
COMP 3059 – Capstone Project I

1.0 Introduction

The product that will be released by our team will be called the DoForYou Web application and mobile application for users to use. Both the web and mobile application will allow users to freely search for and or hire performers that suit the users needs. While on the other end, performers can display their work/skill, accept or decline job offers and also put up their availability to work.

1.1 Purpose

The intended audience for our applications will be available for any users whether poor, middle class or high class families. The intention and purpose of our application is to allow people such as ourselves to be able to find a professional performer that will get any given task done correctly. The application also allows performers to freely choose what task to accept or decline whether the task may be too difficult or requires a lot more time.

1.2 Scope

The proposed system/application will have many functionalities such as a web & mobile compatible UI, Chat system, Payment system, GPS, Customer care, User Authentication, Database and more. Our application will be similar to what users use to find let's say a job or buying items from other people. Our application goal is to allow users and performers to freely find and or list jobs that are needed to be done, everything other than what I mentioned, the application will not be able to do. Users and performers will be able to contact one another once a job is accepted by the performer (depending if the rate of pay for the workload is acceptable by the performer). The system will allow users to list a job that needs to be done whether it's a job at a personal home or a business. Users and performers will be able to leave reviews for one another to show how content either party was with the work that was done. Customer service will be accessible for users or performers to contact in the instance that users and performers were not able to contact each other. The database will contain all information of job listings, performer and user personal and login details and more...

2.0 System Overview

Our team will create a web-based and android applications. The concept and application design will include the entire process of establishing eligibility, scheduling task to be done, finding the right Performer for the Customer, and invoicing the Customer and paying towards the Performer. The application will be designed to be intuitive, supportable, scalable, cost effective, and have the foundation to support future growth. It will be also user-friendly for both - Customers and Performers.

2.1 Project Perspective

DoForYou is a new self-contained system for searching and selecting private performers for small cases, everyday tasks and urgent errands: buy groceries, do a general cleaning, take a package, meet guests, fix an outlet, deliver flowers, etc.

Cost of living is increasing very fast and many people have to take extra shifts or even multiple jobs to afford rent, food, clothes, etc and because of that finishing day to day tasks might be very difficult and sometimes pricy. DoForYou will allow people to finish their tasks on time and decide how much they can afford to pay for that.

DoForYou is a good opportunity for those who struggle to find a job or need extra money to get paid for their work. The system will provide secure payment system to avoid fraud and document validation for safety reasons.

2.2 System Context

DoForYou has multiple purposes and one of those purposes is to help business owners, where problems arise that no one in the company or the owner can fix other than calling a professional person to come and resolve the issue which could take up to days if not weeks to fix. With DoForYou, business owners can be put to ease knowing that they can hire any professional performer using our DoForYou application whether it be cleaning the offices, IT, Construction and or labour related problems knowing that any problem will be solved within a very quick time frame. The example that our team has provided just now would be one of the examples of how our DoForYou Application would be used within a business case scenario.

2.3 General Constraints

- The system should be published prior or on deadline day
- To access application user should have connection to the internet
- The system should be connected to the server at all times
- The user must have an Android OS or access to the browser
- System must run on different versions of Android OS
- The user must have JavaScript enables on their browser
- The system must have simple design to keep the usability of it to simple and easy. Complex actions and or fancy artwork shall not be included to keep the system complexity minimized
- The web application should support a large number of simultaneous requests from users expecting fast load times. Delays can cost us visitors, reduce revenue and undermine our reputation.
- The system shall be developed using database to store data.
- The web application should be compatible with various browsers

- The system shall be designed be able to switch interfaces and or back end (databases).
- The system should have secure payment system to prevent fraud or loss of payment information

2.4 Assumptions and Dependencies

Assumptions:

- The system will be completed using tools and techniques presented in the project plan
- The user will be able to access website without any interruptions
- The user will be able to use android application on different versions of OS
- The android application will not crush while user is actively using it
- The project scope will not change once the stakeholders sign off on the scope statement
- The team will use same up to date software to deliver web and android applications
- The user will be able to navigate through website easily
- The system will be completed as planned within the project schedule
- The team will deliver simple graphical user interface for users
- The website and android application will handle high traffic and will not slow down
- The payment will be processed as planned - secured, and delivered to performer on time

Dependencies:

- The team should agree on the tools they will use to create the system prior starting to work on the system
- Team members should install the same up to date software tools
- Prior building the GUI team should approve the final design
- The team should agree on the programmig languages, databases, libraries and frameworks they will use
- The team should finish web site before testing stage
- The team should finish android application before testing stage
- The team should start working on a fron-end after implementing the base back-end
- The team should start working on the web site before android application
- Each team member should update project frequently so other members could work on the up to date code

3.0 Functional Requirements

3.1 Use Cases

3.1.1 Upload Tasks

Use Case Name	Upload Tasks
Trigger	When a customer clicks upload task button
Precondition	Customer must be logged in as role of “customer”
Basic Path	<ol style="list-style-type: none">1. Customer defines the title, category, and tags of task2. Customer writes specific descriptions3. Customer might attach a few photos to elaborate the task4. Customer enters appropriate amount of money as compensation5. Customers clicks the upload button
Alternative Paths	<ol style="list-style-type: none">1. In step 1 & 2, if customer does not define the title of the task, then the application will let the user know it is required2. During step 1 ~ 4, if customer goes back to previous page or shuts down current page, then all the information that the customer entered will be gone
Post Condition	The task will be inserted into DB. The application will redirect the customer to the “view task” page

3.1.2 Leave Review

Use Case Name	Leave Review
Trigger	When a customer clicks the “task done” button
Precondition	A task must be posted by the customer
Basic Path	<ol style="list-style-type: none">1. Customer defines the title and star rating2. Customer writes more information3. Customer clicks the upload button
Alternative Paths	<ol style="list-style-type: none">1. In step 1 & 2, if customer does not define the title of the task, then the application will let the user know it is required
Post Condition	The review will be inserted into DB The application will show appropriate message according to the process results

3.1.3 Search Tasks

Use Case Name	Search Tasks
Trigger	When a user accesses DoForYou Application
Precondition	None
Basic Path	1. User chooses how to search tasks. The choices are by category, tag, and title 2. User clicks the search button
Alternative Paths	1. During in step 1 ~ 2, if user doesn't type anything, it will do nothing
Post Condition	Application will show the result in ascending order if exists

3.1.4 Edit Tasks

Use Case Name	Edit Tasks
Trigger	When a customer clicks edit button on a task page
Precondition	The task must be posted by currently logged in customer
Basic Path	1. Customer defines the title, category, and tags of the task 2. Customer writes specific descriptions 3. Customer might attach a few photos to elaborate the task 4. Customer enters appropriate amount of money as compensation 5. Customers clicks the edit button
Alternative Paths	1. In step 1 & 2, if customer does not type nothing for the title of the task, then the application will let the user know it is required 2. During step 1 ~ 4, if customer goes back to previous page or shuts down current page, then all the information that the customer entered will be gone
Post Condition	The task in DB will be updated The application will redirect the customer to the "view task" page

3.1.5 Send Messages

Use Case Name	Send Messages
Trigger	When user clicks send message button
Precondition	Only connected customer and performer can communicate simultaneously
Basic Path	1. User types the message 2. User clicks the send button
Alternative Paths	1. In step 2, if the message input box is empty, it will not allow to send
Post Condition	All message data will be stored in DB Everytime user send or receive message, it will update the screen that includes new message

3.1.6 Sign Up

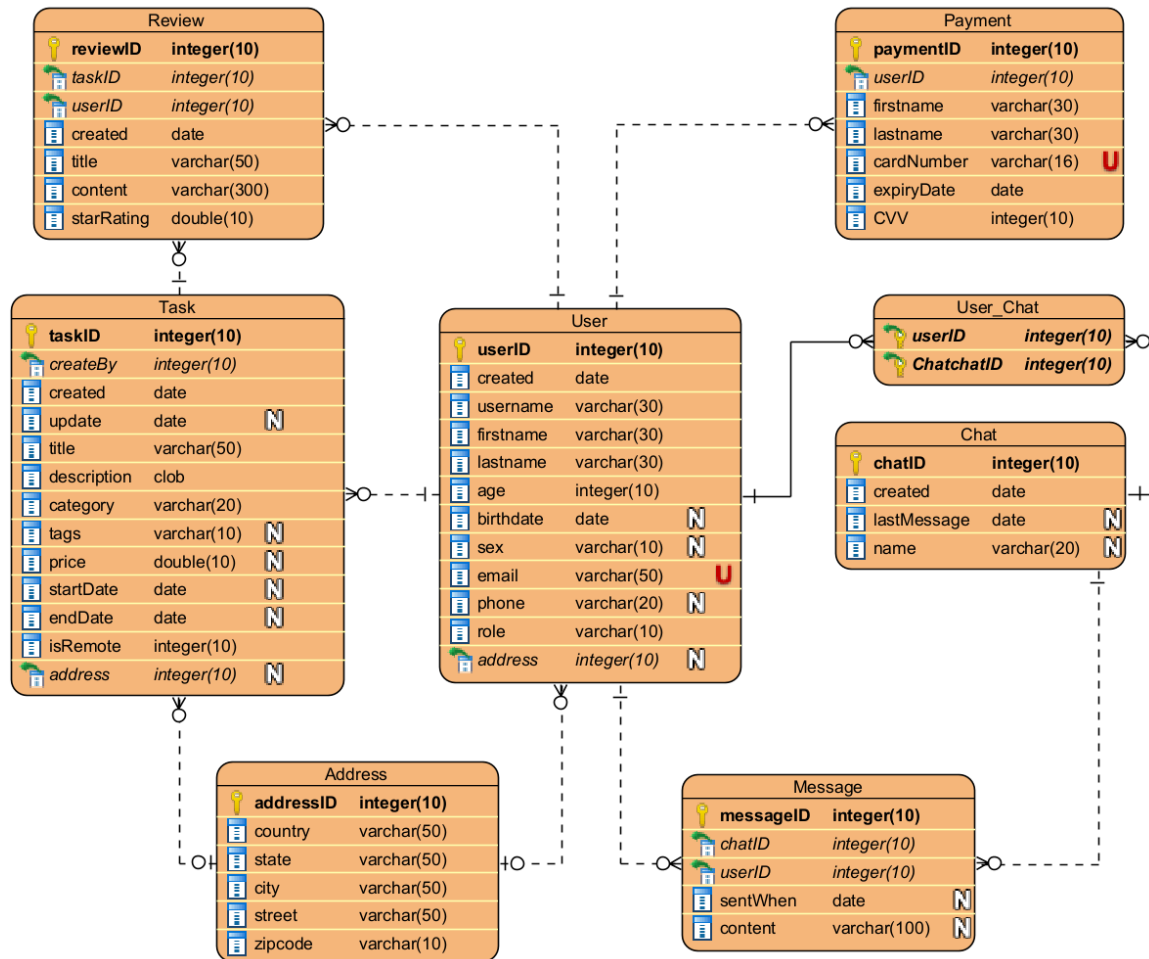
Use Case Name	Sign Up
Trigger	When user access DoForYou Application
Precondition	User must be willing to create an account
Basic Path	1. User clicks sign up button 2. User fill up the form 3. User clicks submit button 4. Application shows the result
Alternative Paths	1. In step 3, if the form is empty or invalid, it will not allow the user to sign up
Post Condition	All user information will be stored in DB

3.1.7 Log In

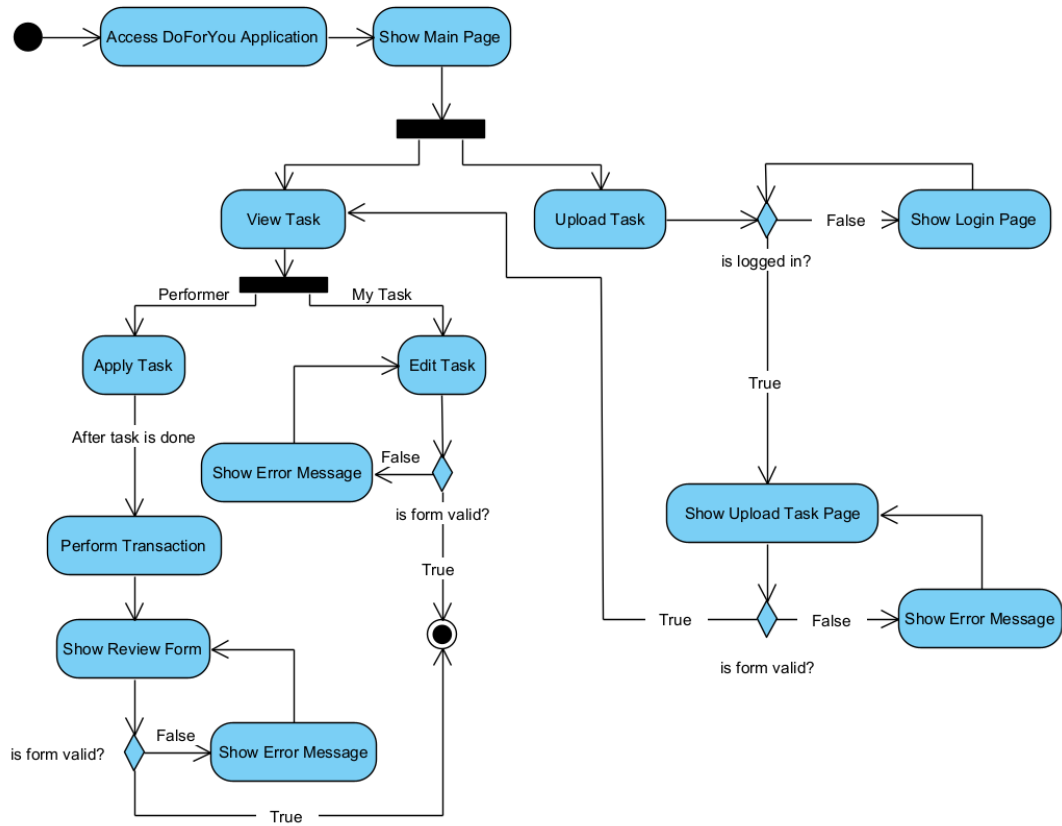
Use Case Name	Log In
Trigger	When user access DoForYou Application
Precondition	User must have his/her own account of DoForYou Application
Basic Path	1. User fill up the email input box 2. User fill up the password input box 3. User clicks login button 4. Application will redirect the user to main page
Alternative Paths	1. In step 3, if the email address and password do not match, the application will forbid logging in and ask again.
Post Condition	User will have permission according to him/her role in DoForYou system.

3.2 Data Modelling and Analysis

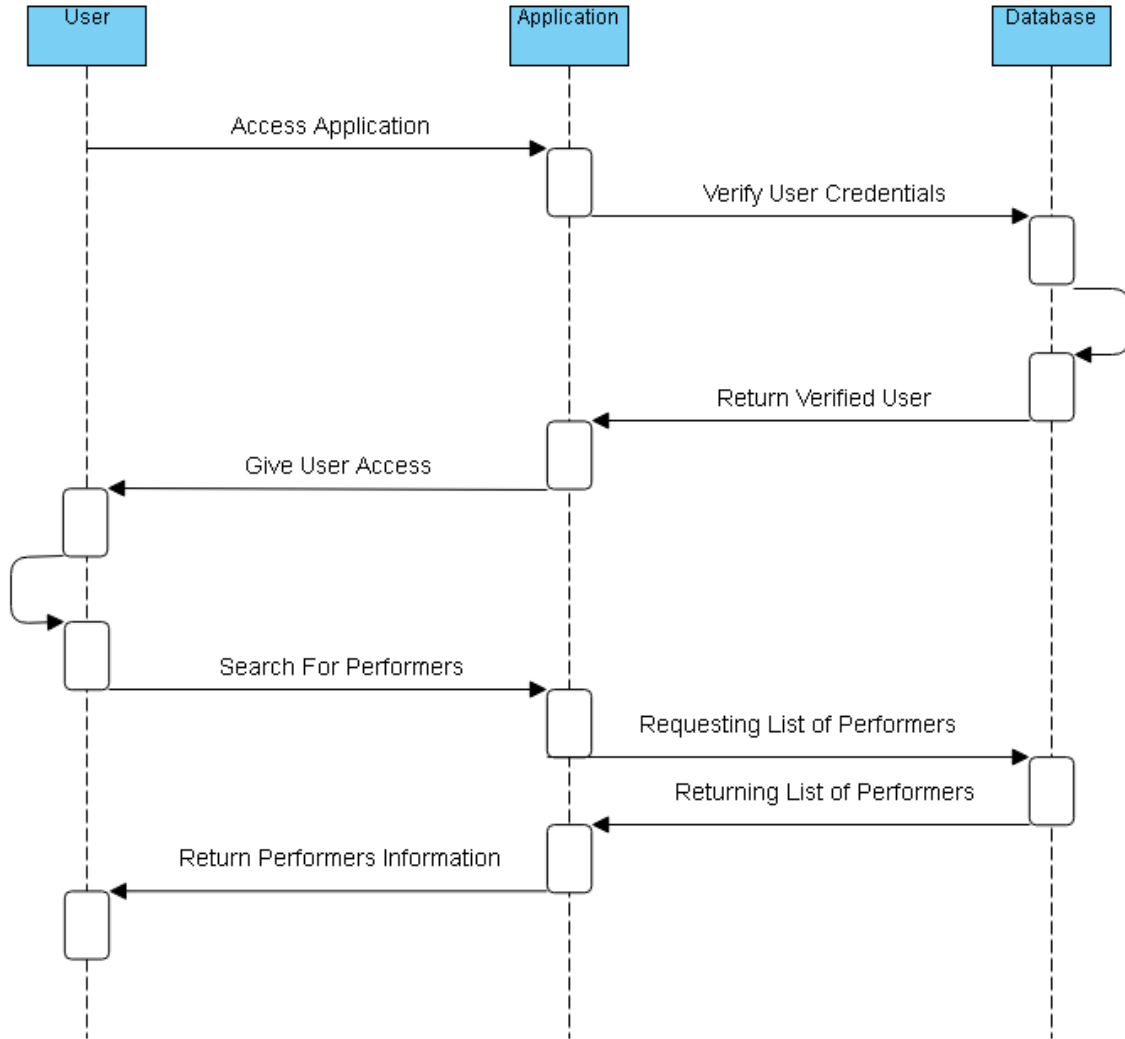
Normalized Data Model Diagram



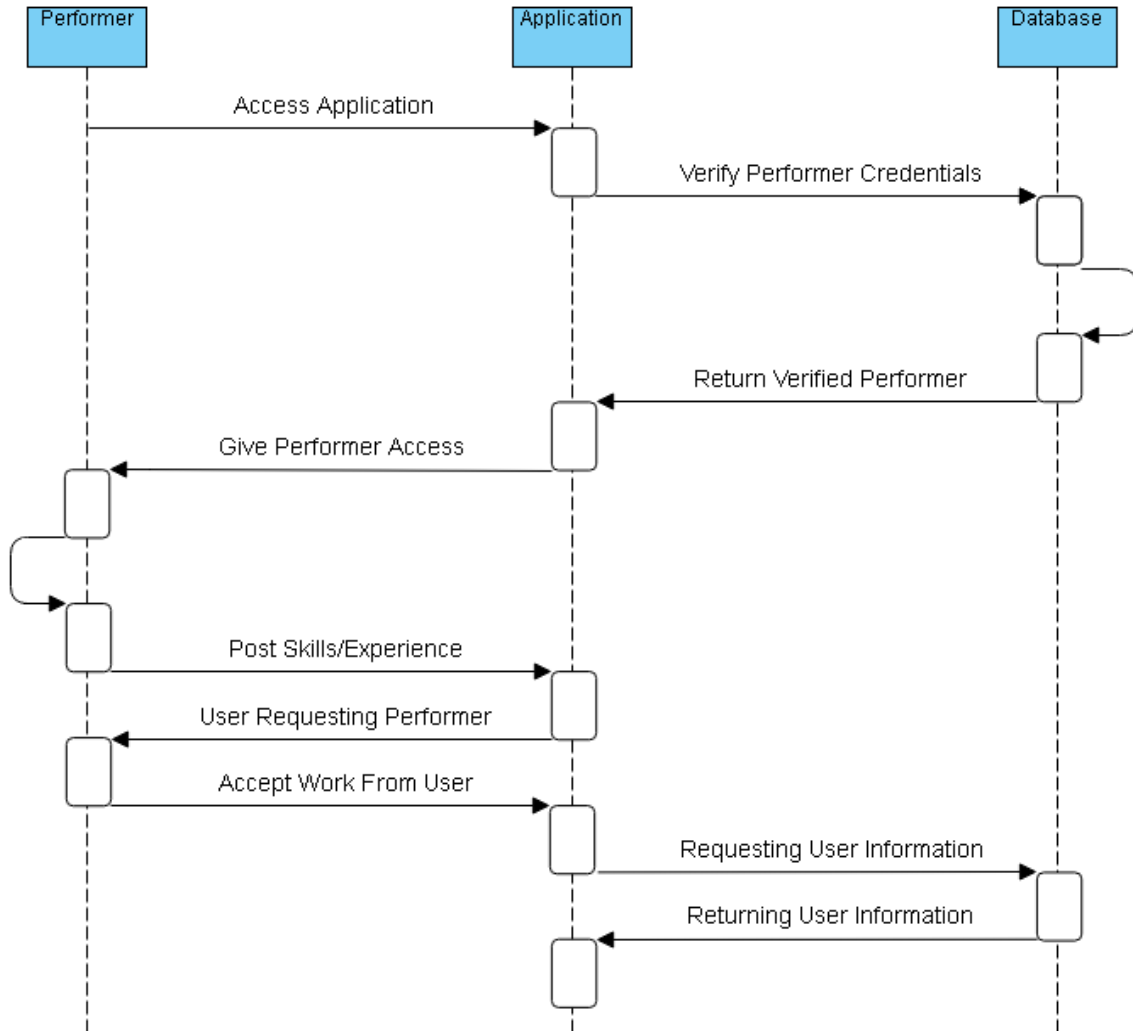
Activity Diagrams



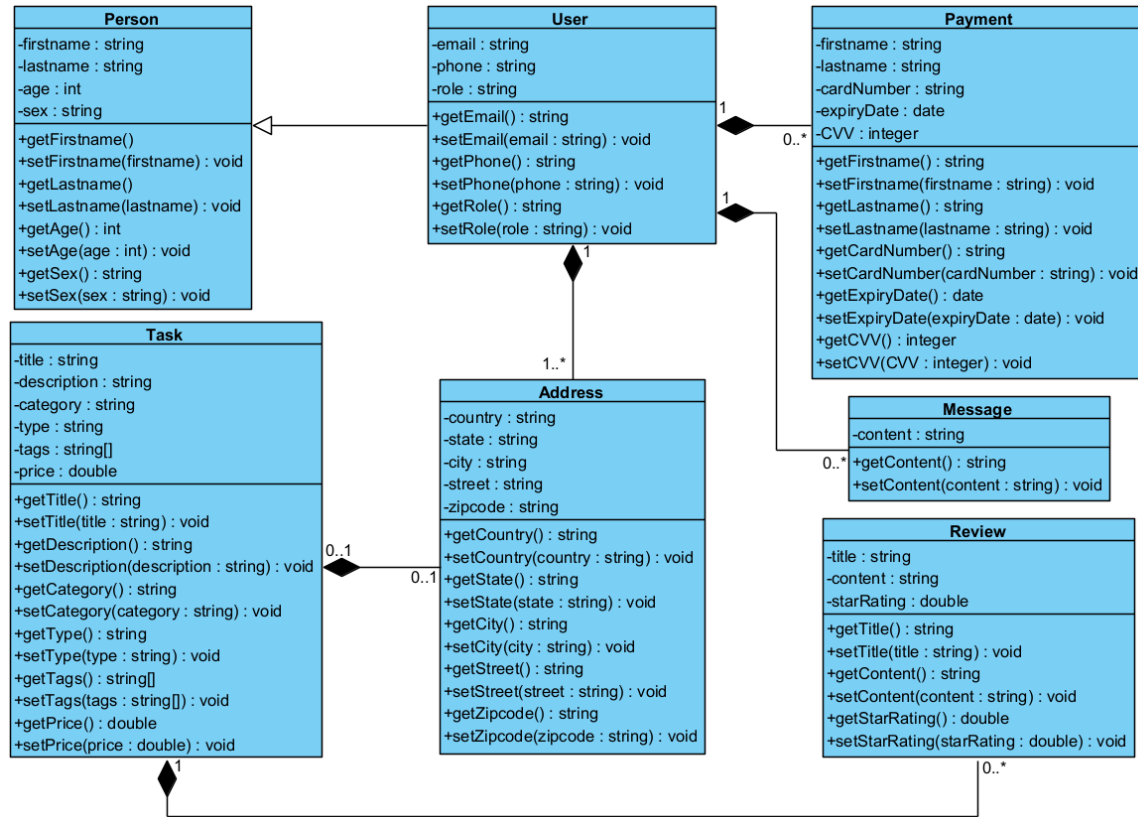
Sequence Diagrams for Users



Sequence Diagrams for Performers

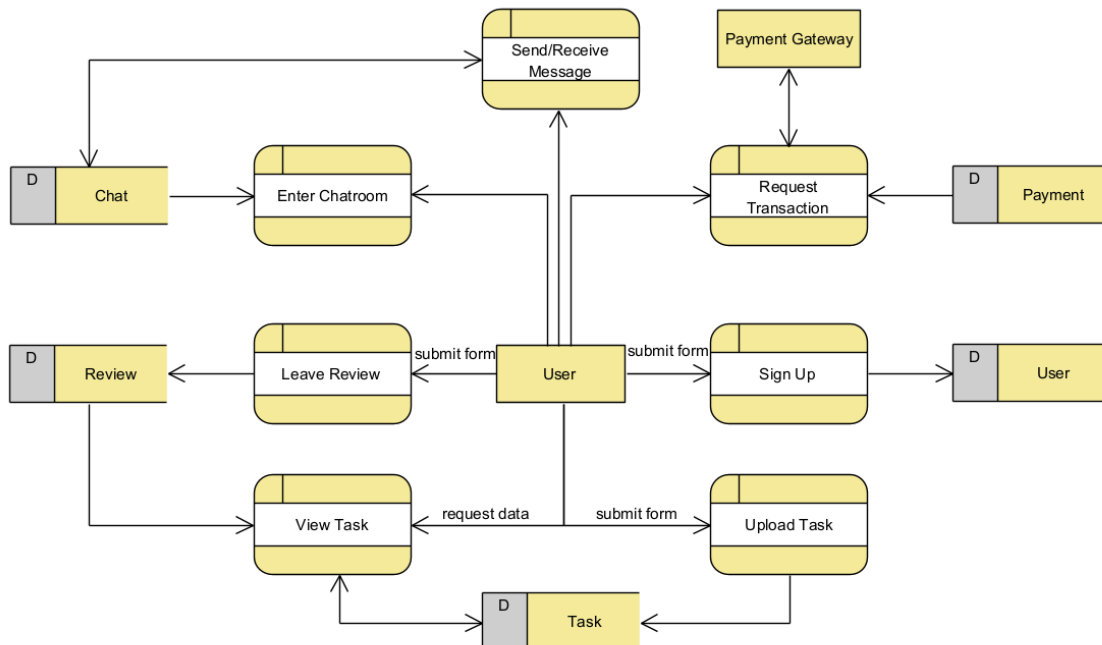


UML Class Diagram



3.3 Process Modelling

Data Flow Diagram



4.0 Non-Functional Requirements

The web application will be on a server with high speed internet capability. The speed of the web application will be dependent on the machines and or smartphone users/performers have access to. Another variable that will affect the speed of the web application is the type of connection the user/performers will have access to in order to use the web application, for example LTE/4G/3G/2G data from the cell phone provider or the internet/wifi speed of the user/performers. The same will apply when accessing the mobile application. The DoForYou web and mobile application will run on a server where the CEO, CTO, System Analyst and Product Manager will have access to. The loading time of both the web and mobile application should and will be instantaneous.

5.0 Logical Database Requirements

Our application will maintain our own database to offer convenient service for customers. All entities and their relationship are described as a normalized data model diagram above. DB will be used for almost every function of our application. If a user does not have any activity within 30 days, this user will no longer be kept in DB. Tasks or reviews that were created by expired or deleted users will be removed from our DB automatically.

6.0 Other Requirements

Additional requirements for the user in order to use the Web application will be any functioning tablet, smartphone, computer or laptop. The requirement to use the Mobile application will be a functioning up-to-date android smartphone as for now until our team creates a functional Mobile application for iOS.

7.0 Approval

The signatures below indicate their approval of the contents of this document.

Project Role	Name	Signature	Date
CEO	Elizaveta Vygovskaia	<i>Elizaveta Vygovskaia</i>	Nov 3, 2022
CTO	Seunghun Yim	<i>Seunghun Yim</i>	Nov 3, 2022
System Analyst	Yoonhee Kim	<i>Yoonhee Kim</i>	Nov 3, 2022
Product Manager	Danny Nguyen	<i>Danny Nguyen</i>	Nov 3, 2022