

OTS (Online Therapy System)

Software Requirement Specification

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1.0. Introduction

1.1. Purpose

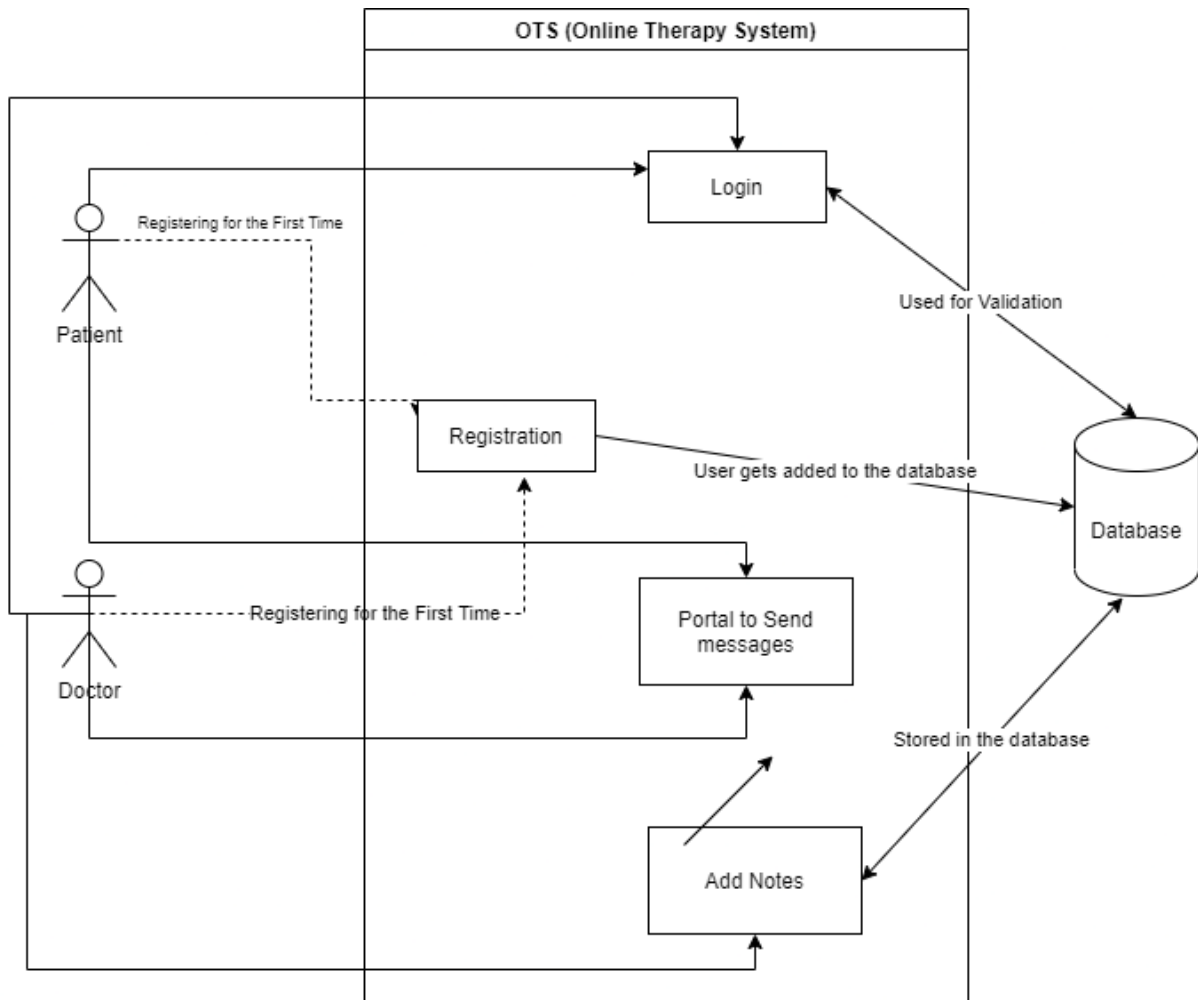
The purpose of this document is to present a detailed overview of ***OTS (Online Therapy System)***. The document will explain the purpose, the features, various use and misuse cases, the security requirements, constraints under which the system will work and how the system will respond to external stimuli.

1.2. Scope of Project

This system will provide the ability to have therapy sessions online to people who need it but cannot visit the practitioner in person. The patient upon successful registration will be able to have a one-on-one telephonic conversation with certified practitioners and receive the necessary help. The patient will be assigned a therapist randomly and the possibility of changing the therapist is not a part of the scope. The therapist can have multiple patients to whom they will provide consultations. The system will have the ability to write and access the notes which the therapist can revisit later.

2. System

2.1. System Environment



2.2. Description of the Project

The OTS service is in no way a complete substitute to an in-person session. More specifically, the system is designed so that the patient is able to talk to the therapist when they cannot visit the therapist in-person. A telephonic conversation with a certified therapist, will help them become clearer if they need an in-person session. Since, these services will be provided free of cost, and will be anonymised the user might be willing to talk more

about themselves and become clearer if they need to take sessions with a therapist.

When the user registers on the website, they will be assigned a certified therapist by the system. The user will be able to send a message to the assigned therapist requesting for a call back at a time suitable to the patient. If the therapist is unable to make it to the requested time, the therapist may send a reply asking for a different time when both the users are available for the conversation.

The therapist will have the ability to add notes for a particular patient which can be revisited later. The therapist will not have ability to edit the files once they have been saved, however they can save multiple files for the patient.

3. System Features

3.1 Use Case Description

Use Case ID:	UC1
Use Case Name:	Login
Actor(s):	1. Patient 2. Therapist
Goals/Actor Goals:	It's a primary function which will validate the actors and provide access to the features according to their respective roles and ensure that there is no unauthorized access.
Description/Summary:	The user provides a combination of email address and a password. The given set of credentials will be

	verified and the upon successful validation, access will be granted.
Preconditions:	The user is currently logged out of the system.
Post-Conditions:	The user will be logged in and have different controls based on the user roles.
Minimum Guarantee:	The system is kept secured of unauthorized access.
Basic Flow:	<ol style="list-style-type: none"> 1. The user navigates to the welcome screen. The welcome screen has a prompt where user is can enter the username and password. 2. The user enters a set of credentials. 3. The given set of credentials are verified against the database which we have on the backend. 4. If the given set of credentials are valid and accurate, the user is granted access.
Alternate Flow:	<ol style="list-style-type: none"> 1. If the given set of credentials are not valid, the user is notified of the same using an error message. The user is taken back to the welcome page. 2. If there are repetitive failures (3 times), the user gets locked. 3. In order to login again, the user will have to verify the email again.
Functional Requirements	<ol style="list-style-type: none"> 1. User shall only be granted access to the features when they provide valid credentials. 2. The system should be able to validate the credentials. 3. Repetitive failed logins will lock the user and the account can only be unlocked when they re-verify using the email id associated with the account.

Use Case ID:	UC2
Use Case Name:	Reset Password
Actor(s):	1. Patient

	2. Therapist
Goals/Actor Goals:	Reset the password if the user has forgotten the old password.
Description/Summary:	User provides the email address associated with the account. If the provided email address is valid and has an account linked in the database, user gets a link in their email address to reset the password.
Preconditions:	The user is not logged in the system.
Post-Conditions:	The user receives a temporary link in the email associated with the account to reset the password.
Minimum Guarantee:	The system is kept secured of unauthorized access.
Basic Flow:	<ol style="list-style-type: none"> 1. User provides an email address. 2. If the provided email address has an account associated with it, a temporary link to reset the password is sent. 3. User uses the temporary link to reset the password.
Alternate Flow:	<ol style="list-style-type: none"> 1. User uses an email address which is not associated with any account in the database. 2. User is notified to create a new account.
Functional Requirements:	<ol style="list-style-type: none"> 1. The user will have the ability to enter the email id which is associated to the account. 2. There will be a functionality which will validate if the email id has an account associated to any account. 3. Upon the validation of the account, the user will be sent a link to the email id associated with the account using which they will be able to change the password.

Use Case ID:	UC3
Use Case Name:	Registration
Actor(s):	<ol style="list-style-type: none"> 1. Patient 2. Therapist
Goals/Actor Goals:	Create a new account
Description/Summary:	User wants to create a new account to use the services.

Preconditions:	User has a unique email ID i.e., an account has not been previously created using the provided email ID.
Post-Conditions:	User is granted access according to the role they choose.
Minimum Guarantee:	User provides a unique email ID.
Basic Flow:	<ol style="list-style-type: none"> 1. User enters an email ID and a password. 2. User will select a role (patient/therapist). 3. If the email ID does not have an account associated with any other account, a verification email is sent to the provided email address. 4. Upon verification of the email address, user is granted access to the relevant portals.
Alternate Flow:	<ol style="list-style-type: none"> 1. If the email ID is not unique, the user is navigated to the login page, along with a message.
Functional Requirements	<ol style="list-style-type: none"> 1. There will be an interface for the user to enter the details. These details will vary according to the role they choose (Name, phone number, email id, Address, SSN, Unique Identification Number (only for users registering as Therapists))

Use Case ID:	UC4
Use Case Name:	Logout
Actor(s):	<ol style="list-style-type: none"> 1. Patient 2. Therapist
Goals/Actor Goals:	The user wants to logout from the system.
Description/Summary:	The user wants to logout from the system, after which the access to the resources is terminated.
Preconditions:	The user is logged in.
Post-Conditions:	The user is logged out.
Minimum Guarantee:	The system is kept secured of unauthorized access.
Basic Flow:	<ol style="list-style-type: none"> 1. User clicks the logout button on the page. 2. Access to resources is terminated .
Functional Requirements:	<ol style="list-style-type: none"> 1. User is able to navigate to the Log Out button and click on it.

Use Case ID:	UC5
Use Case Name:	Send a message to the Therapist
Actor(s):	Patient
Goals/Actor Goals:	Send a message to the therapist.
Description/Summary:	The user wants to send a message to the therapist for a telephonic conversation. The message is sent to work out a time which will be followed by a telephonic conversation.
Preconditions:	The user is logged in the application.
Post-Conditions:	The message is sent to the therapist.
Minimum Guarantee:	The system is kept secured of unauthorized access.
Basic Flow:	<ol style="list-style-type: none"> 1. User navigates to the send-a-message page. 2. User writes a message detailing the issue and the time which works for them
Functional Requirements:	<ol style="list-style-type: none"> 1. The user has the access to a form where they will be able to write a message for the therapist. 2. The therapist will have to be notified upon the receipt of a new message

Use Case ID:	UC6
Use Case Name:	Send message to the patient
Actor(s):	Therapist
Goals/Actor Goals:	Send message to the patient.
Description/Summary:	Therapist replies to the message which was sent earlier by the patient.
Preconditions:	The therapist is logged in to the application
Post-Conditions:	The message is sent to the patient.
Minimum Guarantee:	The system is kept secured of unauthorized access.
Basic Flow:	<ol style="list-style-type: none"> 1. User navigates to the send-a-message page 2. User writes a message which is then sent to the patient.
Functional Requirements:	<ol style="list-style-type: none"> 1. The user has the access to a form where they will be able to write a message for the therapist.

	2. The patient will have to be notified upon the receipt of a new message
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Use Case ID:	UC7
Use Case Name:	Add notes about the patient.
Actor(s):	Therapist
Goals/Actor Goals:	User has the ability to add the notes which can be referenced later.
Description/Summary:	After the telephonic conversation with the patient, therapist has the ability to write some notes for their reference. The files will be stored in the database which may be accessed by the therapist later on.
Preconditions:	The user is logged in and has had a telephonic conversation.
Post-Conditions:	A text file is created with all the notes which the user had entered.
Minimum Guarantee:	The system is kept secured of unauthorized access.
Basic Flow:	<ol style="list-style-type: none"> 1. User navigates to the add notes page. 2. User enters the notes which have to be added which can be referenced at a later point of time.
Functional Requirements:	<ol style="list-style-type: none"> 1. Therapist has an interface where they can add the notes about the patient.

Use Case ID:	UC8
Use Case Name:	Access the notes
Actor(s):	Therapist
Goals/Actor Goals:	Access the notes which were created
Description/Summary:	The user might want to access the notes which were created earlier.
Preconditions:	User is logged in and has some notes saved from previous sessions.
Post-Conditions:	Therapist accesses previous notes of the patient.
Minimum Guarantee:	The system is kept secured of unauthorized access.
Basic Flow:	<ol style="list-style-type: none"> 1. User navigates to the page to access the previous notes.

	2. User enters the date when the notes were created last time. 3. User downloads the files.
Functional Requirements:	1. The user will have an interface to search for the notes using dates. 2. The user will have the ability to download the files

3.2 Misuse Case Description

1. A person may register as a therapist but is not qualified.

A malicious user might register themselves as a therapist, but they might not be certified or qualified to give sessions to the patients. A malicious user registering themselves as a therapist and taking sessions of the patient is considered as a misuse and a threat to the system.

2. A malicious user might access the notes from a session for a different user.

The notes of the therapist about the patient are considered to be Private Health Information and should not be accessible only by the therapist. A malicious user accessing these notes is a threat to the system.

3. A malicious user may register using fake information.

A malicious user might register using fake credentials to use the application, and so is a malicious use case of the application.

4. A malicious user may create (or edit) notes for a patient.

A malicious user might create new notes about the patient. This is a misuse(threat) to the system.

5. A malicious user might impersonate the patient to find private information about the patient.

A malicious user might login and impersonate another user. They might do this to get private information about the patient. This is a misuse of the application.

6. A malicious user might impersonate the patient to find private information about the patient.

A malicious user might login and impersonate another user. They might do this to get private information about the patient. This is a misuse of the application.

7. A malicious user might enter malicious texts in various field and try to access more information

A malicious user might enter commands (or code snippets) in order to bypass the regular flow of the diagram and get confidential information.

Security Requirements

- The user should be able to login and access the features after only after providing valid credentials
- Various PII data (including the patients SSN, Unique Member ID for the therapist, the notes of the patient, etc.) need to be encrypted using a strong encryption
- The application should use secure protocols such as SSL to protect the data/information from any form of analysis.
- Multi Factor Authentication or similar protective features will have to be incorporated in the system to increase the security.