defenition

Login: User can log in their account into the system based on database by inputing their username/email and password in login form

Signup: User can create a new account into the system by inputing some basic information of them in sign up form

Viewing personal information: User can view personal information about themselves

Lookup Dictionary: User can look up any words directly in the system without looking upon the dictionary

Choose Language to learn: Choose a language to learn and this language chosen will be applied to all the system

Do quiz test: Doing quiz tests to enhance your current English level, we can choose two types of quiz including arrange setences, translate word, listen and do task. The system will choose based on the appropriate level of user

Choose lesson to learn: User can choose whichever lesson they want to based on the topic or what they have progressed.

Compete with other learner: Users can compete each other to try out their best and receive reward.

Create flash card: User can create flash card to practice, have a overview of what they have learnt, a flash card must have a question/words and answer/meaning.

Attend class created by Teacher: User can attend class created by his teacher. After joining in, user could participate in lecture and learn from it

Disscussion forum: This is a place to discuss topics related to language learning, some great learning tips or tricks, or suggestions for making the application to be better .

Daily mission: User completes the daily task

Set up objective goals: Set a daily learning goal,and study time

Buy stuff: Users can use bonus points to buy items, costumes for their mascots (each account will have its own mascot representing that account), or use real money to upgrade the Premium account to get can not be advertised when completing each lesson, and additional permission to download lessons offline

Create Class: Teacher can create classs and modify it.

Create lecture: Teacher can create lecture and modify it.

Chapter 4: System Architecture
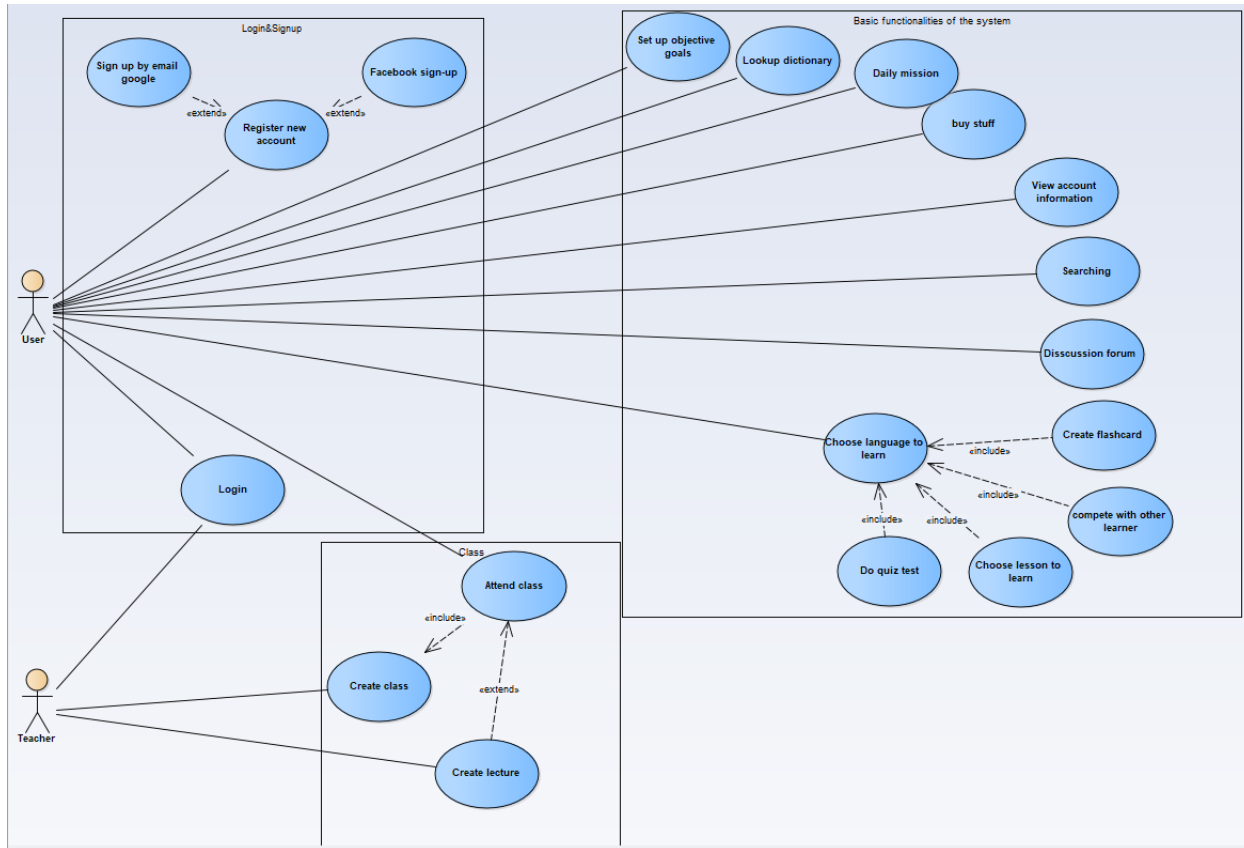
Chapter 5: System requirements specification

* Functional requirements:

a) Business requirement

Num	Requirement	Explain in details
1	Login	User can log in their account into the system based on database by typing their username/email and password.
2	Signup	User can create a new account into the system by typing some basic information of them in sign up form

3	Choose language	User can choose a type of language to improve their bilingual skill
4	Do quiz test	Doing some quiz to test out user's skill.
5	Choose lesson to learn	User can choose lesson to learn whatever they want
6	Compete with other learner	Online challenge between users with leader board.
7	Create flashcard	User can create flashcard to practice, overview their learning process.
8	Discussion forum	User can hop onto the forum and interact with other user by viewing post,… answer the question.
9	Searching	Allowing to search anything provided by the system.
10	View account Information	Watch and modify personal info.
11	Buy stuff	User can buy things on the store online.
12	Daily mission	Doing daily mission.
13	Set up objective goals	User can target their goal to put the focus on achieving it.
14	Attend class	Attend class provided by the teacher.

Teacher requirement

Num	Requirement	Explain in details
1	Login	Teacher can log in their account provided by some trustful source.

	2	Create class	Teacher can create class with stable number of students.
	3	Create lecture	Teacher can form up their documentations and build a lecture based on that.

b) System requirements

- Environment

- Simulation

- Automation

- Authentication

- Backup/restore

* Non-funtional requirement

Num	Content	Criteria
1	Login and login functions are done quickly within 5s and ensure absolute security for customers	Resilience
2	Graphical user interface: -User-friendly, beautiful - Easy operation with smooth learning functions - The buttons are beautifully decorated, convenient and easy to see. - The load speed of lessons is no more than 4s	Usability
3	The search can be searched for many categories, by course name or more specifically, course code because it will be unique.	Serviceability
4	Purchase of clothing items can be paid with a variety of forms such as a bank account or momo link	Security
5	When we do quiz test and network connectivity is lost or have problems, we can easily continue when the problem is fixed or reconnect to the network without having to do it again.	Recoverability

Chapter 6: System models

6.1 Data flow
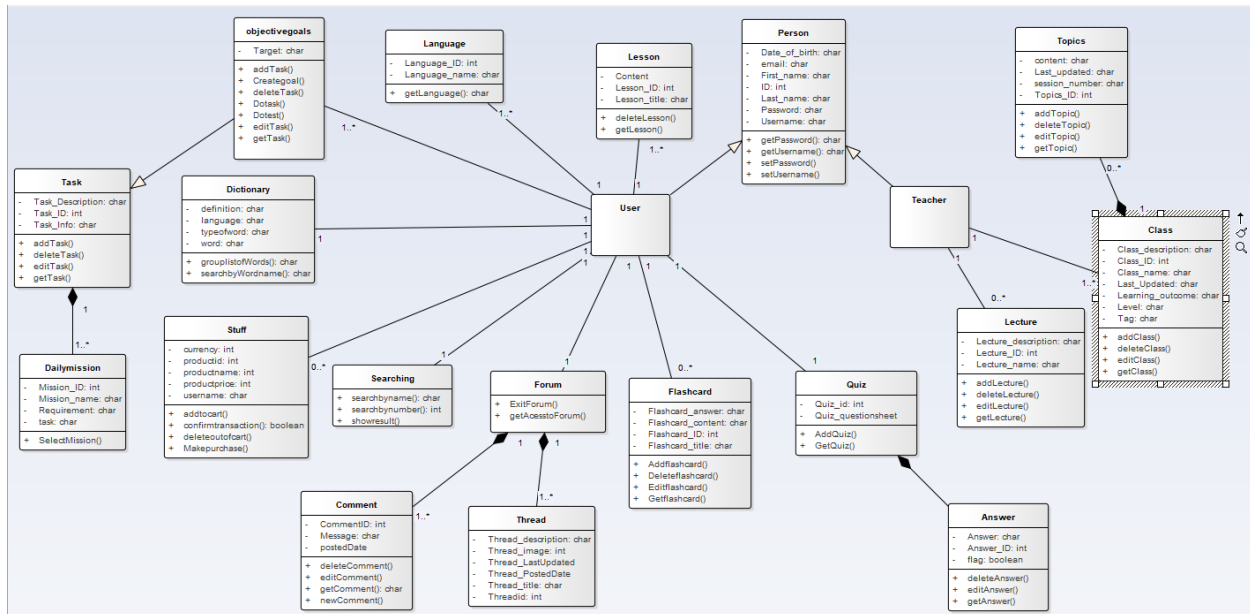
## 6.2 Function design

Login & Watch personal information
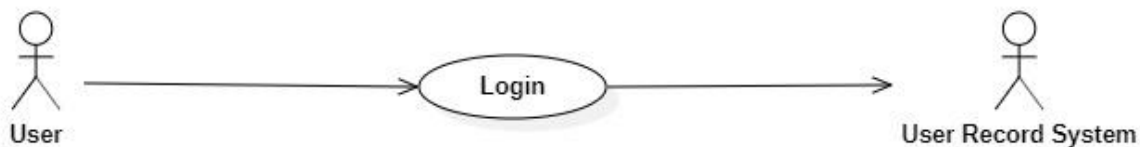
User Login	
Actors	User, User Record System
Description	User login in the system to use the software
Data	username
Stimulus	Interface to write the username and the button to enter the system
Respone	Login succeed

Comments	The user has to write the information account correctly to enter the system

Sign In	
Actors	NewUser, Database User Record
Description	The new user has to register the account
Data	Username, password
Stimulus	Interface to write the username and password
Respone	User registration is successful
Comments	The newuser has to adhere to the system's naming guidelines
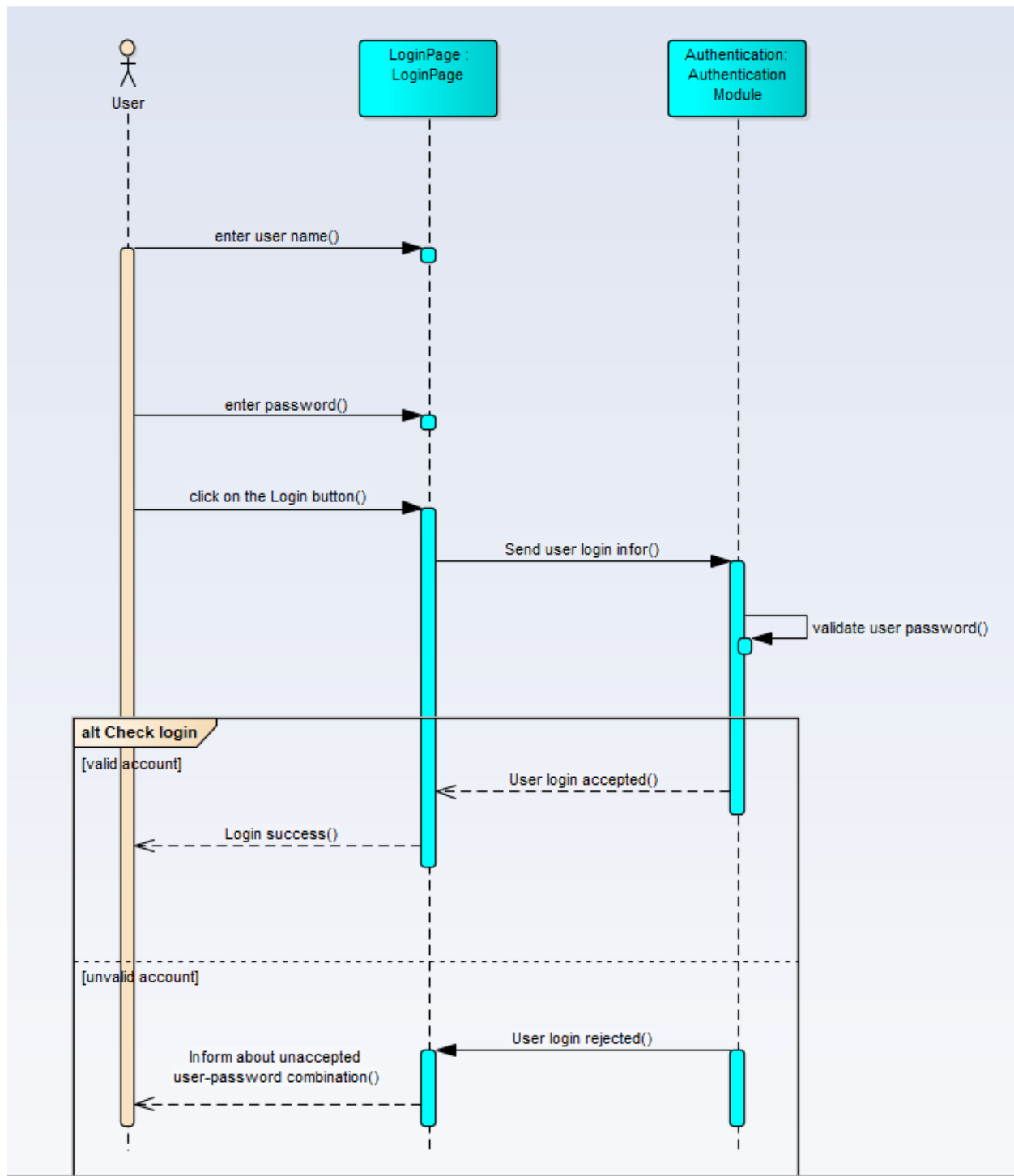
View personal information

Viewing personal information	
Actors	User, Database User Record
Description	User can view personal information about themselves
Data	Username, phone number, address, email.
Stimulus	User is allow to see its own personal information
Respone	The table shows all personal information of user
Comments	Look up or change the information if needed.
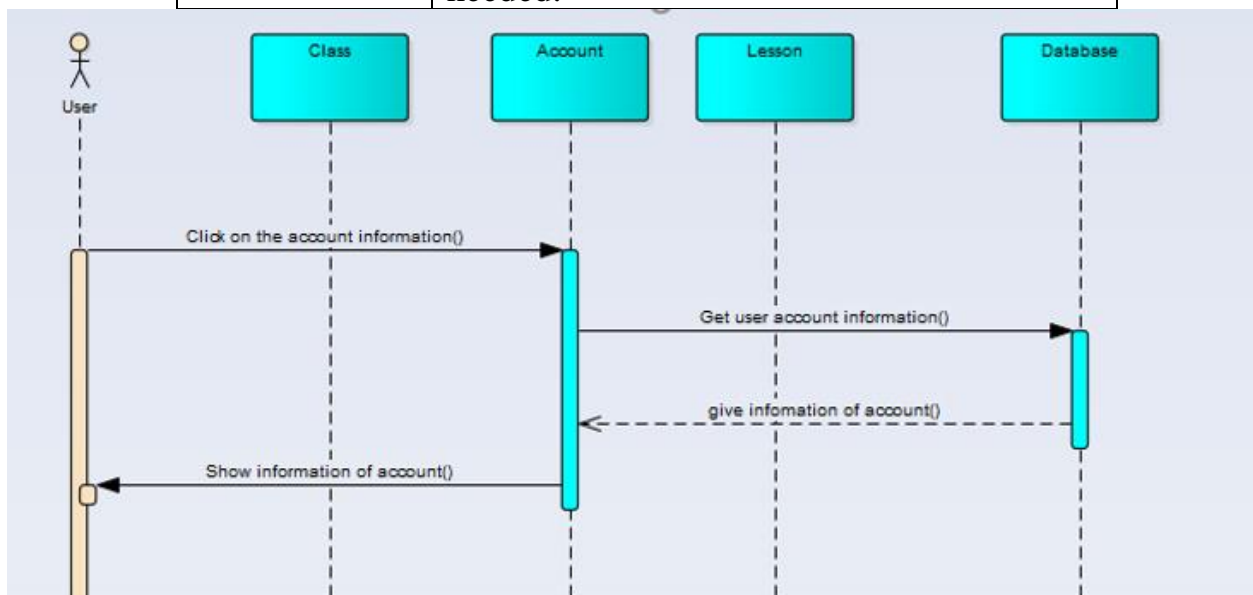
Look up dictiionary

Lookup Dictionary	
Actors	User, Database Dictionary
Description	User can look up any words directly in the system without looking upon the dictionary
Data	words
Stimulus	The interface has the search button to search any words
Respone	The meaning of each word is listed on the system and some example of it
Comments	You must have written the correct word
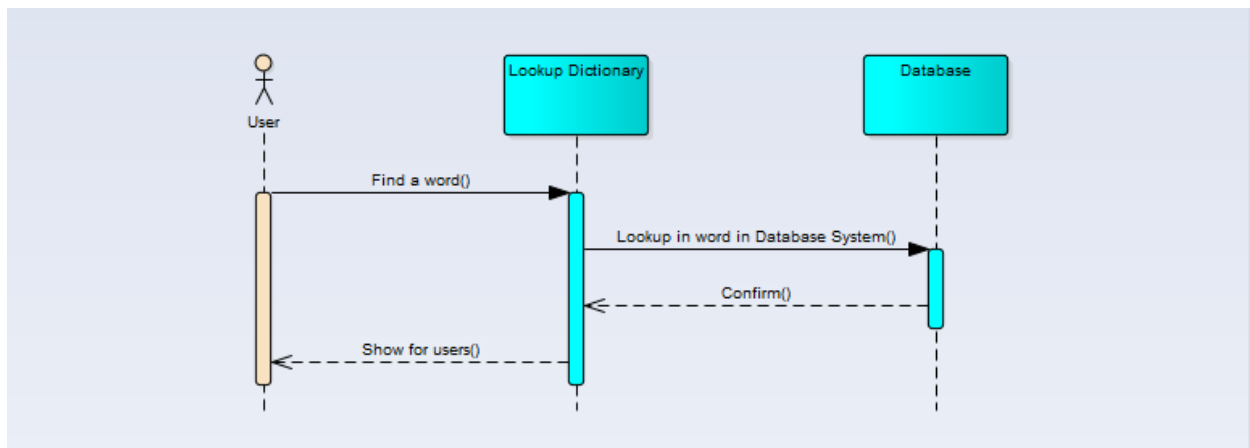
Choose language to learn

Choose Language to learn	
Actors	User, The system
Description	Choose a language to learn and this language chosen will be applied to all the system
Data	Language provided by the system
Stimulus	The interface to choose a certain language
Respone	All the system will be applied with the language you choose
Comments	Choose one language
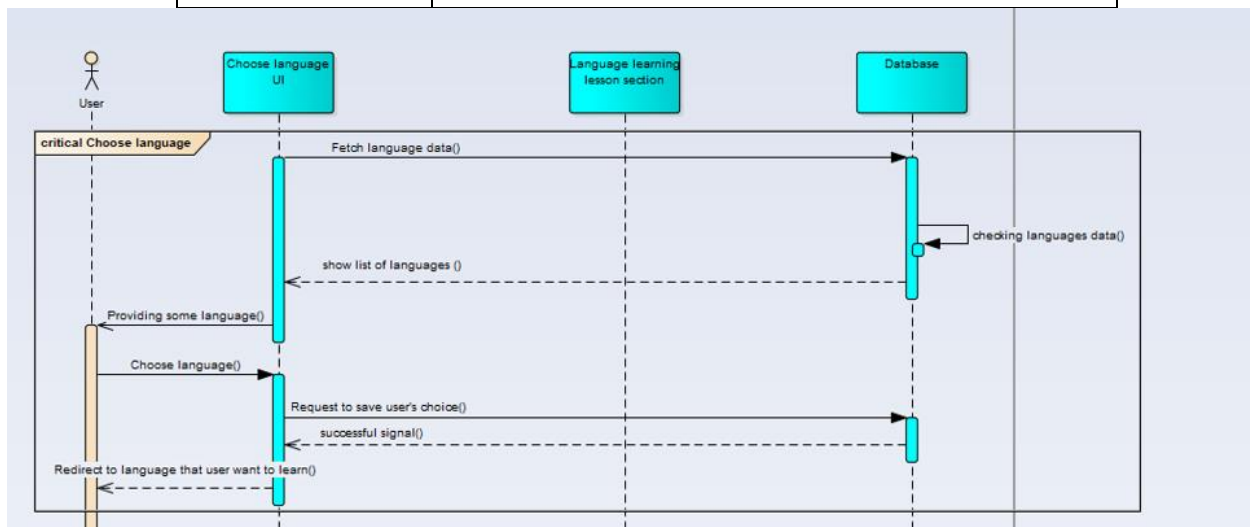
Do quiz test
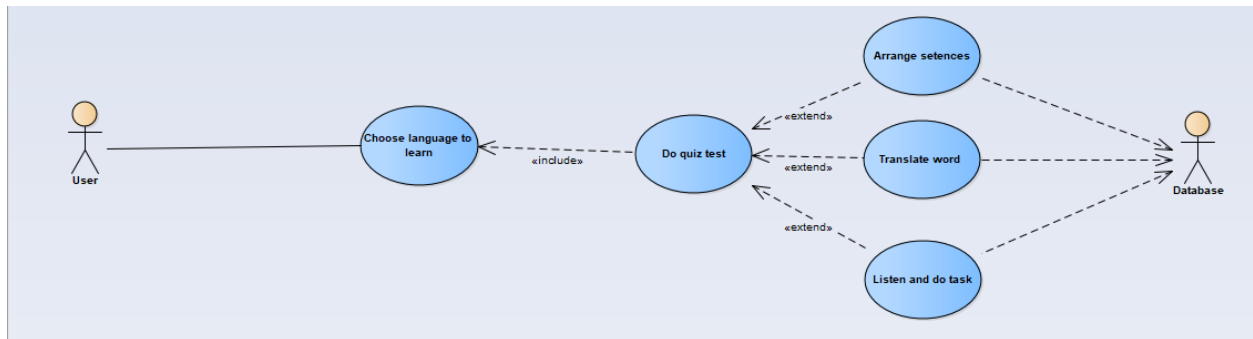
Do quiz test	
Actors	User, Database
Description	Doing quiz tests to enhance your current English level, we can choose two types of quiz including arrange setences, translate word, listen and do task. The system will choose based on the appropriate level of user
Data	Quiz test taken from the system database.
Stimulus	The interface resembles a mini-game, choosing any word to fill in the blanks
Respone	The results of each level will be shown when you finished one level.
Comments	Must be answered correctly.
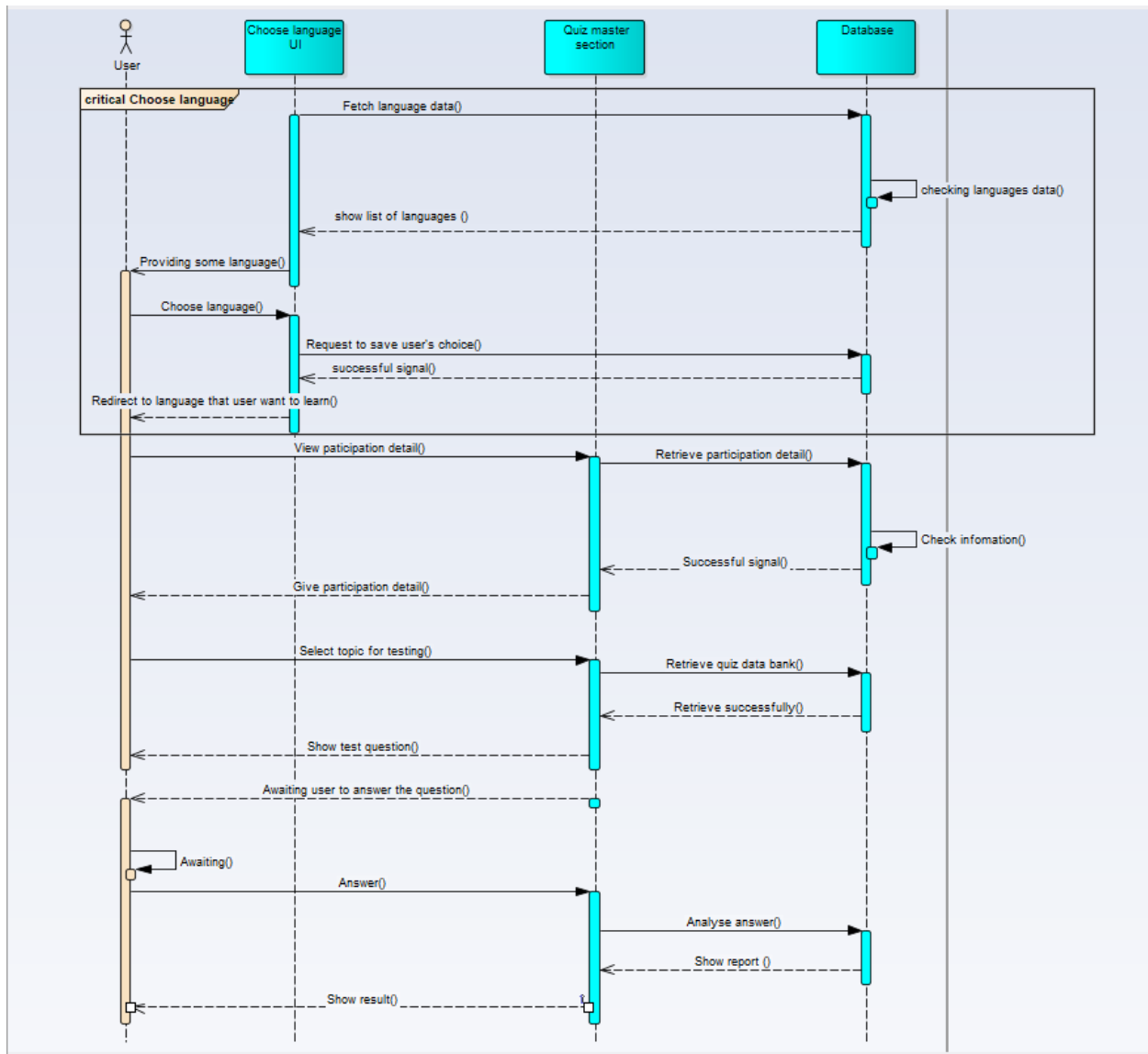
Choose lesson to learn
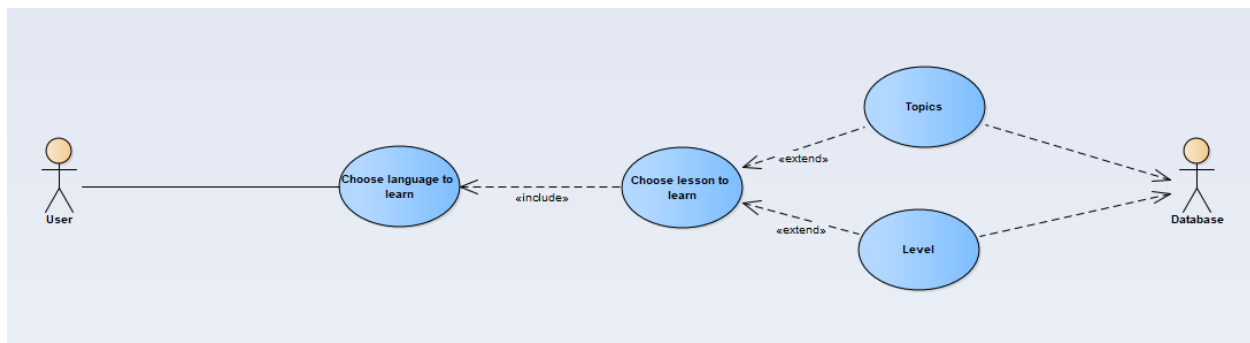
Choose lesson to learn	
Actors	User, Database
Description	User can choose whichever lesson they want to based on the topic or what they have progressed.
Data	Provided by the database itself and its equivalent data record.
Stimulus	The interface resembles UI with many options of lesson to choose and learn from.
Respone	After choosing the lesson will be opened and start.
Comments	Just choose whatever they want based on what user want to do.
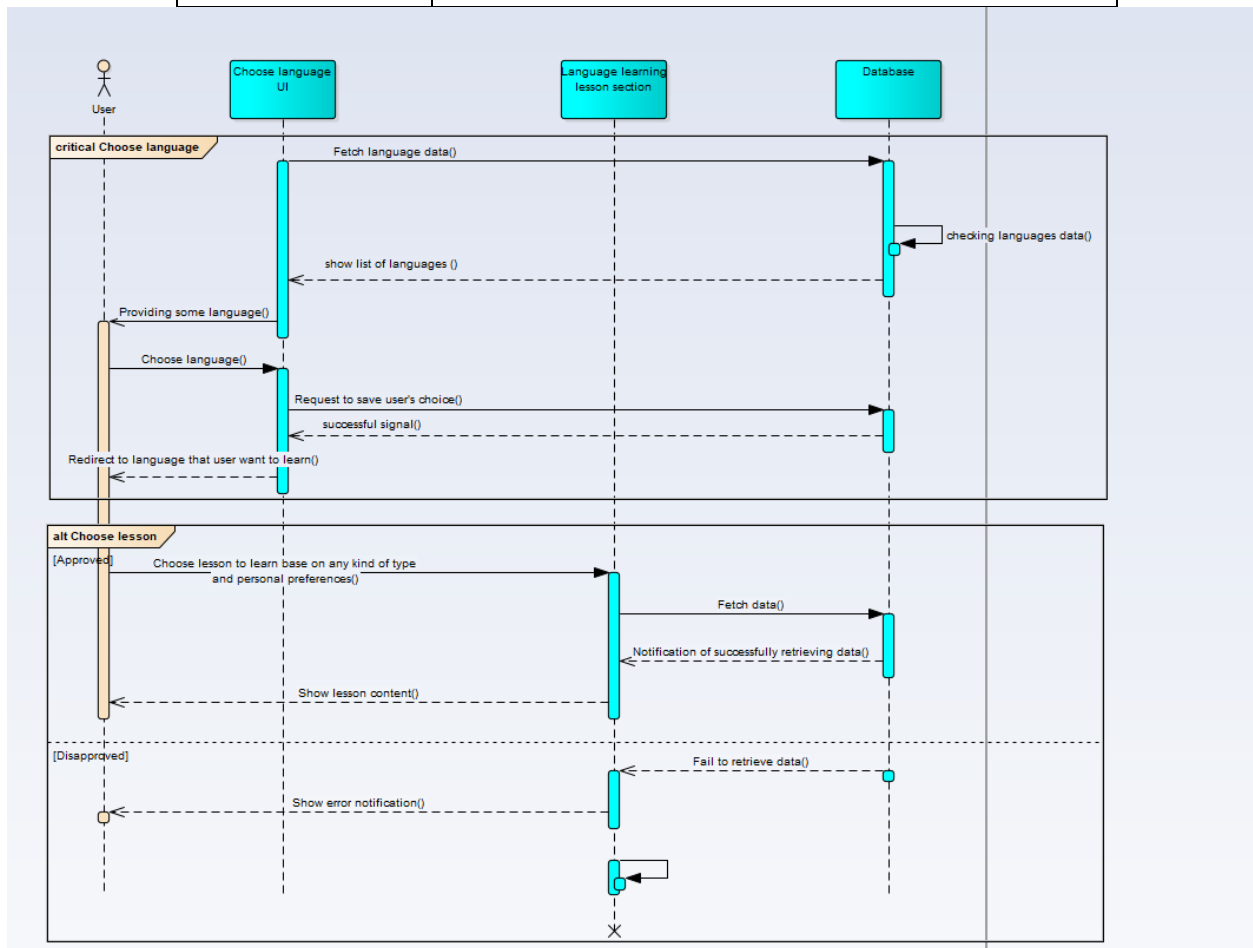
Compete with other learner
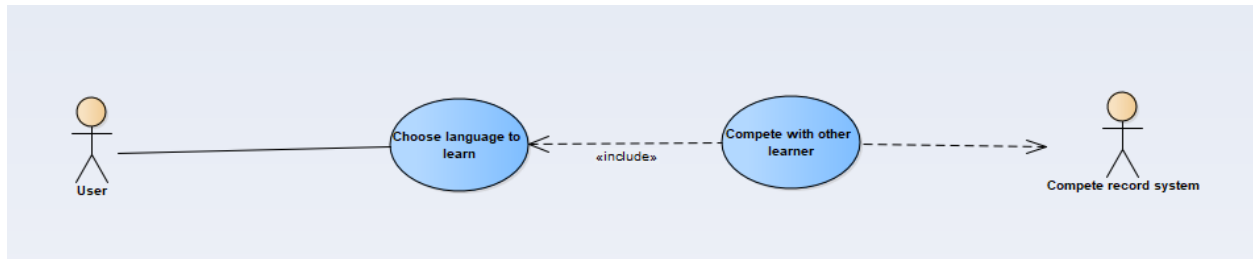
| Compete with other learner	
Actors	User, system
Description	Users can compete each other to try out their best and receive reward.
Data	Leaderboard.
Stimulus	Show leadearboard and challenge that user could participate in and compete.
Respone	Start the challenge and end with the result on the leaderboard.
Comments	Do the best out of it to reach high on the leader board.
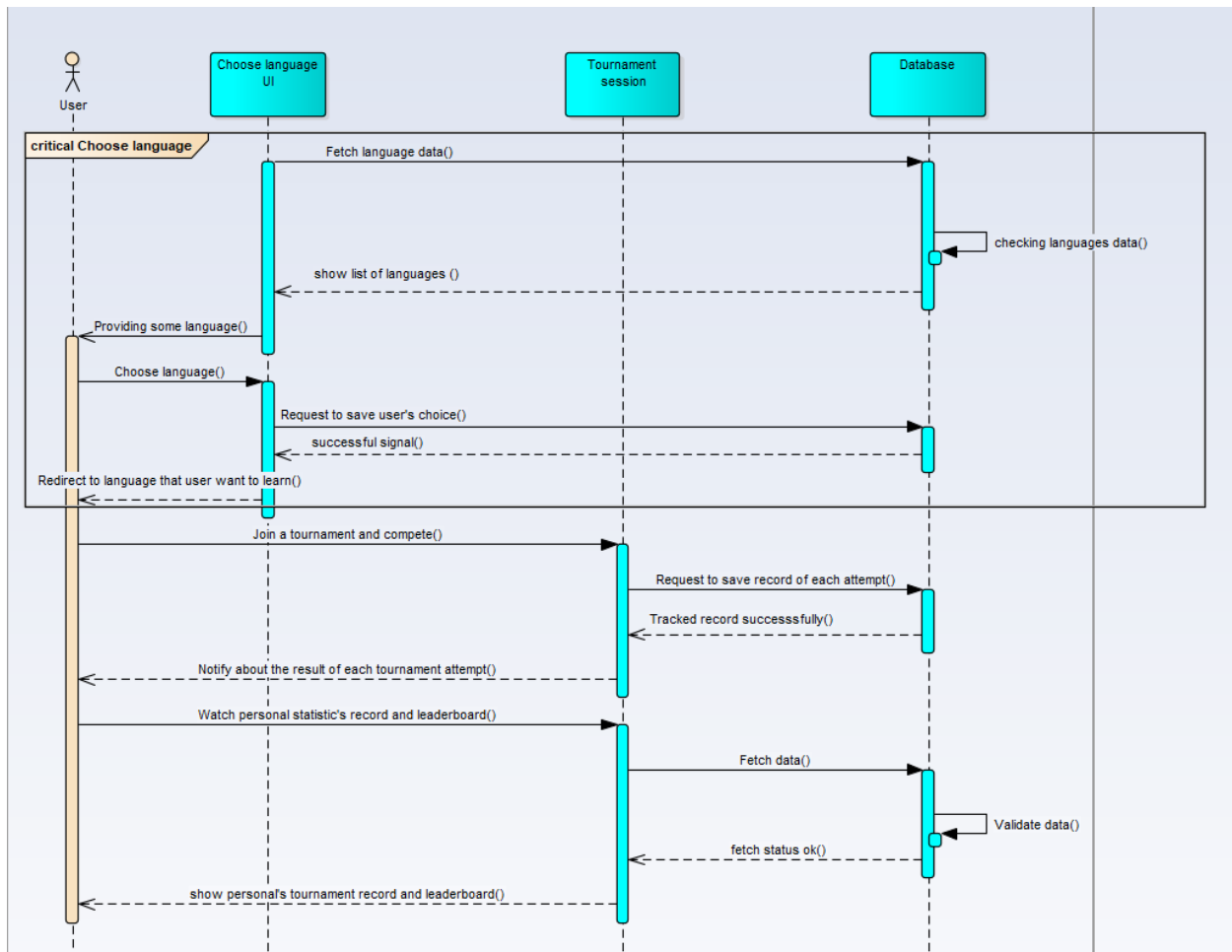
Create flash card
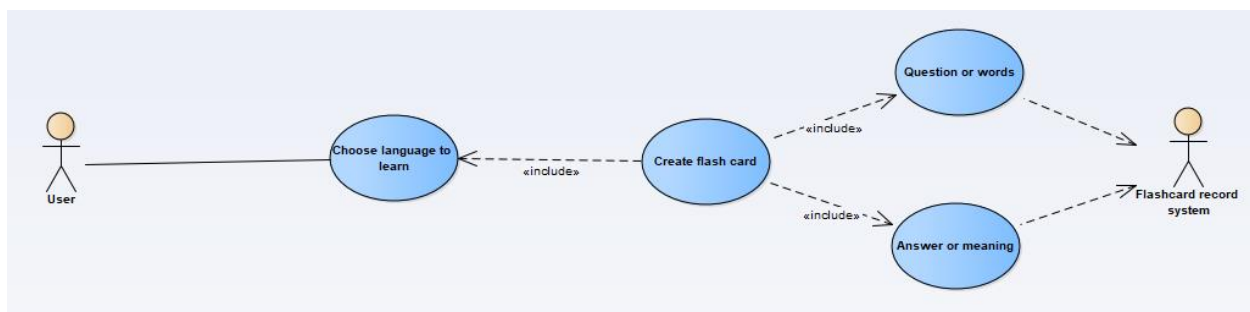
Create flash card	
Actors	User, system

| Description	User can create flash card to practice, have a overview of what they have learnt, a flash card must have a question/words and answer/meaning.
Data	Infomration of every flashcard.
Stimulus	UI with many functionality that user could create, delete flashcard,…
Respone	Data of the flashcard is stored in the record system and user could retrieve it and interact with it again.
Comments	Create flashcard and could change it anytime.
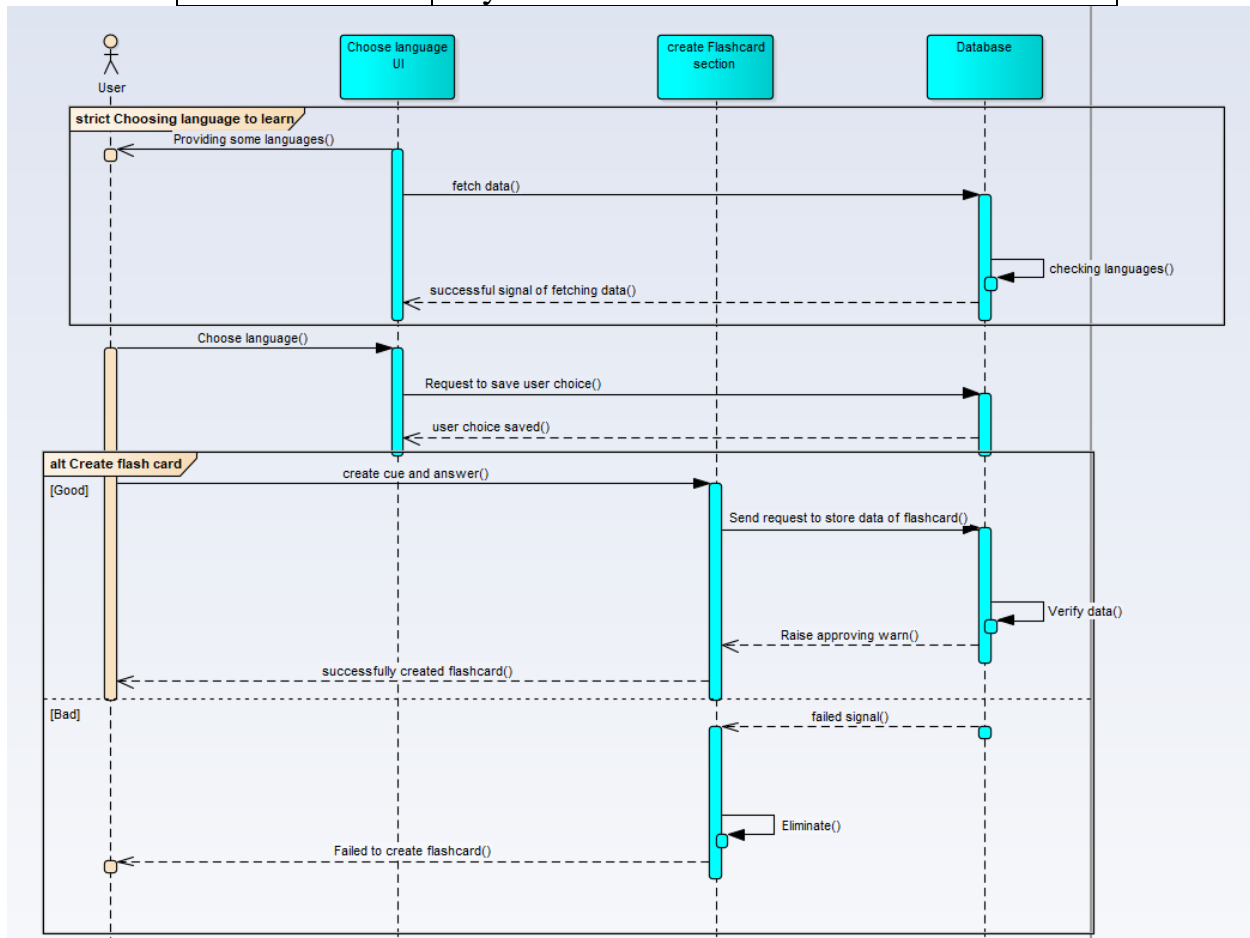
Attdend class created by teacher
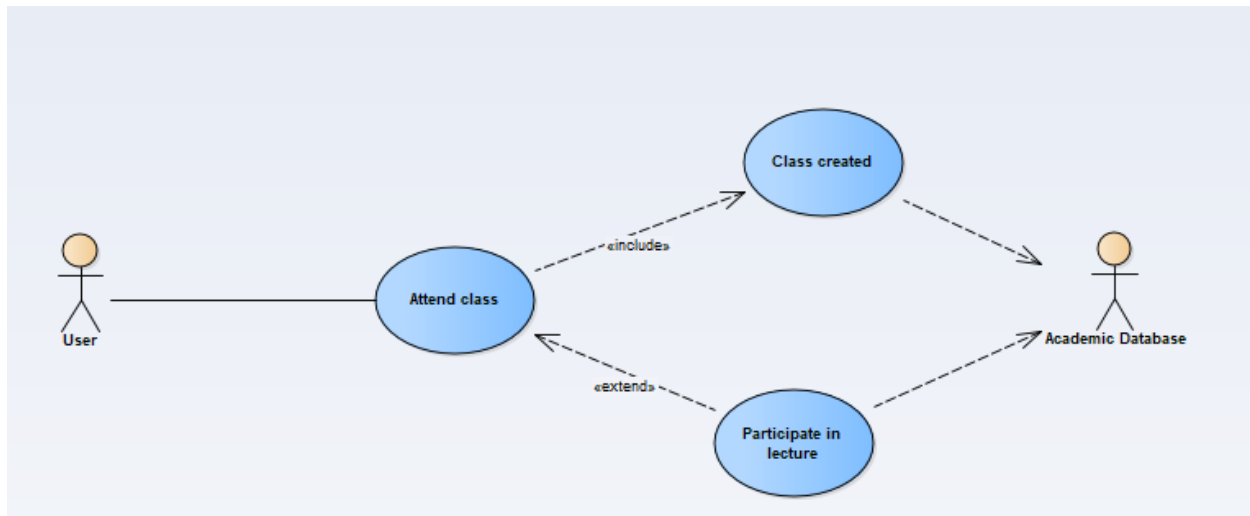
| Attend class created by Teacher	
Actors	User, system database
Description	User can attend class created by his teacher. After joining in, user could participate in lecture and learn from it.
Data	Data privded from the academic database.
Stimulus	Simple UI to join the class and get the most out of knowledge of the lecture.
Respone	Progress user have made will stored back in the academic database.
Comments	Learn the best out of the course and complete it.
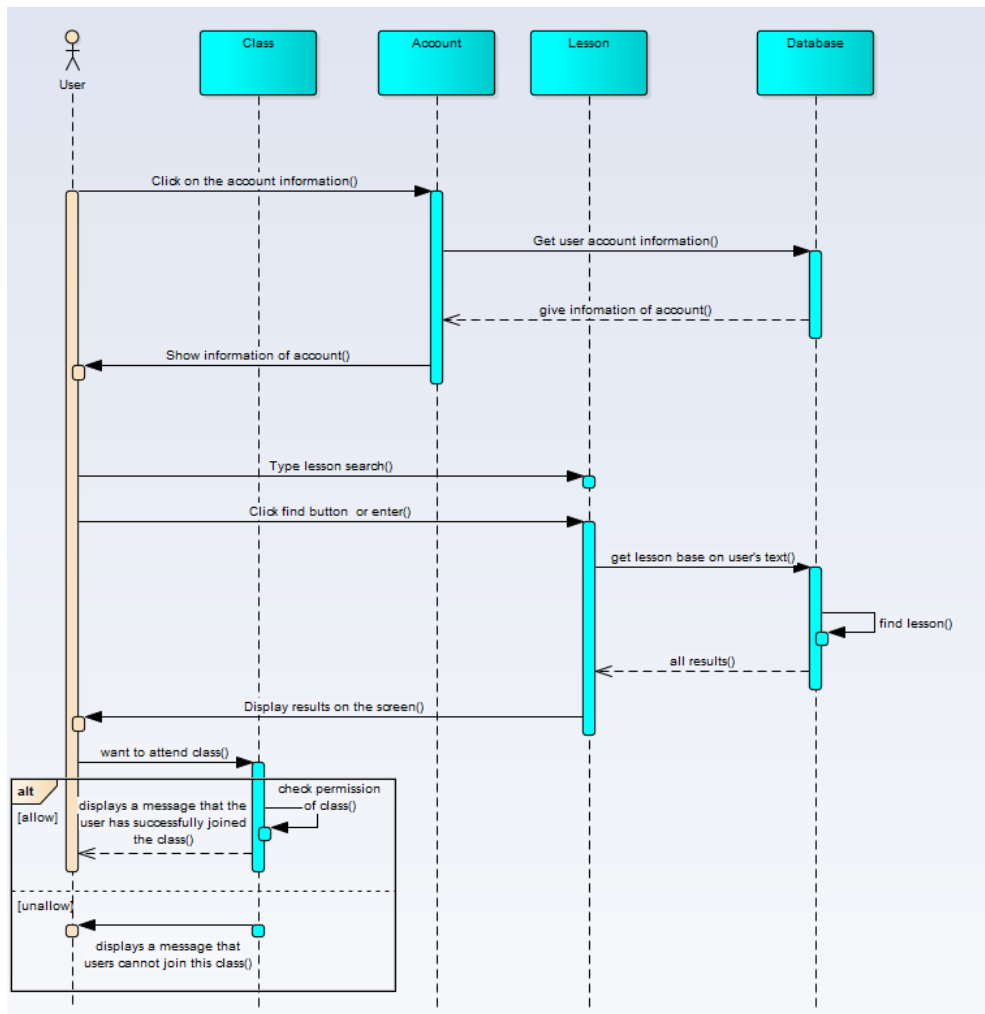
Forum
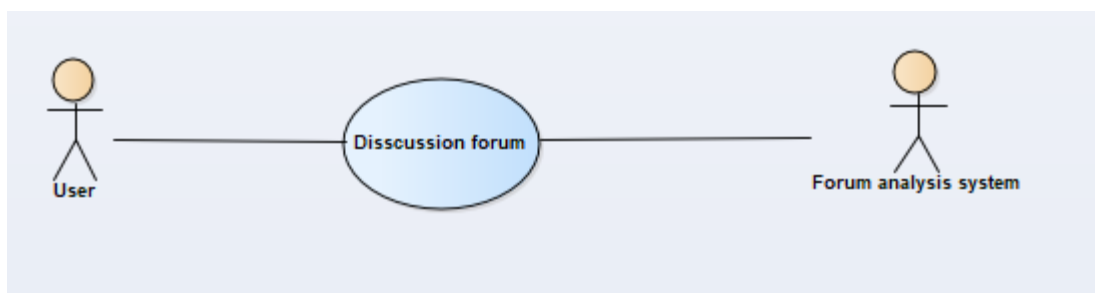
| Disscussion forum	
Actors	User, Forum analysis system

| Description	This is a place to discuss topics related to language learning, some great learning tips or tricks, or suggestions for making the application to be better .
Data	The interactive learners comment
Stimulus	Displays a forum where users can post or share things related to language learning
Respone	Bonus points for participating in interactive commenting and being awarded a title in front of your name make your account look more impressive
Comments	Users will be warned or blocked if they use vulgar words or regularly post unrelated content.
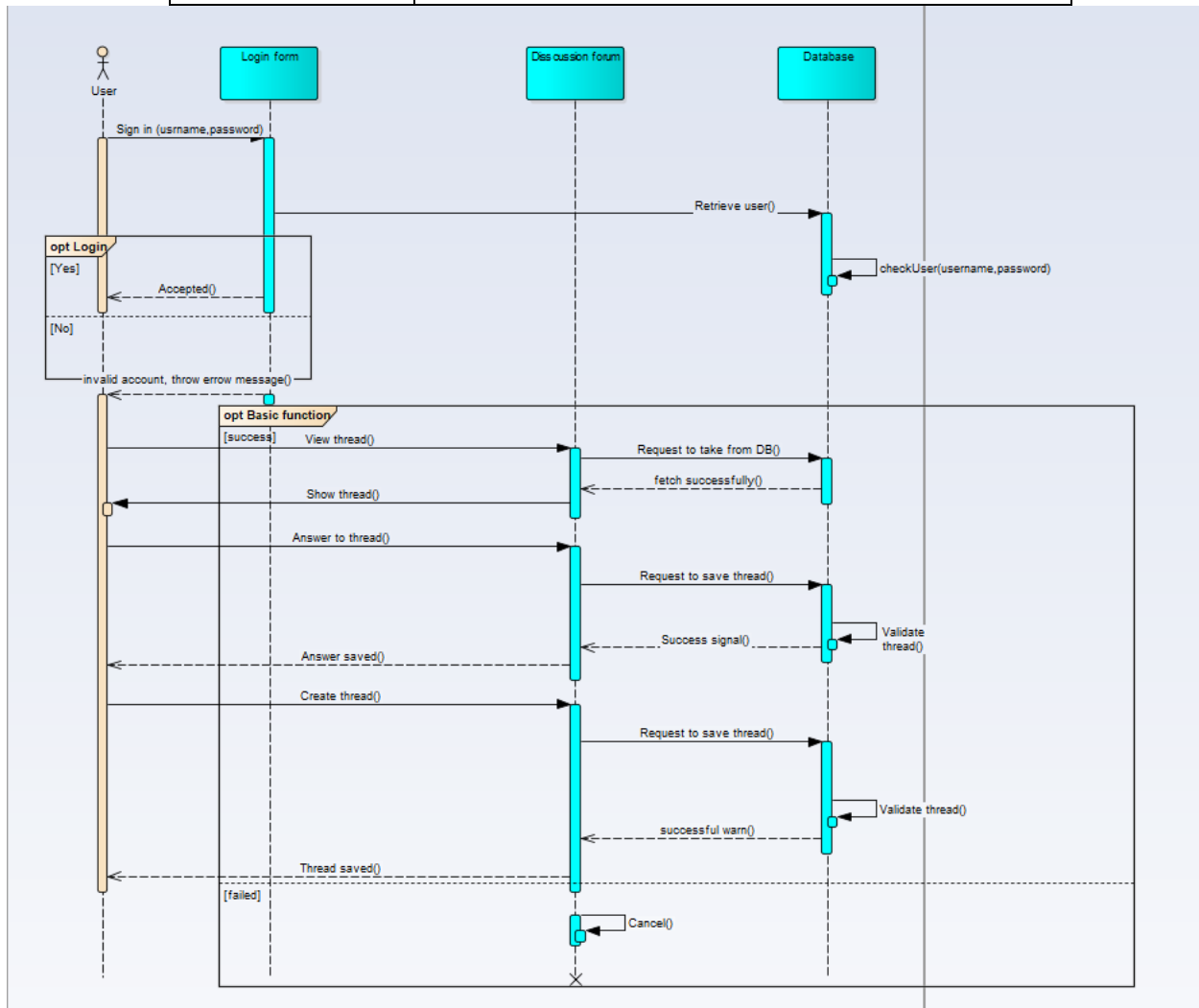
Daily mission
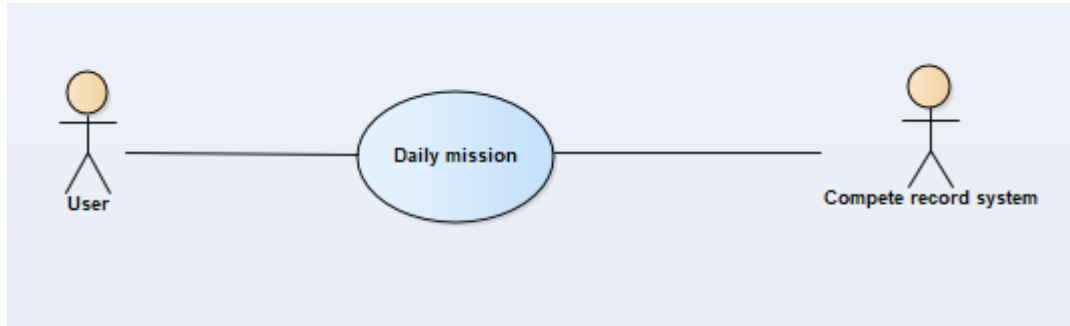
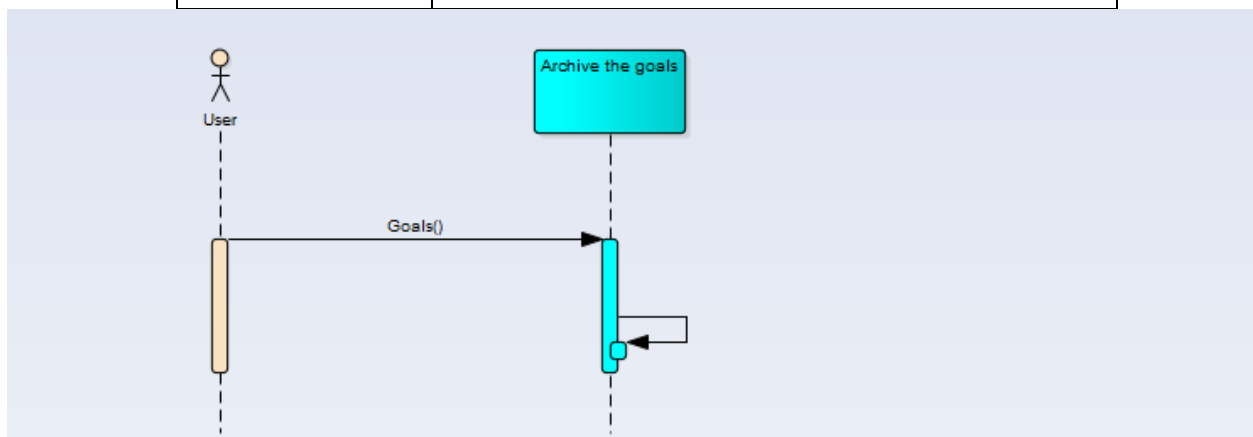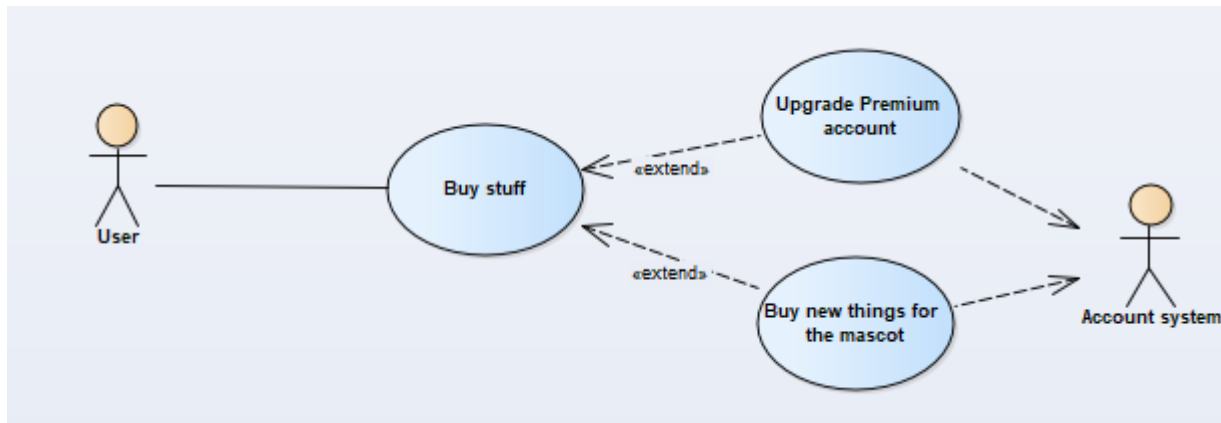| Daily mission	
Actors	User, system
Description	User completes the daily task
Data	From our database to motivate learners
Stimulus	The user interface shows tasks to do each day
Respone	Earn bonus points to use for other things
Comments	User can view task completion progress
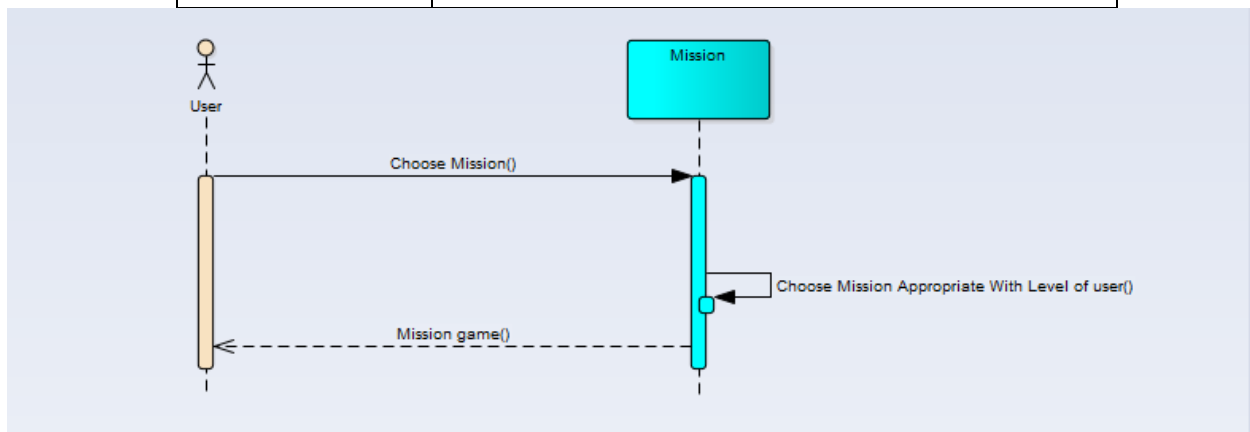
Daily objective goals
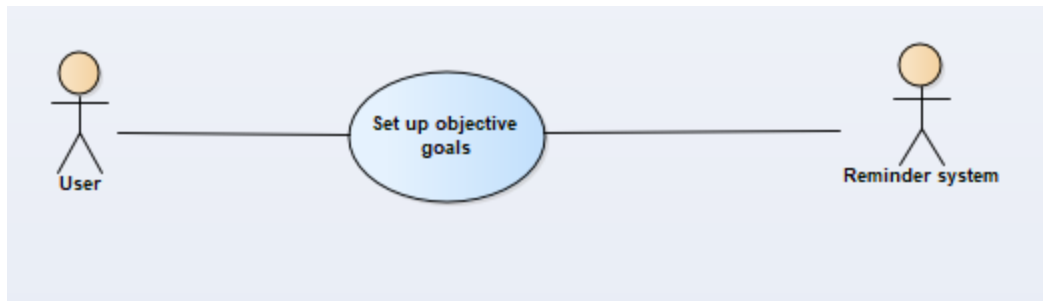
| Set up objective goals	
Actors	User, Reminder system
Description	Set a daily learning goal,and study time
Data	From our database to motivate learners
Stimulus	User interface shows the timeframe for reminders and goals they want to learn
Respone	Reminds to learn according to user set time, and progress set against goals
Comments	Users can turn off this function

Buy stuff

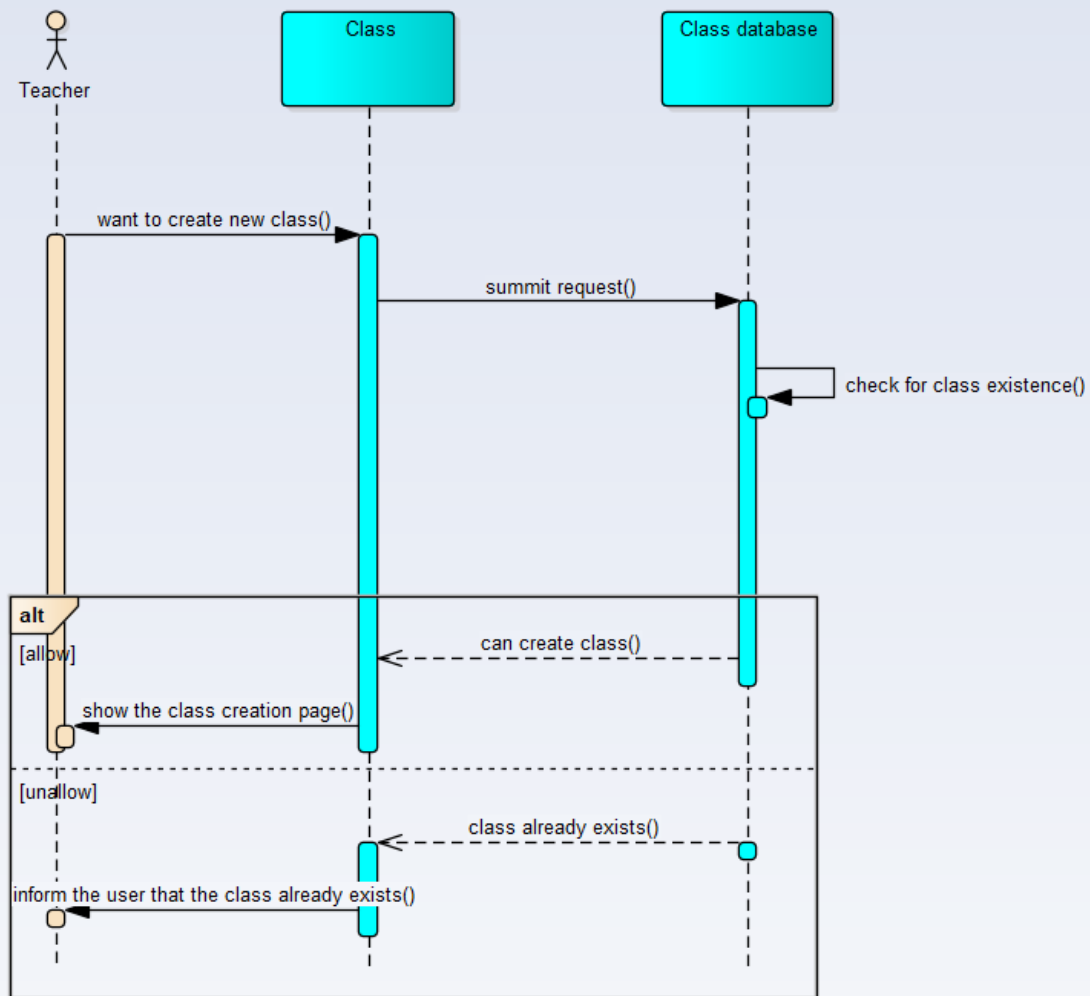| Buy stuff	
Actors	User, Account system
Description	Users can use bonus points to buy items, costumes for their mascots (each account will have its own mascot representing that account), or use real money to upgrade the Premium account to get can not be advertised when completing each lesson, and additional permission to download lessons offline
Data	Will be stored in Account database
Stimulus	User interface to allow user to buy costumes for mascot or upgrade premium account
Respone	Account will be upgraded premium
Comments	The account after the upgrade can be used on any platform in the app
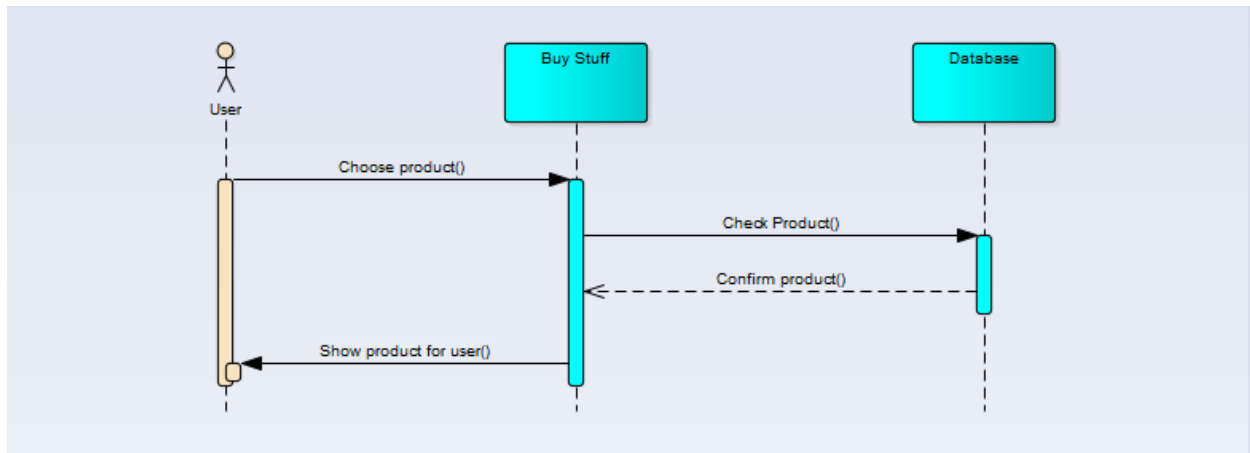
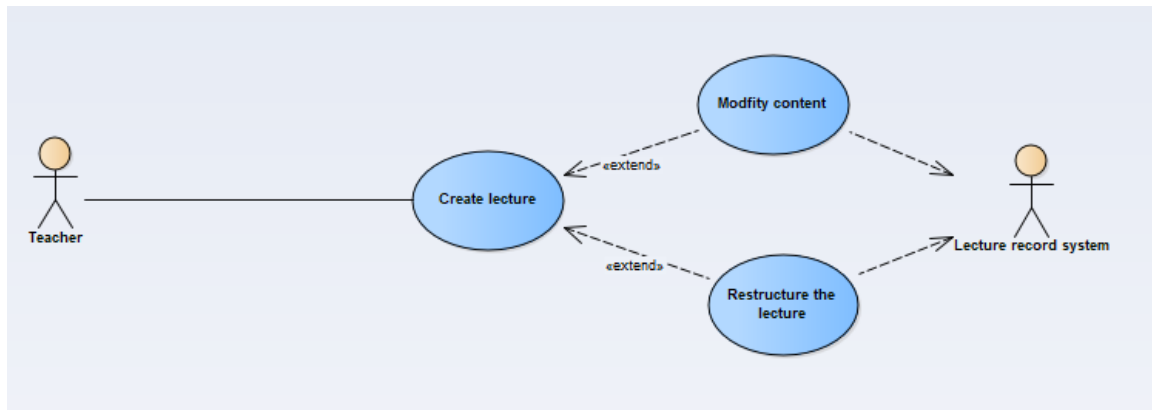## Teacher create class
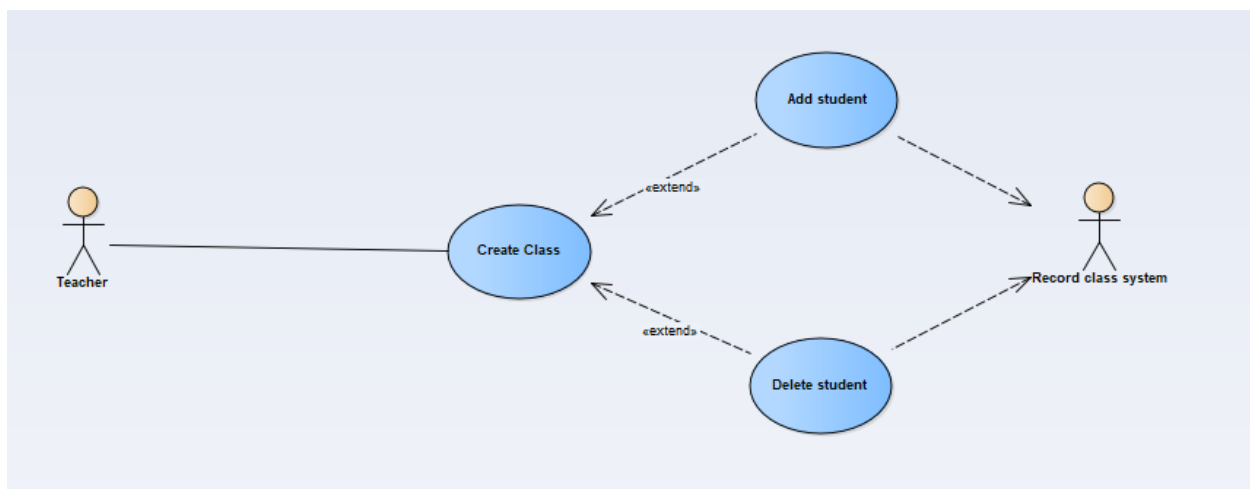
Create Class	
Actors	Teacher, system
Description	Teacher can create classs and modify it.
Data	Information of class
Stimulus	User interface to allow teacher to create class
Respone	Data of the class is stored in the class record system.

Comments	Teacher could have a look on the class and modify it.

Teacher

Class

Class database

want to create new class()

summit request()

check for class existence()

alt

[allow]

can create class()

show the class creation page()

[unallow]

class already exists()

inform the user that the class already exists()

Teacher create lecture

Create lecture	
Actors	Teacher, system
Description	Teacher can create lecture and modify it.
Data	Detailed information of the lecture.
Stimulus	User interface to allow teacher to create lecture
Respone	Data of the class is stored in the lecture record system.
Comments	Teacher could have a look on what he teaches and modify it if needed.
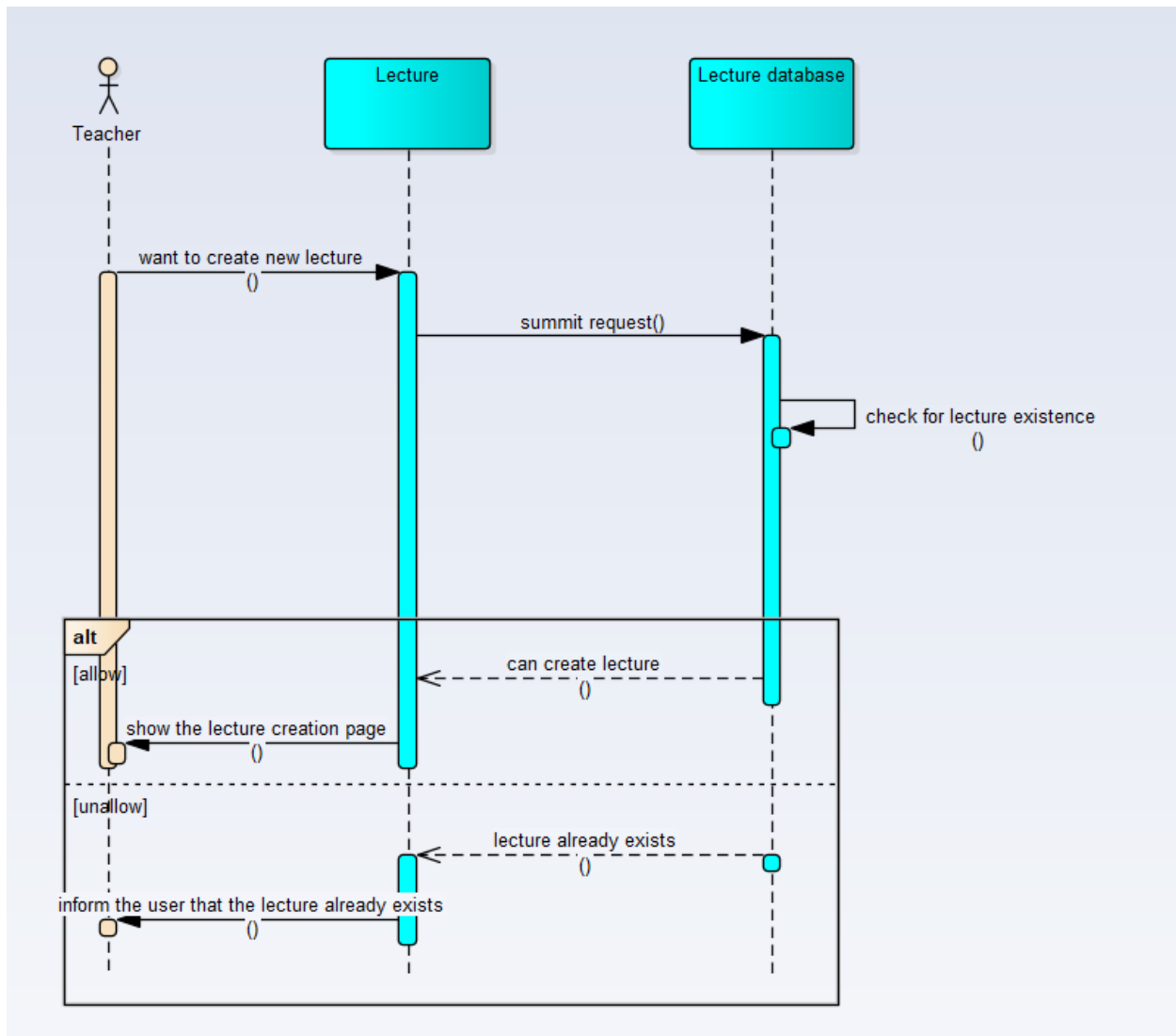
Chapter 7: System evolution

Our software "Learning Language Application" is for those who is in need of learning and improving their foreign language skill. Before doing anything we did a decent research on difficulties that users usually encounter while studying. Base on the research we create this application to help the user get through the situation.

The application has provided with lots of functionalities to help user keep their motivation high up and "hungry" for studying such as daily objective, challenge with reward, compete with other leaner to test user's skill and many others.

It also has forum to connect with the community. Right there user can join in the community and make conversation, chat, sutdy together with others.

A good eye-catching UI and stunning leaning visual is what keep the user's interestingness and curiosity to continue interacting. This is what exactly the software is built for.

User's privacy is our high priority to work on and the application will get constantly update to improve the security and tottaly preserve the intergrity of user's data.

Chapter 8: Appendices

8.1 Application Requirements

Operating system	Windowns 7 (or higher), ios, android
Front end	React, HTML5, Flutter, Switf.
Database	MongoDB, SQL Server
Connectivity	ActiveX Data Object
Report	Data Report

8.2 Hardware Requirements

RAM	512MB or higher
Hard Disk	5GB or higher
Conputer Processor	Intel Gen 6th or higher, ios with A9 or higher, android with snapdragon 678 or higher
Clock Speed	1000 MHZ Processor

Chapter 9: Index