

AMAZON TRANSCRIBE MEDICAL

A PROJECT REPORT

submitted by

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to

the APJ Abdul Kalam Technological University

in partial fulfillment of the requirements for the award of the degree

of

Master of Computer Applications



Department of Computer Applications

RAJIV GANDHI INSTITUTE OF TECHNOLOGY

(Government Engineering College)

KOTTAYAM - 686 501, KERALA

June 2021

DECLARATION

I undersigned hereby declare that the project report "AMAZON TRANSCRIBE MEDICAL" , submitted for partial fulfillment of the requirements for the award of degree of Master of Computer Applications of the APJ Abdul Kalam Technological University, Kerala is a bonafide work done by me under supervision of Prof.Shereena Thampi. This submission represents my ideas in my own words and where ideas or words of others have been included, I have adequately and accurately cited and referenced the original sources. I also declare that I have adhered to ethics of academic honesty and integrity and have not misrepresented or fabricated any data or idea or fact or source in my submission. I understand that any violation of the above will be a cause for disciplinary action by the institute and/or the University and can also evoke penal action from the sources which have thus not been properly cited or from whom proper permission has not been obtained. This report has not been previously formed the basis for the award of any degree, diploma or similar title of any other University.

PAMPADY

June 11, 2021

MARY SHEMNA V.N

**DEPARTMENT OF COMPUTER APPLICATIONS
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KOTTAYAM**



CERTIFICATE

This is to certify that the report entitled '**AMAZON TRANSCRIBE MEDICAL**' submitted by **Ms.MARY SHEMNA V.N(Reg No:KTE18MCA039)** to the APJ Abdul Kalam Technological University in partial fulfillment of the requirements for the award of the Degree of **Master of Computer Applications** is a bonafide record of the project work carried out by her under our guidance and supervision. This report in any form has not been submitted to any other University or Institute for any purpose.

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TO WHOM SO EVER IT MAY CONCERN

This is to Certify that **Ms. Mary Shemna V N**, Reg No: **KTE18MCA039**, M C A 6th semester Student of Rajiv Gandhi Institute of Technology Kottayam has done her project in our Research & Development Division From March 2021 to June 2021. During the training period she did the project on the topic "**AMAZON TRANSCRIBE MEDICAL**" under the guidance of Mr. Jikku Jose Lal the technical expert of our company ,towards the partial fulfillment of Master of Computer Application.

During the project training period she has been found sincere and hardworking. We wish her all Success in her future endeavors.

ABHIJITH TJ

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ABSTRACT

The Amazon Transcribe Medical is an automatic speech recognition (ASR) service driven by state-of-the-art machine learning, the service accurately transcribes medical terminologies such as medicine names, procedures, and even conditions or diseases. Amazon Transcribe Medical can serve a diverse range of use cases, from transcribing physician-patient conversations that enhance clinical documentation, to capturing phone calls in pharmacovigilance, or even subtitling telemedicine consultations. Amazon Transcribe Medical is HIPAA eligible and prioritizes patient data privacy and security. Amazon Transcribe Medical is a scalable transcription service that lives in the cloud. Pay only for what you transcribe, with no fixed costs, upfront commitments, or long-term licenses. Flexibly scale up or down the usage based on your needs.

This Project consist of 3 modules :Audio file transcribe,Record transcribe and Admin pannel.

1.Audio file transcribe:

The audio file transcribe consist of audio file language,speech type,patient or case number,email address.

2.Record transcribe:

This consist of Record the voice using start button,audio file transcribe consist of audio file language,speech type,patient or case number,email address.

3.Admin:

Admin panel consist of login and registration of staff,patient,and doctor,create and edit patient case no,audio file upload,successful results,daily transcribe tasks,case

name with audio file name,google analytics, Adsense,smtp setting for email
service,google setting for google adsense and analytics,profile setting

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CHAPTER 1

INTRODUCTION

1.1 Need for the Project

This project focused on creating an application to perform automatic speech recognition service to the medical field that accurately transcribe the voice into text of medical terminologies. It can serve a diverse range of use cases and also it is a scalable transcription services that lives in the cloud. In the existing system consist of manual process that a medical transcriptionist is the person who responsible for listening to voice recording that physician and other healthcare professionals make and convert them into written reports. that is, it a time consuming process and there is a chance of loose of data. So in the proposed system it use a automatic speech recognition service which recognize the uploaded or recorded audio and automatically transmitted it into text without any persons help that reduce the manual work and obtain accurate results

1.2 Outline of the Report

Details of proposed system is provided in chapter 2. Hardware and software specifications for both development and implementations are detailed. Module description and data flow diagrams are described in chapter 3. Chapter 4 includes the database design and form design. Also, the screenshots of form . Various types of tests are implemented in chapter 5 and system implementation details are detailed in chapter 6. The future scope and conclusions are summarized in chapter 7.

1.3 Motivation

As the amount of documents and information grows within an organization. It is critical to have a system in place to organize, secure, and access it as needed. The organization requirements like effective communication between doctors and patients, automatically convert into text and maintaining records etc

1.4 Scope of the project

The web application designed for medical purpose which provides an admin facility in order to manage the system and keep the information accurate. Our service and the web application have successfully satisfied the requirements of the institution. It makes the medical transcriptionist work easier.

CHAPTER 2

REQUIREMENT ANALYSIS AND SPECIFICATION

Requirements Analysis is the process of defining the expectations of the users for an application that is to be built or modified. Requirements analysis involves all the tasks that are conducted to identify the needs of different stakeholders. Therefore requirements analysis means to analyze, document, validate and manage software or system requirements[9]. High quality requirements are documented, actionable, measurable, testable, traceable, helps to identify business opportunities, and are defined to a facilitate system design.

2.1 System Study

System analysis is a logical process; the objective of this phase is not actually to solve the problem but to determine what must be done to solve the problem. So in this phase I gathered and interpreting facts about the current system was done by having frequent meetings with my clients and thereby acquiring a detailed specification

I had several meetings under Mr.Abhijith T J, (CEO , STROKX Technologies), designated as the head of the project. He is the only person who have a direct communication with our client. So requirement for the product are collected by the CEO itself and are shared with us.I prepared some questionnaires regarding my doubts and cleared it with him.The main requirement put forward by our client is that the system should analyse the capability of its every user so that appropriate tasks can be assigned to them.

.He also pointed that the design should be an attractive study environment to cover all the sections.

2.1.1 Existing System

The existing system consist of manual process that is A medical transcriptionist is the person who responsible for listening to voice recording that physician and other healthcare professionals make and convert them into written reports.so the accuracy of such evaluation depends on the knowledge of the medical transcriptionist.and also the person must be a hard worker in that field,it is a time consuming process also in the existing system there is a chance of error or losing of data and it is less user friendly.

2.1.2 Proposed System

In the proposed system,it use a automatic speech recognition service which recognizes the uploaded or recorded audio and it automatically transmitted it in to text without any human help,that means ,In the proposed system it reduce the manual work.It also provide good graphical user interface so that it provide a user friendly atmosphere.Also,retrieving and managing of data can be easily done.

2.2 System Specification

The system specification is the work product produced by the system and requirements engineer. It describes the functions and performance of a computer based system and constraints that will govern its development. In requirements specifications, a detailed and precise description of a system is set out to act as a basis for a contract and software developer, so the user requirements are properly organize and documented in the software requirement specification. The system specification for Development and Implementation are included here.

2.2.1 System Specification for Development

The system specifications for development is the hardware and software that is used to build this system conveniently. So the specified tools are required in the development stage.

2.2.1.1 Hardware Specifications

- Processor : Intel Core i3.
- RAM : 4GB and Above.
- Hard disk : 40GB.
- Ordinary mouse and Multimedia Keyboard and Microphone.

2.2.1.2 Software Specifications

- Operating System : Windows7 and above or Linux versions and Android device.
- Environment : Atom or Sublime Text Editor
- Language : Python
- Framework : Django
- Back End : MySql

2.2.2 System Specification for Implementation

The system specifications for implementation is the hardware and software that is used to build this system conveniently. So the specified tools are required in the implementation stage.

2.2.2.1 Hardware Specifications

- Processor : Intel Core i3.
- RAM : 512MB and Above.
- Hard disk : 40GB.
- Ordinary mouse and Multimedia Keyboard and Microphone.

2.2.2.2 Software Specifications

- Operating System : Windows7 and above or Linux versions and Android device.
- Framework : Django
- Back End :MySQL

2.3 Software Tools

Software is always a part of the system; works begins by establishing requirements for all the system elements. This system view is essential when software must interface with other elements such as hardware, people, database, system engineering and analysis encompasses requirement gathering system level with small amount of top-level design and analysis. The requirement gathering process is intensified and focuses specifically on software[9]. To understand the nature of the program to be built, software must understand the information domain for the software, as well as required function, performance and interfacing. Requirement for both the system and software are reviewed with customer.

2.3.1 Python

Python is an interpreted, high-level, general-purpose programming language. Created by Guido van Rossum and first released in 1991, Python's design philosophy emphasizes code readability with its notable use of significant whites pace. Its language constructs and object-oriented approach aim to help programmers write clear, logical code for small and large-scale projects [8][2]. Python is dynamically typed and garbage-collected. It supports multiple programming paradigms, including structured (particularly, procedural), object-oriented, and functional programming. Python is often described as a "batteries included" language due to its comprehensive standard library[3][7].

2.3.2 MySQL

MySQL[8] is a widely used open source Relational Database Management System (RDBMS)[5] . The MySQL development project has made its source code available under the terms of the GLU General Public License, as well as under a variety of proprietary agreements[1]. MySQL was owned and sponsored by a single for-profit firm, the Swedish company MySQL AB, now owned by Oracle Corporation. MySQL is a popular choice of database for use in web applications, and is a central component of the widely used LAMP open source web application software stack (and other AMP stacks). LAMP is an acronym for Linux, Apache[3], and MySQL, pearl/PHP /Python. Free-software open source project that require a full-featured database management system. MySQL is also used in many high-profile, large scale websites including Wikipedia, Google(through not for searches), Face book Twitter, Flickr and YouTube.

2.3.3 Django

Django is an advanced Web framework written in Python that makes use of the model view controller (MVC) architectural pattern. Django was created in a fast-moving newsroom environment, and its key objective is to ease the development of complicated, database-driven websites. This Web framework was initially developed for The World Company for managing some of their news-oriented sites. In July 2005, it was publicly released under a BSD license.

Django's primary goal is to ease the creation of complex, database-driven websites. The framework emphasizes re usability and "plugg ability" of components, less code, low coupling, rapid development, and the principle of don't repeat yourself. Python is used throughout, even for settings files and data models[6]. Django also provides an optional administrative create, read, update and delete interface that is generated dynamically through introspection and configured via admin models.

CHAPTER 3

SYSTEM MODELING

3.1 Introduction

System modeling is the process of developing abstract models of a system, with each model presenting a different view or perspective of that system. A common type of systems modeling is function modeling, with specific techniques such as the Data Flow Diagram. These models can be extended using functional decomposition, and can be linked to requirements models for further systems partition.

3.2 Module Description

A module is a software component or part of a program that contains one or more routines. One or more independently developed modules make up a program. An enterprise-level software application may contain several different modules, and each module serves unique and separate business operations. The modules of the project that I am dealing with, MODULES:

- **Audio File Transcribe**

The audio file transcribe module includes the audio file language, speech type, patient or case number, email address.

- **Record Transcribe**

The record transcribe record the voice using start button, audio file

language,speech type, case number,email address.

- Admin panel

The admin panel consist of login and registration of staff,doctor,patient,create and edit patient case number,audio file upload,successful results,daily transcribe tasks,case name with audio file name,google analytic,adsense,smtp setting for email services,google settings for google adsense and analytics and profile setting.

3.3 Data Flow Diagram

A data flow diagram is graphical tool used to describe and analyze movement of data through a system[1]. These are the central tool and the basis from which the other components are developed. The transformation of data from input to output, through processed, may be described logically and independently of physical components associated with the system. These are known as the logical data flow diagrams. The physical data flow diagrams show the actual implements and movement of data between people, departments and workstations[1].

A full description of a system actually consists of a set of data flow diagrams. Using two familiar notations Yourdon, Gane and Sarson notation develops the data flow diagrams. Each component in a DFD is labeled with a descriptive name. Process is further identified with a number that will be used for identification purpose[1]. The development of DFD'S are done in several levels. Each process in lower level diagrams can be broken down into a more detailed DFD in the next level.

The lop-level diagram is often called context diagram. It consists a single process bit, which plays vital role in studying the current system. The process in the

context level diagram is exploded into other process at the first level DFD. The idea behind the explosion of a process into more process is that understanding at one level of detail is exploded into greater detail at the next level. This is done until further explosion is necessary and an adequate amount of detail is described for analyst to understand the process[1]. Larry Constantine first developed the DFD as a way of expressing system requirements in a graphical form, this lead to the modular design.

3.3.1 DFD Symbols

In DFD, there are four symbols:

1. A square defines a source (originator) or destination of system data.
2. An arrow identifies data flow. It is the pipeline through which the information flows.
3. A circle or a bubble represents a process that transforms incoming data flow into outgoing data flows.
4. An open rectangle is a data store, data at rest or a temporary repository of data[1].

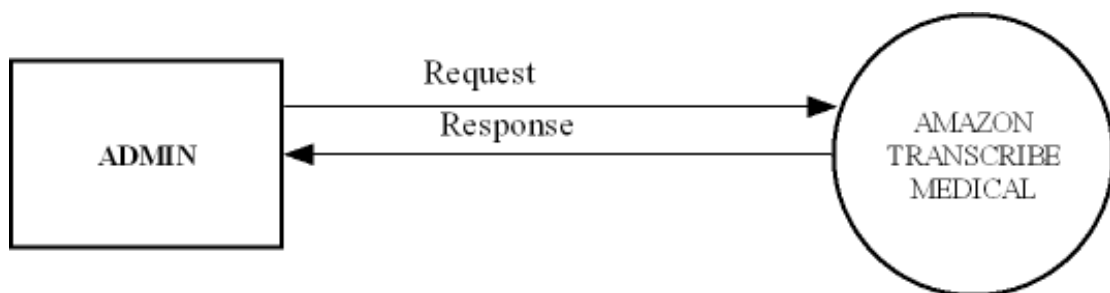


Fig. 3.1. level 0

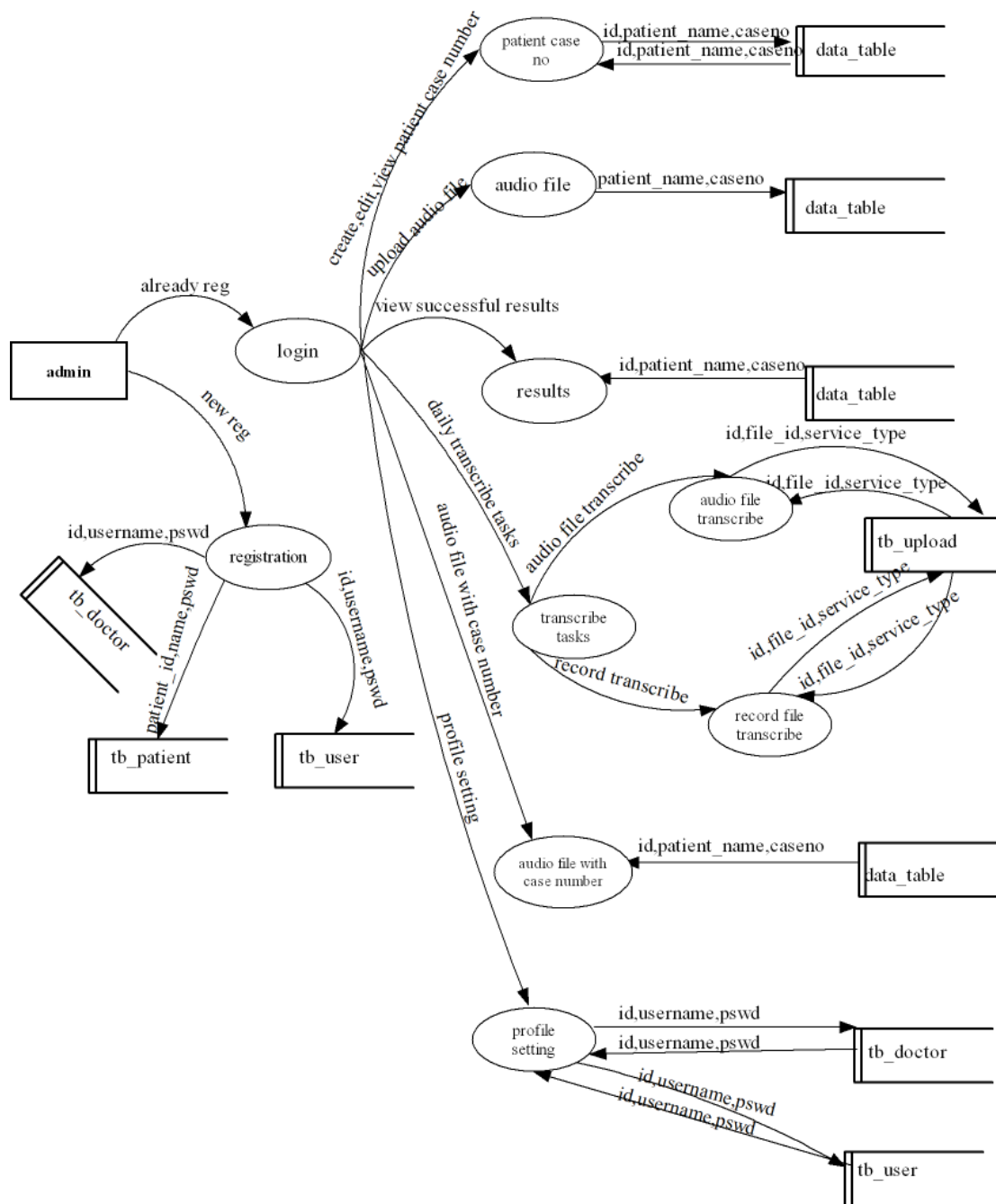


Fig. 3.2. level 1.Admin

3.4 UML Diagrams

A UML diagram is a diagram based on the UML (Unified Modeling Language) with the purpose of visually representing a system along with its main actors, roles,

actions, artifacts or classes, in order to better understand, alter, maintain, or document information about the system[1]. UML is an acronym that stands for Unified Modeling Language[1]. Simply put, UML is a modern approach to modeling and documenting software. In fact, it's one of the most popular business process modeling techniques. It is based on diagrammatic representations of software components. There are several types of UML diagrams and each one of them serves a different purpose regardless of whether it is being designed before the implementation or after (as part of documentation)[1].

A Use Case diagram illustrates a set of use cases for a system, i.e. the actors and the relationships between the actors and use cases. A use case diagram at its simplest is a representation of a user's interaction with the system that shows the relationship between the user and the different use cases in which the user is involved. A use case diagram can identify the different types of users of a system and the different use cases and will often be accompanied by other types of diagrams as well. The use cases are represented by either circles or ellipses.

3.4.1 Use Case Diagrams

Use Case diagrams are used to analyze the system's high-level requirements[1]. The three main components of this UML diagram are:

Functional requirements: Represented as use cases; a verb describing an action.

Actors: They interact with the system; an actor can be a human being, an organization or an internal or external application.

Relationships between actors and use cases: Represented using straight arrows

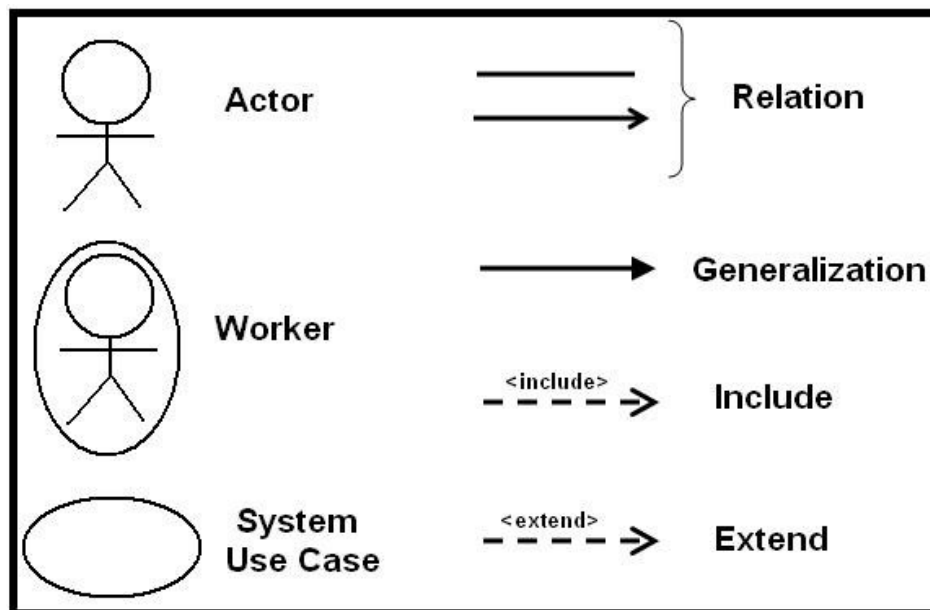


Fig. 3.3. use case diagram symbols

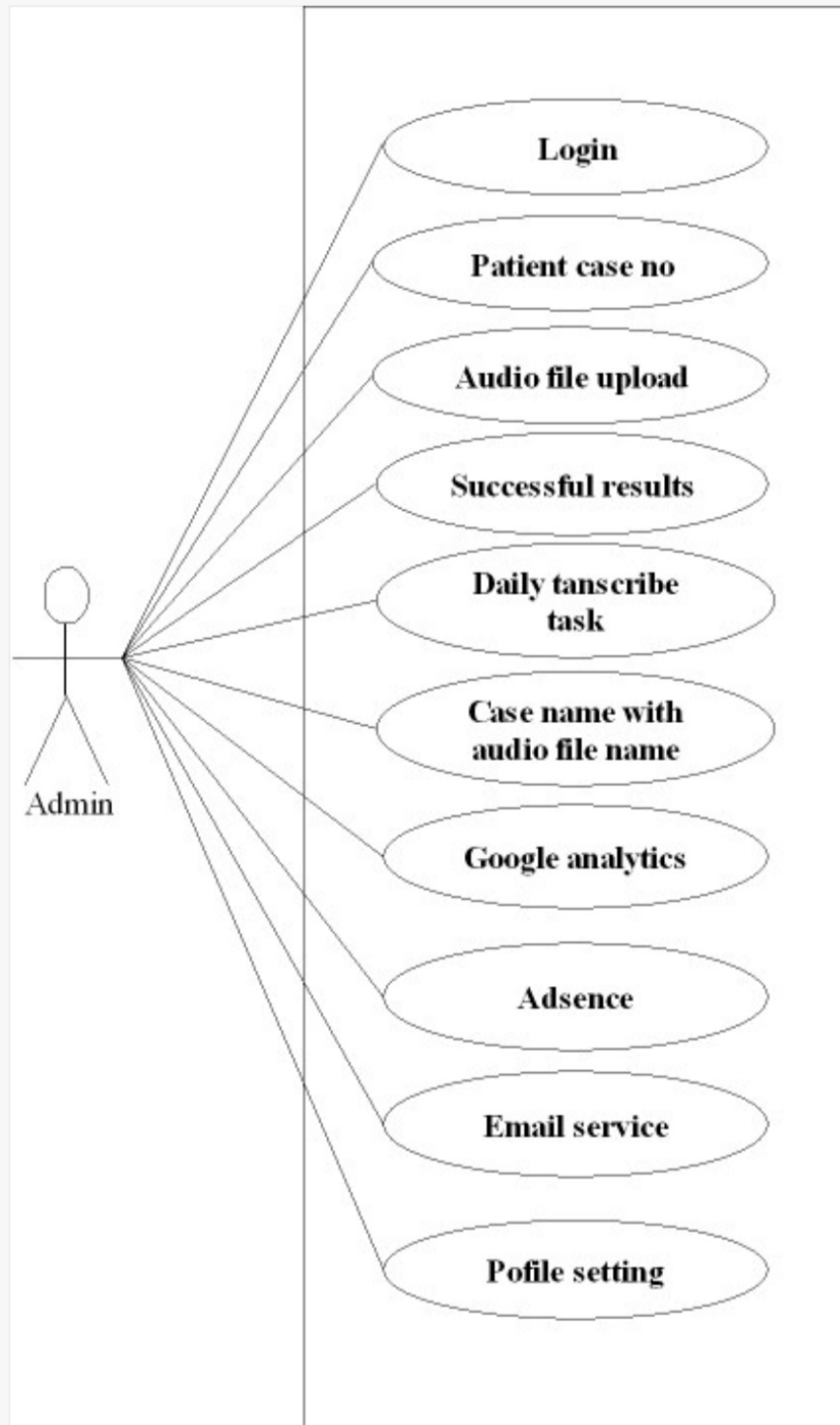


Fig. 3.4. use case diagram

CHAPTER 4

SYSTEM DESIGN

4.1 Introduction

The most creative and challenging face of the system development is System Design. It provides the understanding and procedural details necessary for the logical and physical stages of development. In designing a new system, the system analyst must have a clear understanding of the objectives, which the design is aiming to fulfill. The first step is to determine how the output is to be produced and in what format. Second, input data and master files have to be designed to meet the requirements[6].

4.2 Database Design

A properly designed database provides you with access to up-to-date, accurate information. Because a correct design is essential to achieving your goals in working with a database, investing the time required to learn the principles of good design makes sense. In the end, you are much more likely to end up with a database that meets your needs and can easily accommodate change.

4.2.1 Tables

Table 4.1. Doctor Table

FIELD NAME	DATA TYPE	CONSTRAINTS	DESCRIPTION
id	Integer	Primary Key	Id of doctor
username	Varchar	Not Null	Name of doctor
password	Varchar	Not Null	Password of doctor
email	Varchar	Not Null	Email of the doctor
join_date	Timestamp	Not Null	Join date of doctor
address	Varchar	Not Null	Address of the doctor
hospital/management name	Varchar	Not Null	Name of the hospital
doctor verfid	Varchar	Not Null	Doctor verification id

Table 4.2. Medtrans Table

FIELD NAME	DATA TYPE	CONSTRAINTS	DESCRIPTION
medtrans_id	Integer	Primary Key	Id of medical transcriptionist
org_name	Varchar	Not Null	Name of organization
created_by	Tinyint	Not Null	Person who created
updated_by	Tinyint	Not Null	person who updated
created_at	Timestamp	Not Null	Created time
updated_at	Timestamp	Not Null	Updated time

Table 4.3. Login Table

FIELD NAME	DATA TYPE	CONSTRAINTS	DESCRIPTION
id	Integer	Primary Key	Login Id
username	Varchar	Not Null	Username
password	Varchar	Not Null	password
type	Varchar	Not Null	Type of user

Table 4.4. Data Table

FIELD NAME	DATA TYPE	CONSTRAINTS	DESCRIPTION
id	Integer	Primary Key	Id of data
patient_name	Varchar	Not Null	Name of the patient
case_number	Varchar	Not Null	Case number of patient
date	Date	Not Null	Date
Doctor_name	Varchar	Not Null	Name of doctor
audio_file_language	Text	Not Null	Language of audio file
rec_duration	Varchar	Not Null	Record duration
speech_type	Varchar	Not Null	Type of speech
active_status	Tinyint	Not Null	Active time
created_at	Timestamp	Not Null	Created time
updated_at	Timestamp	Not Null	Updated time
Created_by	Integer	Not Null	Created person
Updated by	Integer	Not Null	Updated person
medtrans_id	Integer	Foreign Key	Id of medical transcrip- tionist

Table 4.5. Role Table

FIELD NAME	DATA TYPE	CONSTRAINTS	DESCRIPTION
id	Integer	Primary Key	Id of role
name	Varchar	Not Null	Name of the staff/doctor
type	Varchar	Not Null	Type of user
active_status	Tinyint	Not Null	Active time
created_by	Varchar	Not Null	Created person
updated_by	Varchar	Not Null	Updated person
created_at	Timestamp	Not Null	Created time
updated_at	Timestamp	Not Null	Updated time
medtrans_id	Integer	Foreign Key	id of medical transcriptionist

Table 4.6. upload Table

FIELD NAME	DATA TYPE	CONSTRAINTS	DESCRIPTION
id	Integer	Primary Key	Id of upload table
file name	Text	Not Null	Name of file
file_id	Text	Not Null	id of file
service_type	Varchar	Not Null	Type of service
description	Medium Text	Not Null	Description of fle
file size	Double	Not Null	Size of file
client_id	Integer	Not Null	Id of client
user_id	Integer	Not Null	Id of user
updated_by	Tinyint	Not Null	person who updated
created_at	Timestamp	Not Null	Created time
deleted	Tinyint	Not Null	Deleted file

Table 4.7. user Table

FIELD NAME	DATA TYPE	CONSTRAINTS	DESCRIPTION
id	Integer	Primary Key	Id of user
full_name	Varchar	Not NULL	Full name of user
username	Varchar	Not Null	Username of user
email	Varchar	Not Null	Email of user
password	Varchar	Not Null	Password of user
usertype	Varchar	Not Null	Type of user
access_status	Tinyint	Not Null	Access status
active_status	Tinyint	Not Null	Active Time
random_code	Text	Not Null	Code
notification_token	Text	Not Null	Token of notification
remember_token	Text	Not Null	Token of remember
creanttd _{by}	TTinylinyint	Not Null	Person who created
updated_by	Tinyint	Not Null	person who updated
created_at	Timestamp	Not Null	Created time
updated_at	Timestamp	Not Null	Updated time
medtrans_id	Integer	Foreign key	Id of medical transcrip- tionist
role_id	Integer	Foreign Key	Id of role

Table 4.8. Patient Table

FIELD NAME	DATA TYPE	CONSTRAINTS	DESCRIPTION
patient_id	Integer	Primary Key	Id of patient
patient_name	Varchar	Not Null	Name of patient
password	Varchar	Not Null	Password of patient
gender	Varchar	Not Null	Gender of the patient
mobile_number	Varchar	Not Null	Mobile number of patient
day	Integer	Not Null	Day of admission
month	Integer	Not Null	Month of admission
year	Integer	Not Null	Year of admission
street_address	Varchar	Not Null	Street address of patient
city	Varchar	Not Null	City Name
zipcode	Integer	Not Null	Zipcode of the street
country	Varchar	Not Null	Country name of patient
email	Varchar	Not Null	Email of the patient
test1	Varchar	Not Null	test1 details of patient
test2	Varchar	Not Null	test2 details of patient

4.3 User-Interface Design

4.3.1 Screenshots

DOCTOR REGISTRATION

HOW IT WORKS:

- With Amazon Transcribe Medical, you can quickly and accurately transcribe medical dictation and conversational speech into text for a variety of purposes, such as recording physician notes.
- Amazon Transcribe Medical currently supports medical transcription in US English language only.
- It supports transcription for *primary care*, covering specialties such as family medicine, internal medicine, pediatrics, and OB-GYN.
- Supported audio encoding formats are mp3 | mp4 | wav | flac | ogg | amr | webm.
- Maximum supported audio file size is up to 2GB.
- Maximum supported audio file length is up to 4 hours.
- Speaker identification feature can identify up to 10 speakers.
- For best results use: *FLAC* or *WAV* formats, with *PCM 16-bit* encoding.
- Amazon Transcribe Medical is *HIPAA* compliant.

RESULTS:

▶ 00:00 03:43 🔊 📄

TRANSCRIBE MEDICAL RESPONSE:

RAW TEXT (UNEDITED)

SPEAKER IDENTIFICATION

DOCTOR NAME^(REQUIRED)

Enter Doctor's Full Name

EMAIL ADDRESS^(REQUIRED)

Your Email Address

DOCTOR VERIFICATION ID^(REQUIRED)

ver id

ADDRESS^(REQUIRED)

full address

HOSPITAL NAME^(REQUIRED)

hospital/Management name

PASSWORD^(REQUIRED)

password


JOIN DATE^(REQUIRED)

dd-mm-yyyy

REGISTER NOW

Fig. 4.1. Doctor Registration page

USER REGISTRATION




HOW IT WORKS:

- With Amazon Transcribe Medical, you can quickly and accurately transcribe medical dictation and conversational speech into text for a variety of purposes, such as recording physician notes.
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- Speaker identification feature can identify up to 10 speakers.
- For best results use: *FLAC* or *WAV* formats, with PCM 16-bit encoding.
- Amazon Transcribe Medical is HIPAA compliant.

RESULTS:

▶ 00:00

02:43

TRANSCRIBE MEDICAL RESPONSE:

RAW TEXT (UNEDITED)

SPEAKER IDENTIFICATION

NAME (REQUIRED)

Enter Full Name

EMAIL ADDRESS (REQUIRED)

Your Email Address

MEDICAL TRANSCRIBE MANAGEMENT ID (REQUIRED)

enter your unique id

USER TYPE (REQUIRED)

Staff

PASSWORD (REQUIRED)

password

ADMIN PASSWORD (REQUIRED)


admin/staff password for authentication

REGISTER NOW

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Fig. 4.2. User Registration page

PATIENT REGISTRATION


HOW IT WORKS:

- With Amazon Transcribe Medical, you can quickly and accurately transcribe medical dictation and conversational speech into text for a variety of purposes, such as recording physician notes.
- Amazon Transcribe Medical currently supports medical transcription in [US English](#) language only.
- It supports transcription for primary care, covering specialties such as family medicine, internal medicine, pediatrics, and OB-GYN.
- Supported audio encoding formats are mp3 | mp4 | wav | flac | ogg | amr | webm.
- Maximum supported audio file size is up to 2GB.
- Maximum supported audio file length is up to 4 hours.
- Speaker identification feature can identify up to 10 speakers.
- For best results use: [FLAC](#) or [WAV](#) formats, with [PCM 16-bit](#) encoding.
- Amazon Transcribe Medical is [HIPAA](#) compliant.

RESULTS:

▶ 00:00

03:43

🔊

📄

TRANSCRIBE MEDICAL RESPONSE:

RAW TEXT (UNEDITED)

SPEAKER IDENTIFICATION

NAME^(REQUIRED)

Enter Full Name

GENDER^(REQUIRED)

Male/Female

MOBILE NUMBER^(REQUIRED)

enter correct mobile number(updates are informed through

DATE OF ADMISSION^(REQUIRED)

dd-mm-yyyy

ADDRESS^(REQUIRED)

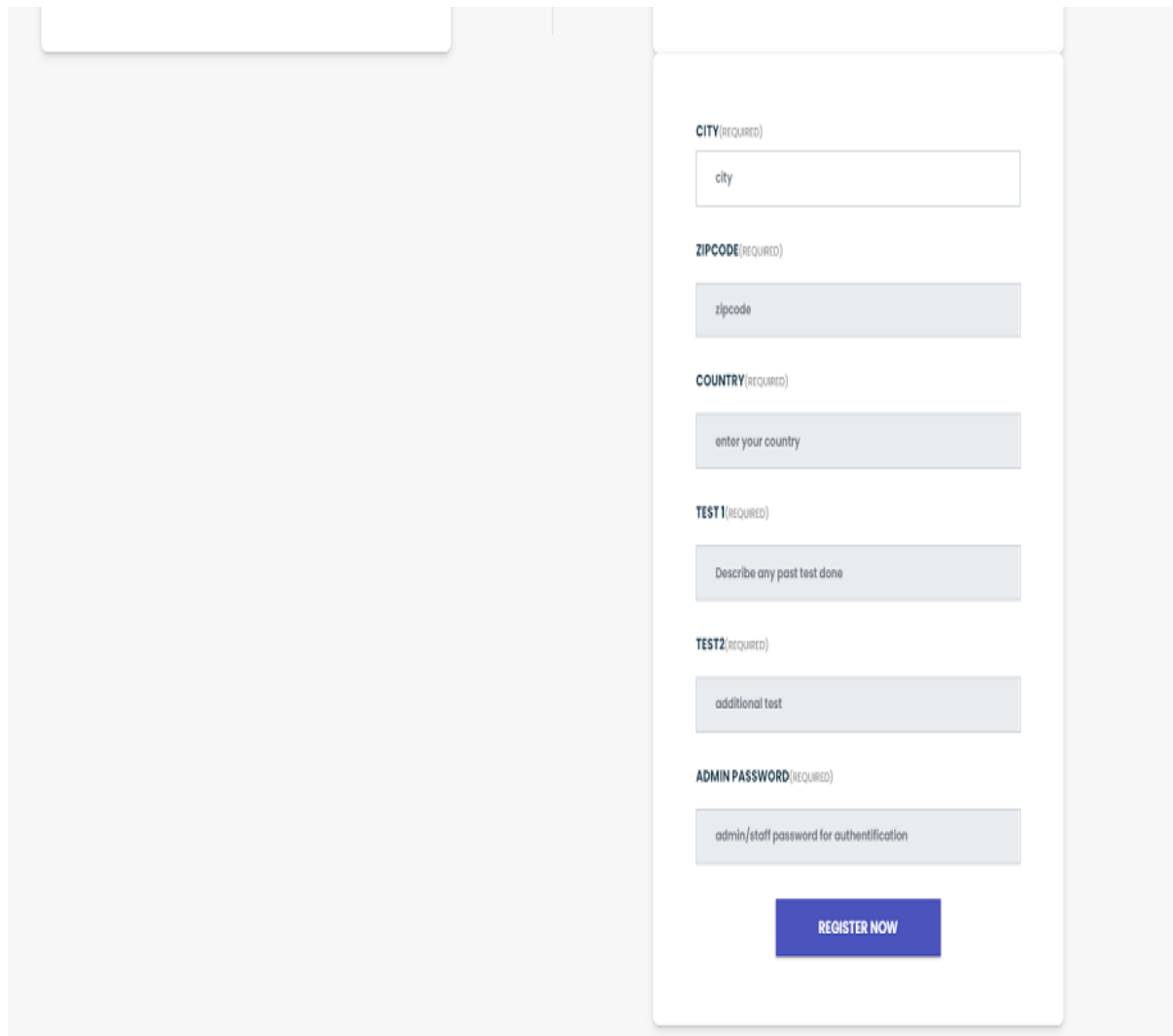
Address

EMAIL^(REQUIRED)

email

SAVE AND CONTINUE

Fig. 4.3. Patient Registration page



The image shows a patient registration form with several input fields and a submit button. The fields are arranged vertically on a white background with a light gray border. Each field is preceded by a label in bold uppercase letters, followed by '(REQUIRED)' in smaller uppercase letters. The input fields are light gray with rounded corners. The first field contains the text 'city'. The second field contains 'zipcode'. The third field contains 'enter your country'. The fourth field contains 'Describe any past test done'. The fifth field contains 'additional test'. The sixth field contains 'admin/staff password for authentication'. At the bottom of the form is a blue button with the text 'REGISTER NOW' in white uppercase letters.

CITY(REQUIRED)

city

ZIPCODE(REQUIRED)

zipcode

COUNTRY(REQUIRED)

enter your country

TEST1(REQUIRED)

Describe any past test done

TEST2(REQUIRED)

additional test

ADMIN PASSWORD(REQUIRED)

admin/staff password for authentication

REGISTER NOW

Fig. 4.4. Patient Registration page cont..

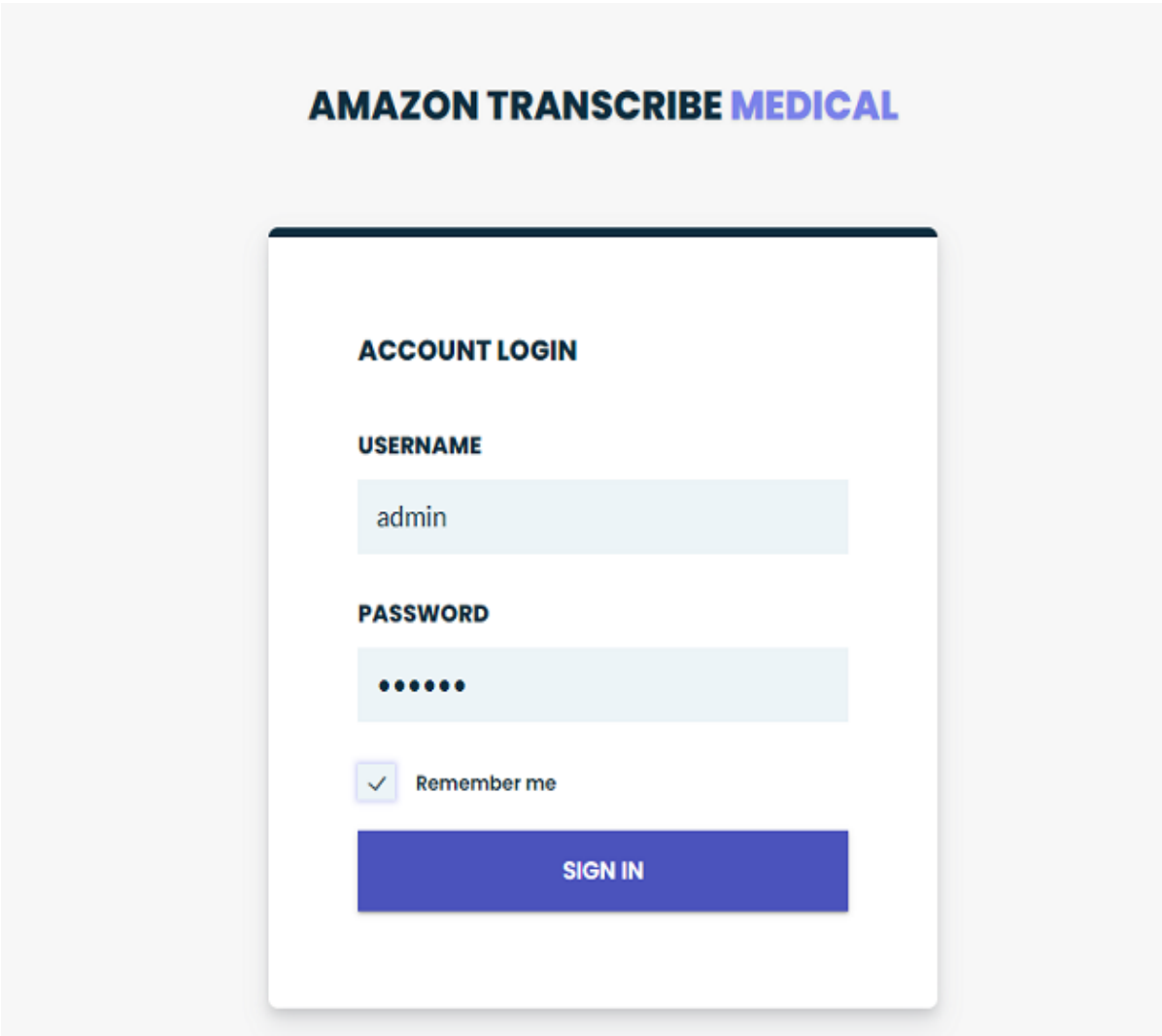


Fig. 4.5. Login page

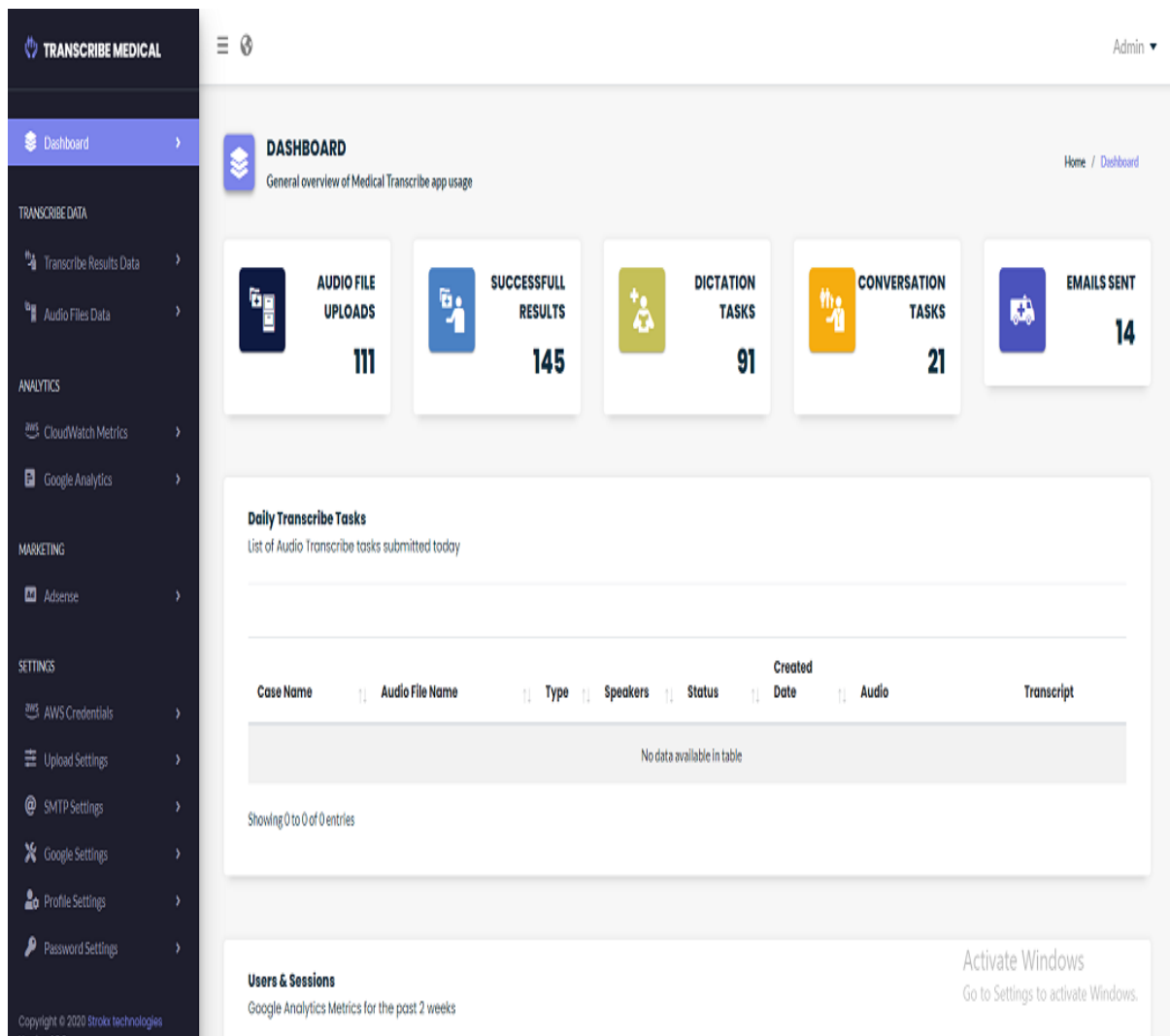


Fig. 4.6. Dashboard

LAUNCH TRANSCRIBE

AUDIO FILE TRANSCRIBE



*UP TO 2GB OF AUDIO FILES

RECORD TRANSCRIBE



*UP TO 4 HOURS OF AUDIO FILE LENGTH

Fig. 4.7. Audio file home page

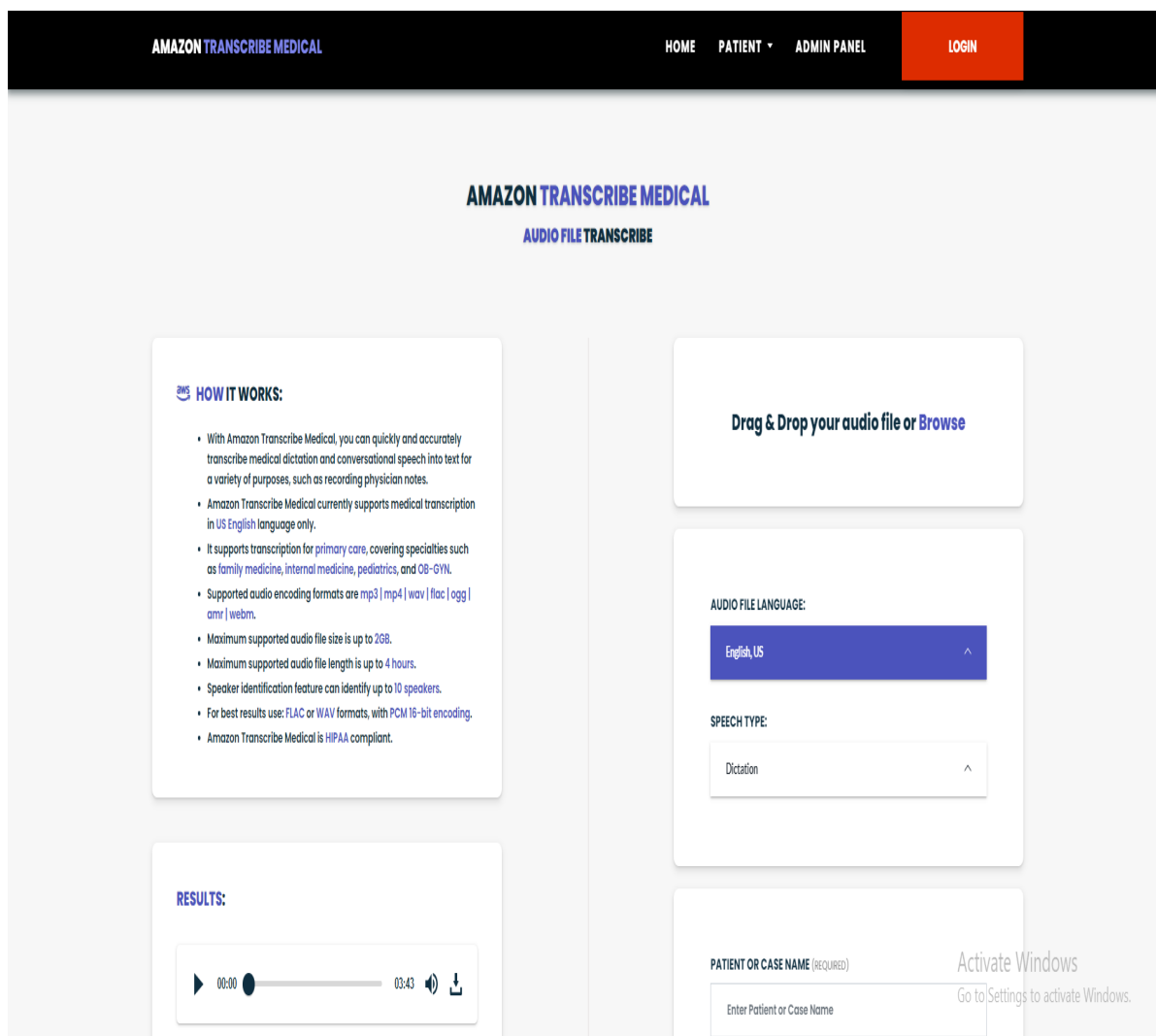


Fig. 4.8. Audio file transcribe page

RESULTS:

▶ 00:00 03:43 🔊 📄

TRANSCRIBE MEDICAL RESPONSE:

RAW TEXT (UNEDITED)

SPEAKER IDENTIFICATION

Dictation

PATIENT OR CASE NAME (REQUIRED)

Enter Patient or Case Name

*for properly tracking audio transcript results in admin panel

EMAIL ADDRESS (OPTIONAL)

☒ No need for notifications via email, will check in admin panel


Your Email Address

*Email addresses are used for notifications only

TRANSCRIBE NOW

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Fig. 4.9. Audio file transcribe page cont..


HOW IT WORKS:

- With Amazon Transcribe Medical, you can quickly and accurately transcribe medical dictation and conversational speech into text for a variety of purposes, such as recording physician notes.
- Amazon Transcribe Medical currently supports medical transcription in [US English](#) language only.
- It supports transcription for [primary care](#), covering specialties such as [family medicine](#), [internal medicine](#), [pediatrics](#), and [OB-GYN](#).
- Supported audio encoding formats are [mp3](#) | [mp4](#) | [wav](#) | [flac](#) | [ogg](#) | [amr](#) | [webm](#).
- Maximum supported audio file size is up to 2GB.
- Maximum supported audio file length is up to 4 hours.
- Speaker identification feature can identify up to 10 speakers.
- For best results use: [FLAC](#) or [WAV](#) formats, with [PCM 16-bit encoding](#).
- Amazon Transcribe Medical is [HIPAA](#) compliant.

RESULTS:

▶

00:00

◉

03:43

🔊

⬇️

TRANSCRIBE MEDICAL RESPONSE:

RAW TEXT (UNEDITED)

SPEAKER IDENTIFICATION

Hours

00

Minutes

00

Seconds

24

RECORD

STOP

*Remove iframe if connected from Envato

AUDIO FILE LANGUAGE:

English, US

⬆️

SPEECH TYPE:

Dictation

⬆️

PATIENT OR CASE NAME (REQUIRED)

Enter Patient or Case Name

*For properly tracking audio transcript results in admin panel

EMAIL ADDRESS (OPTIONAL)

Fig. 4.10. Record file transcribe page

RESULTS:

▶ 00:00

01:43

🔊

📄

TRANSCRIBE MEDICAL RESPONSE:

RAW TEXT (UNEDITED)

SPEAKER IDENTIFICATION

Dictation

PATIENT OR CASE NAME (REQUIRED)

Enter Patient or Case Name

*for properly tracking audio transcript results in admin panel

EMAIL ADDRESS (OPTIONAL)

☒ No need for notifications via email, will check in admin panel

Your Email Address

*Email addresses are used for notifications only

TRANSCRIBE NOW

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Fig. 4.11. Record file transcribe page cont..

TRANSCRIBE MEDICAL

Dashboard

TRANSCRIBE DATA

Transcribe Results Data

Audio Files Data

ANALYTICS

CloudWatch Metrics

Google Analytics

MARKETING

AdSense

SETTINGS

AWS Credentials

Upload Settings

SMTP Settings

Google Settings

Profile Settings

Password Settings

Admin

TRANSCRIBE RESULTS

All audio transcribe results

Home / Transcribe Results

Transcribe Results Table

View result details

Show

25

entries

Search:

Case Name	Audio File Name	Type	Speakers	Status	Created Date	Audio	Transcript
pappin	1621338013-pappin.wav	CONVERSATION	2	PROCESSING	2021-05-18 11:40:13	<div>0:00 / 0:00</div> <div></div> <div></div>	<div></div> <div></div> <div></div>
arof1	1620664801-Aroof1.wav	DICTATION	1	PROCESSING	2021-05-10 04:40:01	<div>0:00 / 0:00</div> <div></div> <div></div>	<div></div> <div></div> <div></div>
arof	VOXTAB-Medical-audio.mp3	DICTATION	1	PROCESSING	2021-05-10 04:37:52	<div>0:00 / 0:00</div> <div></div> <div></div>	<div></div> <div></div> <div></div>
testing	AudioSegment.mp3	DICTATION	1	PROCESSING	2021-05-05 07:18:11	<div>0:00 / 0:00</div> <div></div> <div></div>	<div></div> <div></div> <div></div>
a	1620126173-a.wav	DICTATION	1	PROCESSING	2021-05-04 11:02:33	<div>0:00 / 0:00</div> <div></div> <div></div>	<div></div> <div></div> <div></div>
test1	EN24.mp3	DICTATION	1	PROCESSING	2021-04-25 08:05:05	<div>0:00 / 0:00</div> <div></div> <div></div>	<div></div> <div></div> <div></div>
bobby-jones	1618496063-Bobby Jones.wav	DICTATION	1	PROCESSING	2021-04-15 02:14:23	<div>0:00 / 0:00</div> <div></div> <div></div>	<div></div> <div></div> <div></div>

Fig. 4.13. Transcribe Result page

TRANSCRIBE MEDICAL

Dashboard

TRANSCRIBE DATA

Transcribe Results Data

Audio Files Data

ANALYTICS

CloudWatch Metrics

Google Analytics

MARKETING

AdSense

SETTINGS

AWS Credentials

Upload Settings

SMTP Settings

Google Settings

Profile Settings

Password Settings

Admin

arof1	1620664801-Arofl.wav	DICTATION	1	PROCESSING	2021-05-10 04:40:01	0:00 / 0:00	
arof	VOXTAB-Medical-audio.mp3	DICTATION	1	PROCESSING	2021-05-10 04:37:52	0:00 / 0:00	
testing	AudioSegment.mp3	DICTATION	1	PROCESSING	2021-05-09 07:18:11	0:00 / 0:00	
a	16201261					0:00 / 0:00	
test1	EN24.mp3					0:00 / 0:00	
bobby-jones	16184960					0:00 / 0:00	
azay	16180237					0:19 / 0:19	
john	16179236					0:00 / 0:00	
asaaaa	cocuklar-duymasin-delikanli-adam-instagram-kisa-durum-sarkilari-yeni-sayfamiza-abone-olalim-yorumda-mp3-indir-FewW6bzQWw.mp3	DICTATION	1	COMPLETED	2021-04-03 04:46:38	0:00 / 0:00	
asaaaa	cocuklar-duymasin-delikanli-adam-instagram-kisa-durum-sarkilari-yeni-sayfamiza-abone-olalim-yorumda-mp3-indir-FewW6bzQWw.mp3	DICTATION	1	COMPLETED	2021-04-03 04:46:14	0:00 / 0:00	
ak	y2mate-com-Bestshortmotivationalspeech/videoDoubtsandhowtodealwiththem.mp3	DICTATION	1	COMPLETED	2021-04-03 04:15:36	0:00 / 0:00	

RAW TEXT RESULTS

Good morning doctor um my name is a serum yellow and I have been sick have been having headache for the last versed five weeks with a please help with dr, please and now into the clinic many times didn't get.

Fig. 4.14. Raw Text Result page

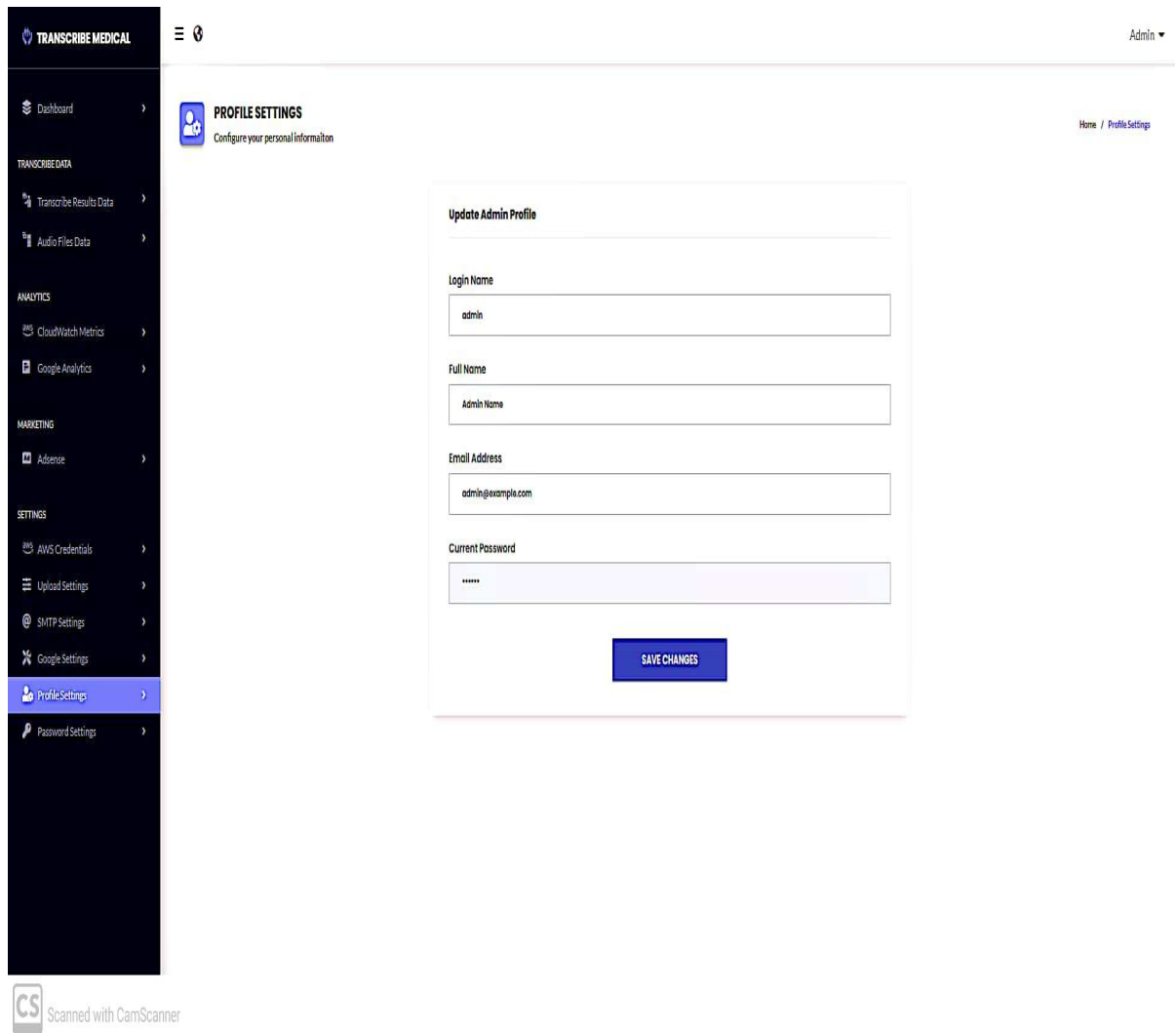


Fig. 4.15. Profile setting page

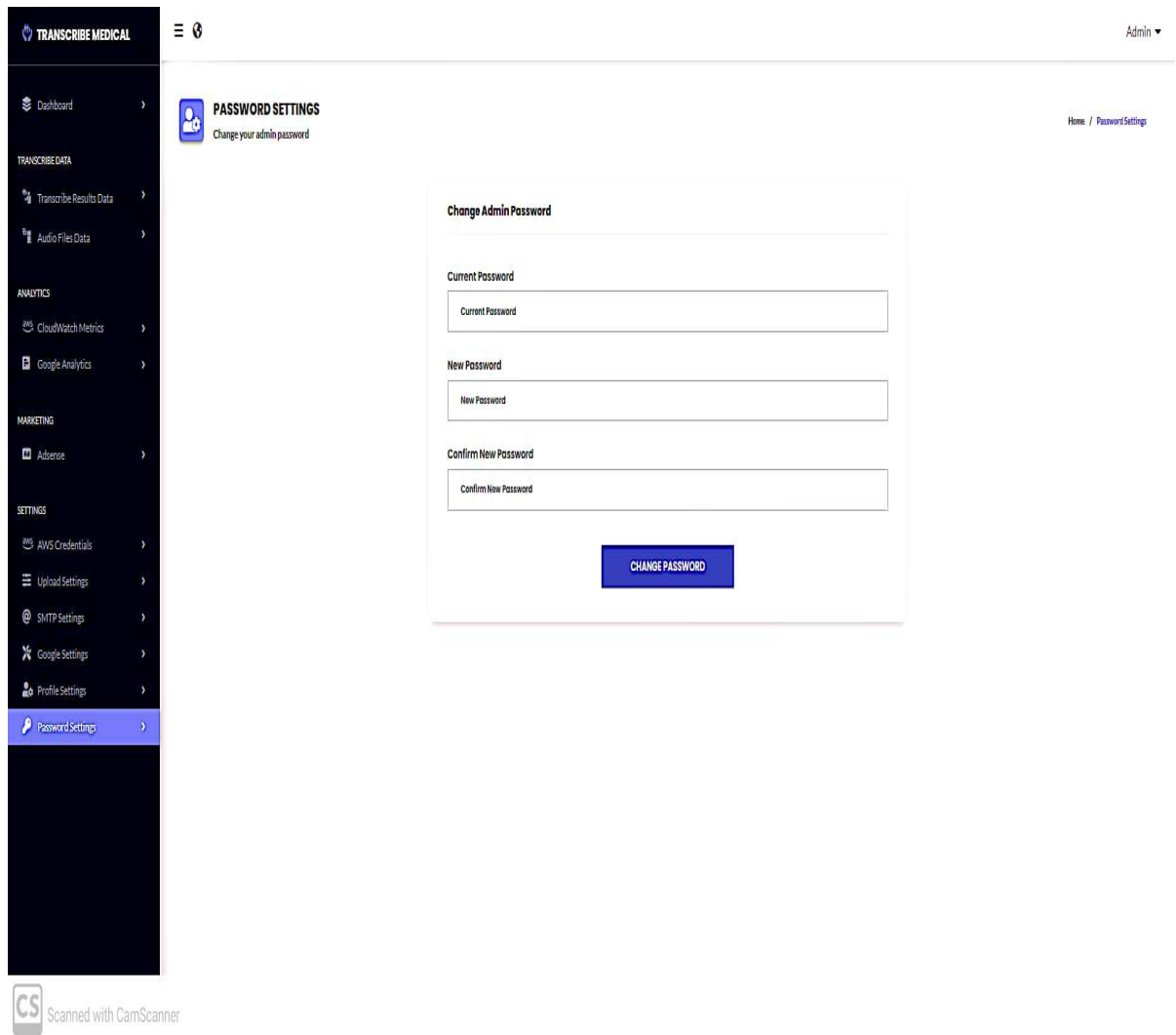


Fig. 4.16. Password change page

CHAPTER 5

SYSTEM TESTING

5.1 Introduction

Testing is the process of examining the software to compare the actual behavior with that of the expected behavior. The major goal of software testing is to demonstrate that faults are not present. In order to achieve this goal the tester executes the program with the intent of finding errors. Though testing cannot show absence of errors but by not showing their presence it is considered that these are not present[6]. System testing is the first Stage of implementation, which is aimed at ensuring that the system works accurately and efficiently before live operations commences . Testing is vital to the success of the system. System testing makes a logical assumption that if all the parts of the system are correct and the goal will be successfully achieved. A series of testing are performed for the proposed system before the proposed system is ready for user acceptance testing.

5.1.1 Unit testing

In this each module is tested individually before integrating it to the final system . Unit test focuses verification in the smallest unit of software design in each module. This is also known as module testing as here each module is tested to check whether it is producing the desired output and to see if any error occurs[6].

5.1.2 Integration testing

Integration testing is the phase in software testing in which individual software modules are combined and tested as a group. It occurs after unit testing and before validation testing. Integration testing takes as its input modules that have been unit tested, groups them in larger aggregates, applies tests defined in an integration test plan to those aggregates, and delivers as its output the integrated system ready for system testing[6]. The purpose of integration testing is to verify functional, performance, and reliability requirements placed on major design items.

5.1.3 User acceptance testing

No system could be useful if it does not produce the required output in the specific format. Output testing is performed to ensure the correctness of the output and its format[6]. The output generated or displayed by the system is tested asking the users about the format required by them .

5.2 Test Cases

Table 5.1. Test case 1:Login Form

Name of control	Validation	Input	Response	Remark
Text Box(username)	Alphanumeric Characters	b*3cd	Not valid	
		9bcd	Not valid	
		sbcd	Success	
Text Box(password)	More than 8 characters	mkaakm	8-chars minimum	
		abcdef@123	Success	

Table 5.2. Test case 3: Registration Form

Name of control	Validation	Input	Response	Remark
Text Box(Fname)	Letters A-Z , a-z	ABc	success	
		a5f	invalid	
Text Box(Lname)	Letters A-Z , a-z	ABc	success	
		ab5	invalid	
Text Box(Addre)	Letters A-Z , a-z	ABc	success	
		ab5	invalid	
Text Box(Email)	alpha numeric and ' _ ' , ' ' , ' - ' and then followed by some letters or digits	abc.a@	success	
		abc.@	invalid	
	@ character should be included	abc@	Success	
		abc	@ is not included	
	2*alpha numeric and ' _ ' , ' ' are after @	abc@12.com	Success	
		abc@12#.com	In valid	
	top level domain begins with ' ' and followed by 3 or less letter character	.com	success	
		.com.c	invalid	
	no white space is allowed	abc@gmail.com	success	
		abc @gmail.com	invalid	
Text Box (Password)	More than 6 characters allowed	123456	Success	
		1234	Too short	
Text Box (Phone_Number)	Numbers 0-9	1988985	Success	
		sd4566	invalid	
	exactly 10 numbers allowed	1234567890	Success	
		12344	invalid	

CHAPTER 6

SYSTEM IMPLEMENTATION

Implementation is the process that actually yields the lowest-level system elements in the system hierarchy. Production involves the hardware fabrication process of forming, removing, joining, and finishing, the software realization process of coding and testing, or the operational procedures development process for operators roles. The purpose of the implementation process is to design and create a system element conforming to that elements design properties and/or requirements.

The steps undertaken in a normal software implementation process:

- Prepare the infrastructure.
- Perform final verification.
- Implement new process and procedures.
- Monitor the solution.

In this manner the planning of implementation carried out thus it is a great success. Now the system is ready for deployment and supposed to be used in near future. I maintain a clear communication with my technical head throughout the project that brings out the project error free while on the implementation part.

6.1 Implementation Method

Parallel : When the new system is used at the same time as the old system the two systems are said to be running in parallel.

Phased : When small parts of the new system gradually replace small parts of the old system, the implementation method is said to be phased.

Pilot : When a small group of users within an organization uses a new system prior to wider use, the system is said to be piloted.

Direct : When a new system is implemented without any phased or pilot implementation, it is said to be direct. The old system is retired, and the new system goes live.

CHAPTER 7

CONCLUSION AND FUTURE SCOPE

The project named “ AMAZON TRANSCRIBE MEDICAL” is a web application. This project is developed using PYTHON. As it is very flexible with user friendly screens,that is it is a reliable software which accurately transmit the medical terminologies automatically.Any number of users can use this application together. Error correction and enhancement can be made easily.The system is flexible and changes if any can be made without much difficulty. Every step has been taken to make the working of the project comfortable as possible for the users. Proper consideration has been given for enhancements in future throughout the development of the software. But the system can be extended, as the software is constantly evolving and always has scope for future enhancement. The functions have been done carefully and successfully in the software, and if any development is necessary in future. It can be done without affecting the design by adding additional modules to the system.

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