AMAZON TRANSCRIBE MEDICAL

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Overview

INTRODUCTION

- Automatic speech recognition service.
- Transcribes medical terminologies.
- Diverse range of use cases.
- It is HIPAA eligible .
- Data privacy and security.

EXISTING SYSTEM

- It has a medical transcriptionist.
- Responsible for listening to voice record and written reports.
- Very hardworking and time consuming process.
- Chance of losing and errors of data.
- less user friendly.

PROPOSED SYSTEM

- Automatic speech recognition service.
- it automatically transmit audio to text.
- Easy to manage and maintain.
- Reduce the manual work.
- Easy to retrieve the data and user friendly.

MODULE DESCRIPTION

- Audio file transcribe.
- Record transcribe.
- Admin panel.

- Audio file transcribe
  - Audio file language
  - speech type
  - patient or case number
  - email address

- Record transcribe
  - Record the voice using start button.
  - Audio file language
  - speech type
  - patient or case number
  - email address

- Admin panel
  - login and registration.
  - create and edit patient case number.
  - Audio file upload.
  - successful results.
  - daily transcribe tasks.
  - case name with audio file name.
  - google analytics.
  - Adsense.
  - email services.
  - profile setting.

PRODUCT BACKLOG

Sl.No	**Description**	**Priority**
1	Data base creation	1
2	Home page creation	2
3	Registration and Login Page creation	3
4	Creation of audio transcribe	4
5	Creation of record transcribe	5
6	Creation of admin session	6

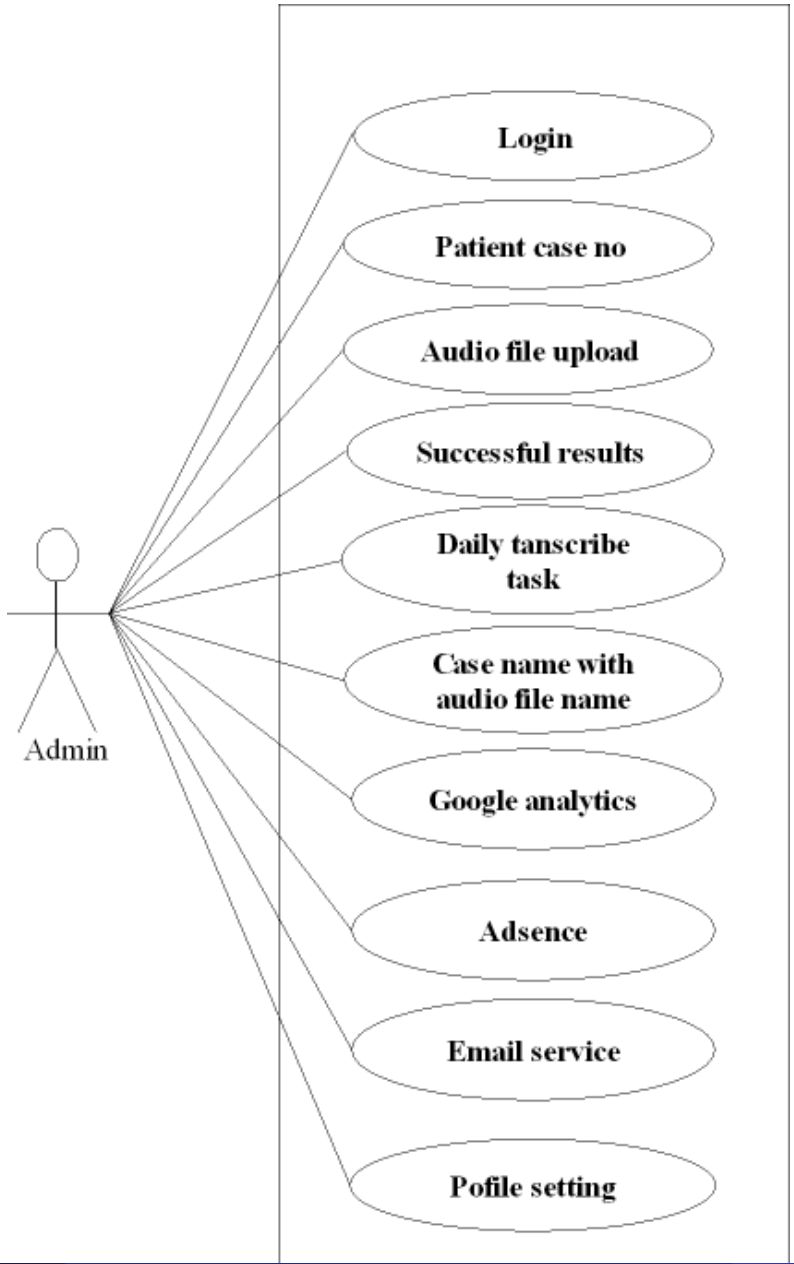
SPRINT BACKLOG

Sl.No	Date	Tasks	Status
1	31/3/21 TO 9-04-21	Discussion of topics and Requirement	Completed
2	10/4/21 To 15/4/21	Table Design	completed
3	19/4/21-30/4/21	DFD,Form Design	completed
4	1/5/21	Coding	In progress

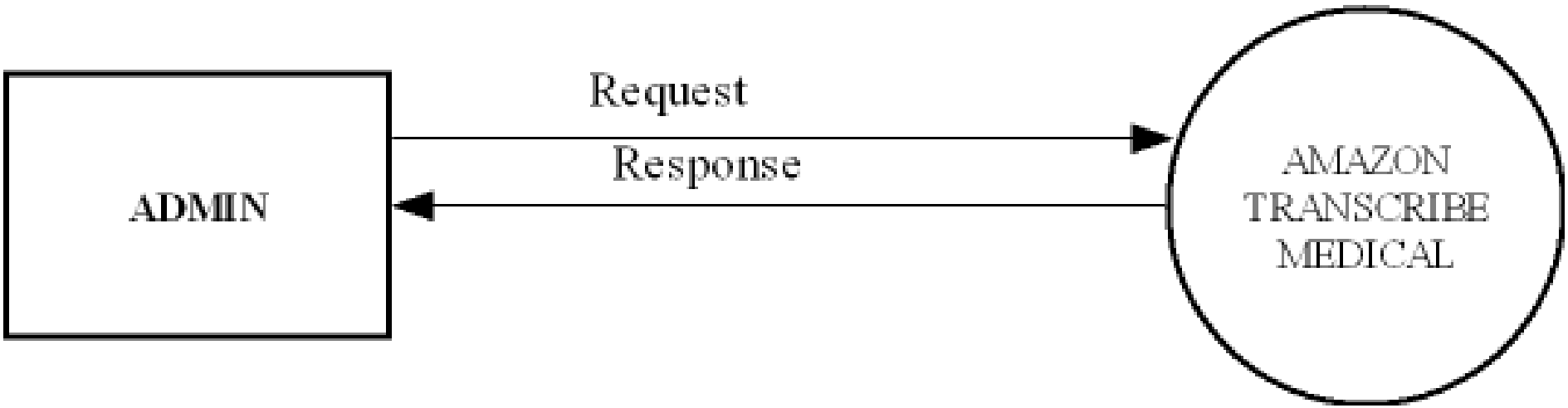
HARDWARE AND SOFTWARE SPECIFICATION

- Hardware Specification
  - 32-bit or 64-bit
  - 2 GB RAM
  - intel i3.
- Software Specification
  - Operating system:Windows 7 or above.
  - Framework:Django
  - Browser:Any Browser
  - Front-End: Python 3.8.0
  - Backend: MySql

USE CASE DIAGRAM



DATA FLOW DIAGRAM:Level 0



Level 1

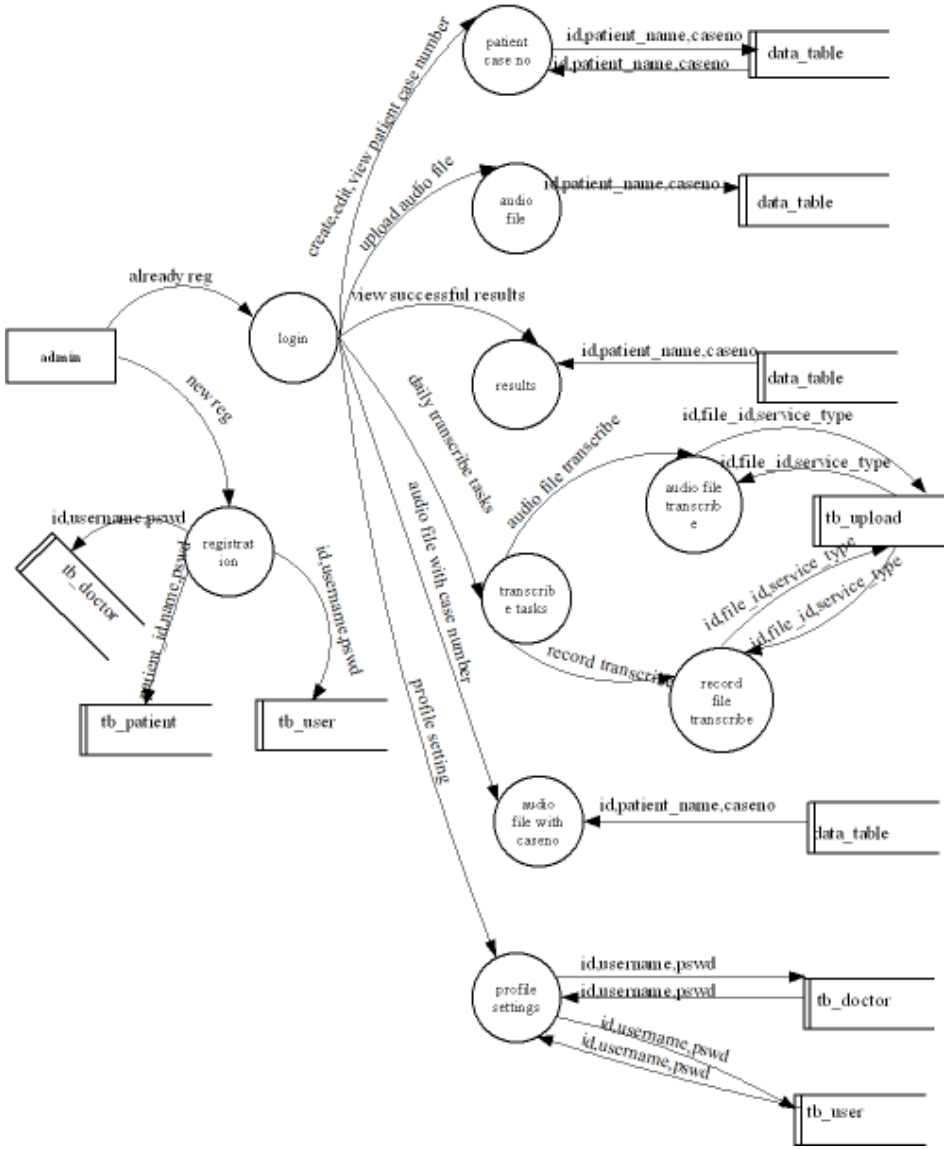

patient case no
id,patient_name,caseno
id,patient_name,caseno
data_table
audio file
id,patient_name,caseno
data_table
create,edit,view patient case number
upload audio file
already reg
login
view successful results
admin
new reg
results
id,patient_name,caseno
data_table
daily transcribe tasks
audio file transcribe
id,file_id,service_type
id,file_id,service_type
audio file transcrib e
tb_upload
id,username,pswd
registrat ion
tb_doctor
id,username,pswd
transcrib e tasks
id,file_id,service_type
id,file_id,service_type
record transcrip
record file transcribe
audio file with case number
id,username,pswd
tb_patient
tb_user
audio file with caseno
id,patient_name,caseno
data_table
profile setting
profile settings
id,username,pswd
id,username,pswd
tb_doctor
id,username,pswd
id,username,pswd
tb_user

TABLE DESIGN

1.Data_table

column name	Data type	Constraints
id	int(10)	primary key
case_number	varchar(255)	not null
date	date	not null
doctorname	varchar(250)	not null
audio_file_language	text	not null
rec_duration	varchar(100)	not null
speech_type	varchar(2)	not null
active_status	tinyint(4)	not null
created_at	timestamp	not null
updated_at	timestamp	not null
created_by	int(10)	not null
updated_by	int(10)	not null
medtrans_id	int(10)	foreign key

Cont...

2.Doctor_table

column name	Data type	Constraints
id	int(11)	primary key
username	varchar(30)	not null
password	varchar(30)	not null
email	varchar(30)	not null
join_date	timestamp	not null
address	varchar(250)	not null
hospital/management name	varchar(250)	not null
doctor verfid	varchar(15)	not null

Cont...

3.patient_table

column name	Data type	Constraints
patient_id	int(11)	primary key
patient_name	varchar(250)	not null
password	varchar(20)	not null
gender	varchar(20)	not null
mobile_number	varchar(30)	not null
day	int(10)	not null
month	varchar(20)	not null
year	int(20)	not null
street_address	varchar(250)	not null
city	varchar(250)	not null
zipcode	int(30)	not null
country	varchar(250)	not null
email	varchar(250)	not null
tset1	varchar(20)	not null
test2	varchar(20)	not null

Cont...

4.medtran_table

column name	Data type	Constraints
medtrans_id	int(11)	primary key
org_name	varchar(200)	not null
created_by	tinyint(4)	not null
updated_by	tinyint(4)	not null
created_at	timestamp	not null
updated_at	timestamp	not null

Cont...

5.roles

column name	Data type	Constraints
id	int(11)	primary key
name	varchar(100)	not null
type	varchar(100)	not null
active_status	tinyint(4)	not null
created_by	varchar(255)	not null
updated_by	varchar(255)	not null
created_at	timestamp	not null
updated_at	timestamp	not null
medtrans_id	int(10)	foreign key

Cont...

6.upload

column name	Data type	Constraints
id	int(11)	primary key
file name	text	not null
file_id	text	not null
service_type	varchar(20)	not null
description	medium text	not null
file size	double	not null
created_at	datetime	not null
client_id	int(11)	not null
user_id	int(11)	not null
uploaded_by	int(11)	not null
deleted	tinyint(11)	not null

)

Cont...

7.user

column name	Data type	Constraints
id	int(11)	primary key
full name	varchar(250)	not null
username	varchar(250)	not null
email	varchar(250)	not null
password	varchar(100)	not null
user type	varchar(200)	not null
access_status	tinyint(4)	not null
active_status	tinyint(4)	not null
random_code	text	not null
notification_token	text	not null
rember_token	varchar(100)	not null
created_at	timestamp	not null
updated_at	timestamp	not null
created_by	int(11)	not null
updated_by	int(11)	not null
medtrans_id	int(11)	foreign key
role_id	int(11)	foreign key

FORM DESIGN

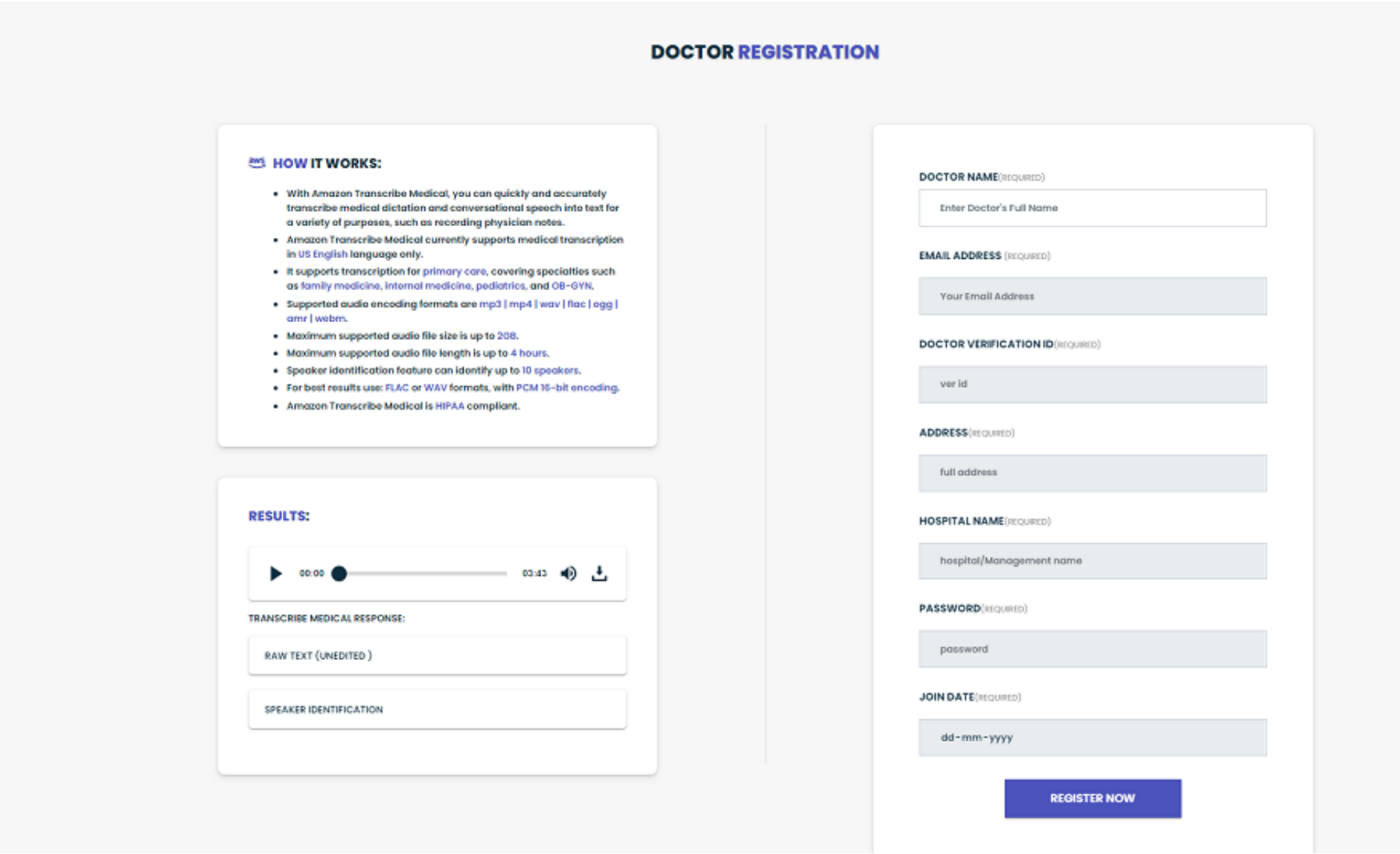
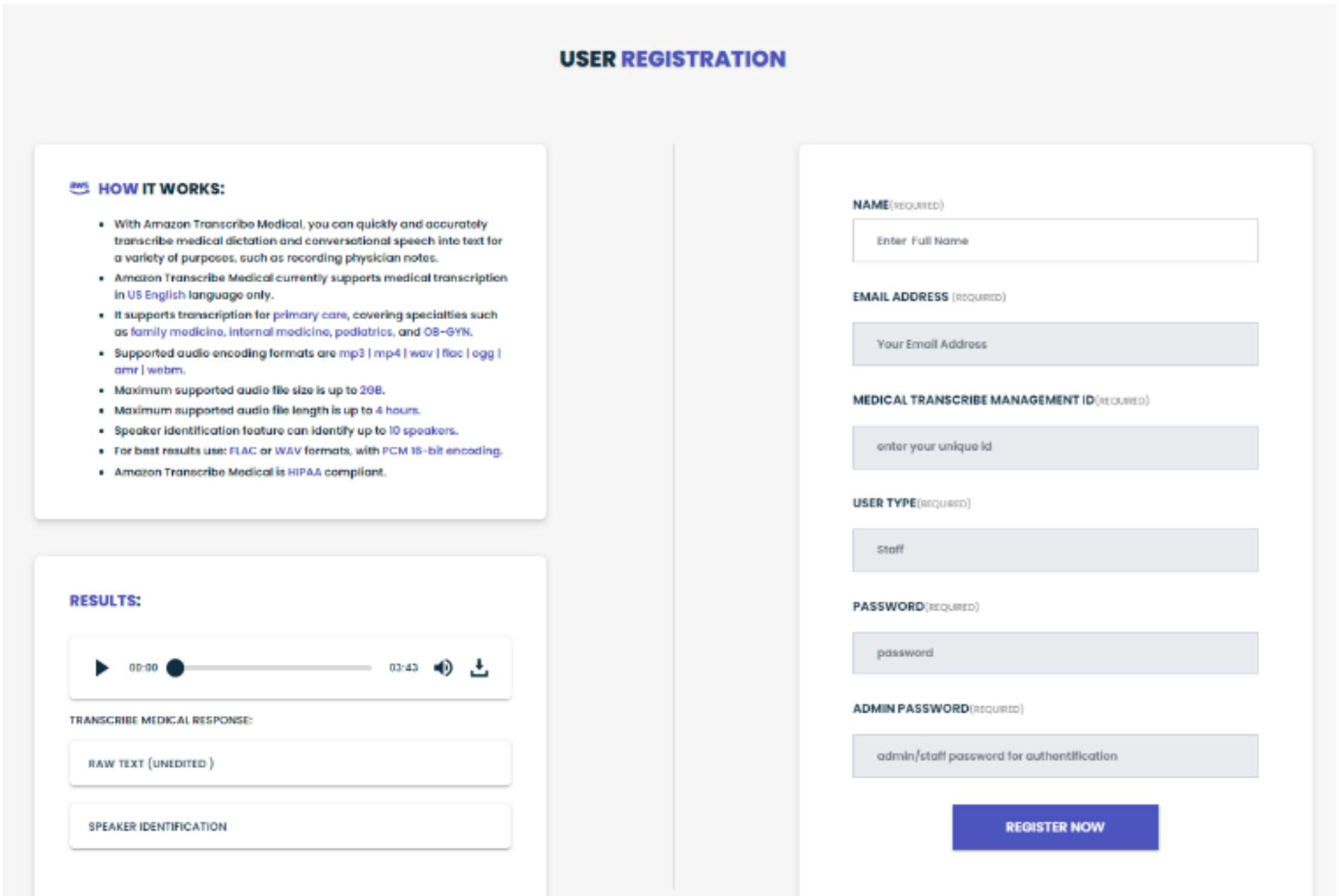
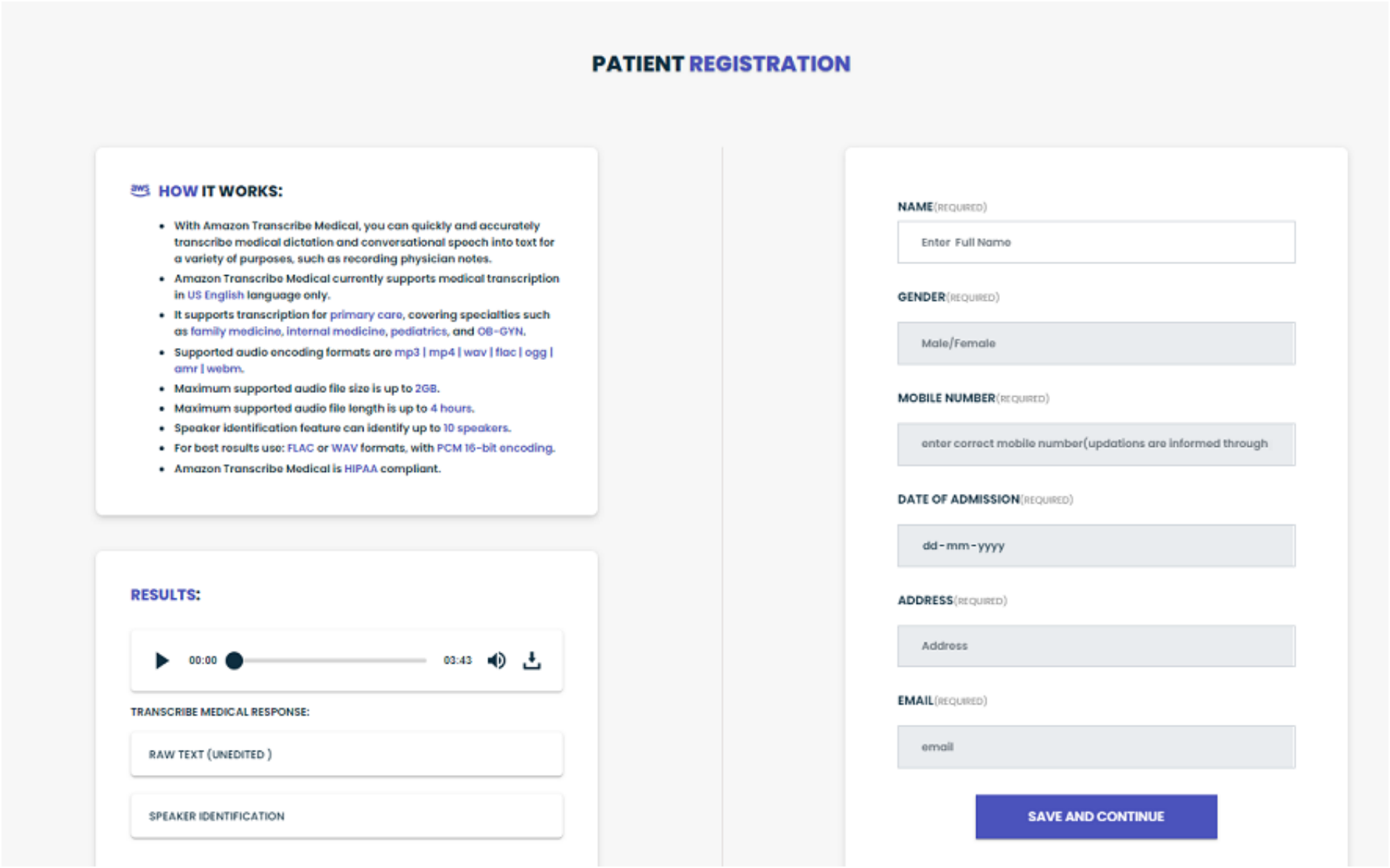


Figure: Doctor Registration

FORM DESIGN


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.
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
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 authentification
REGISTER NOW

FORM DESIGN


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.
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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(updations are informed through
DATE OF ADMISSION(REQUIRED)
dd-mm-yyyy
ADDRESS(REQUIRED)
Address
EMAIL(REQUIRED)
email
SAVE AND CONTINUE

FORM DESIGN

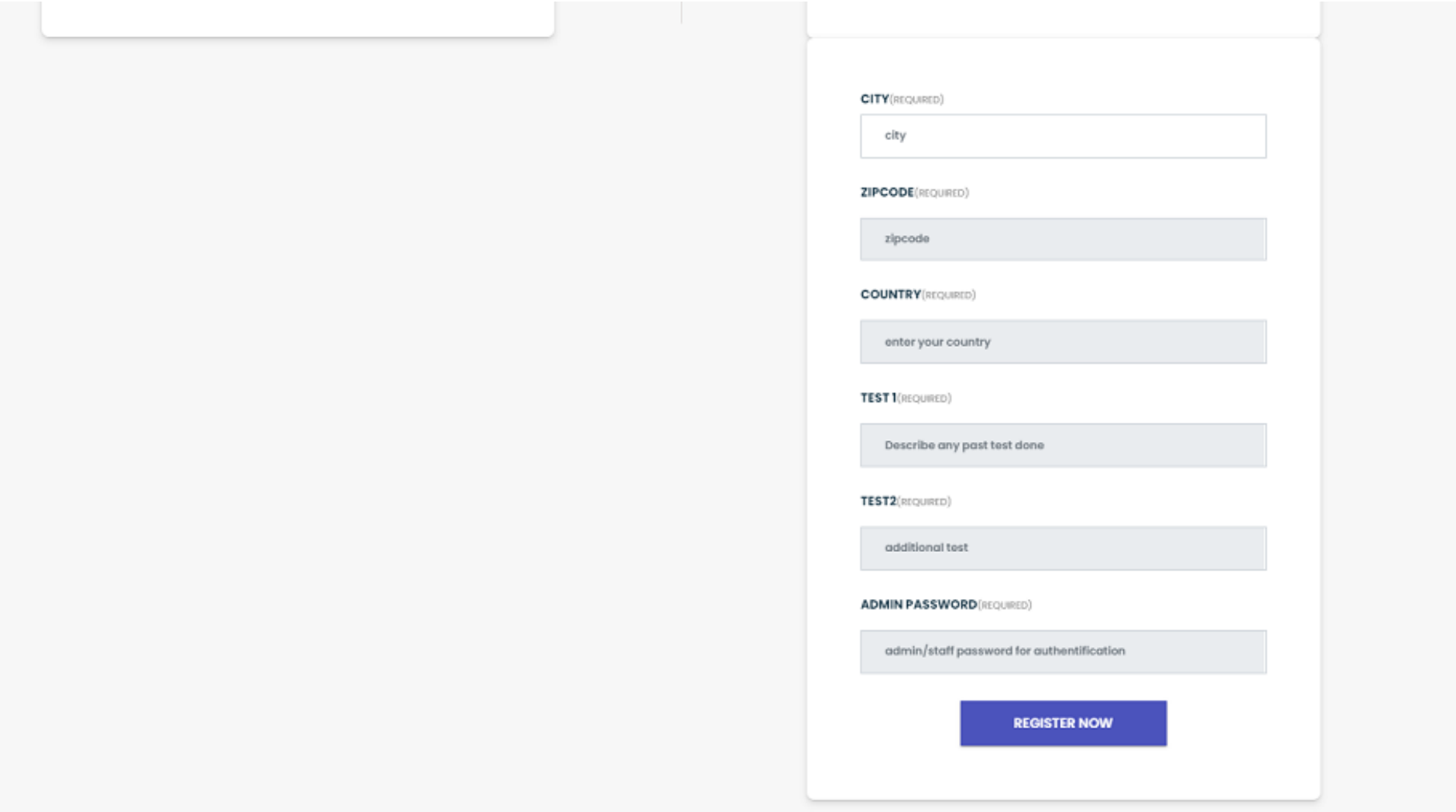


Figure: Patient Registration cont..

FORM DESIGN

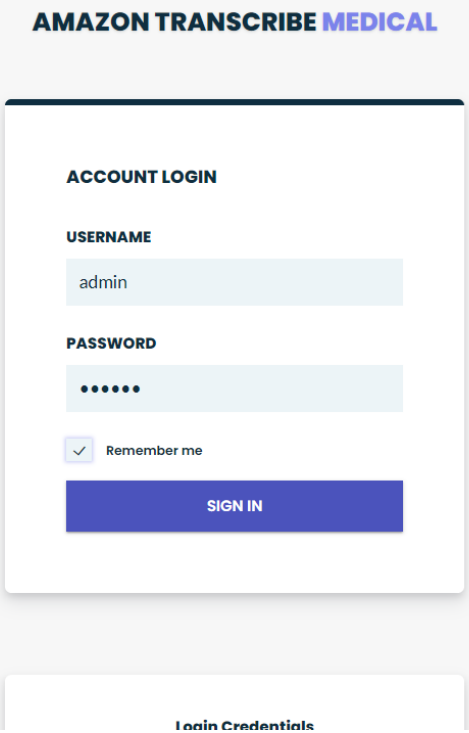


Figure: Login

FORM DESIGN

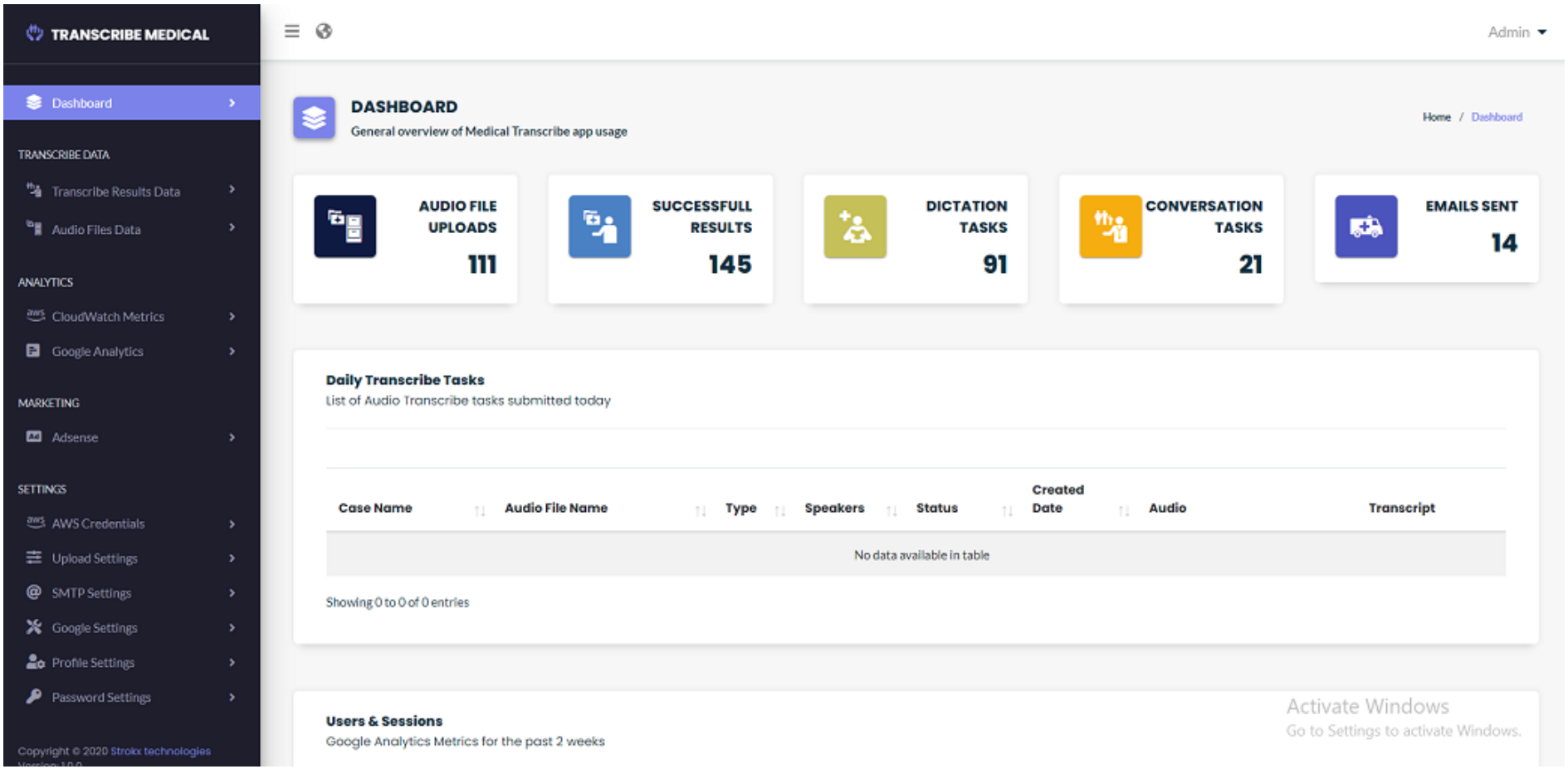


Figure: Dash Board

FORM DESIGN

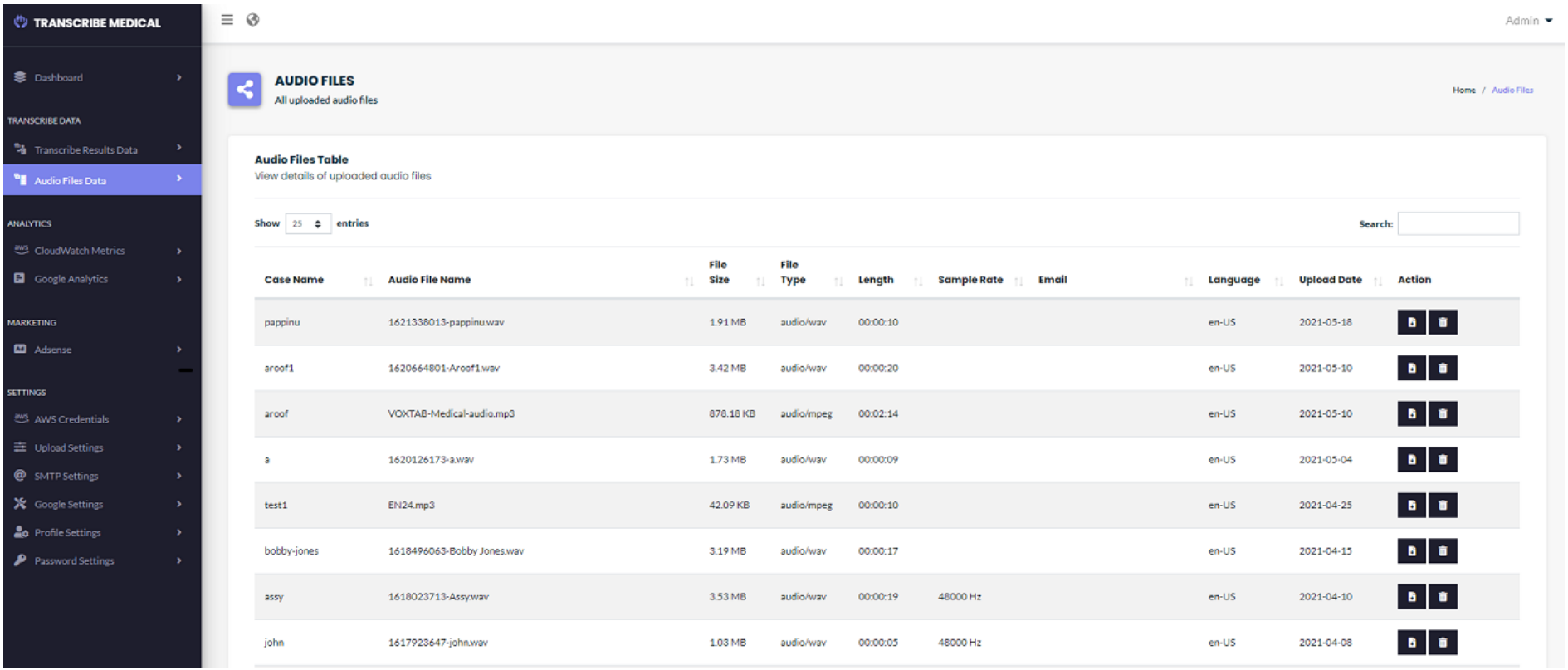
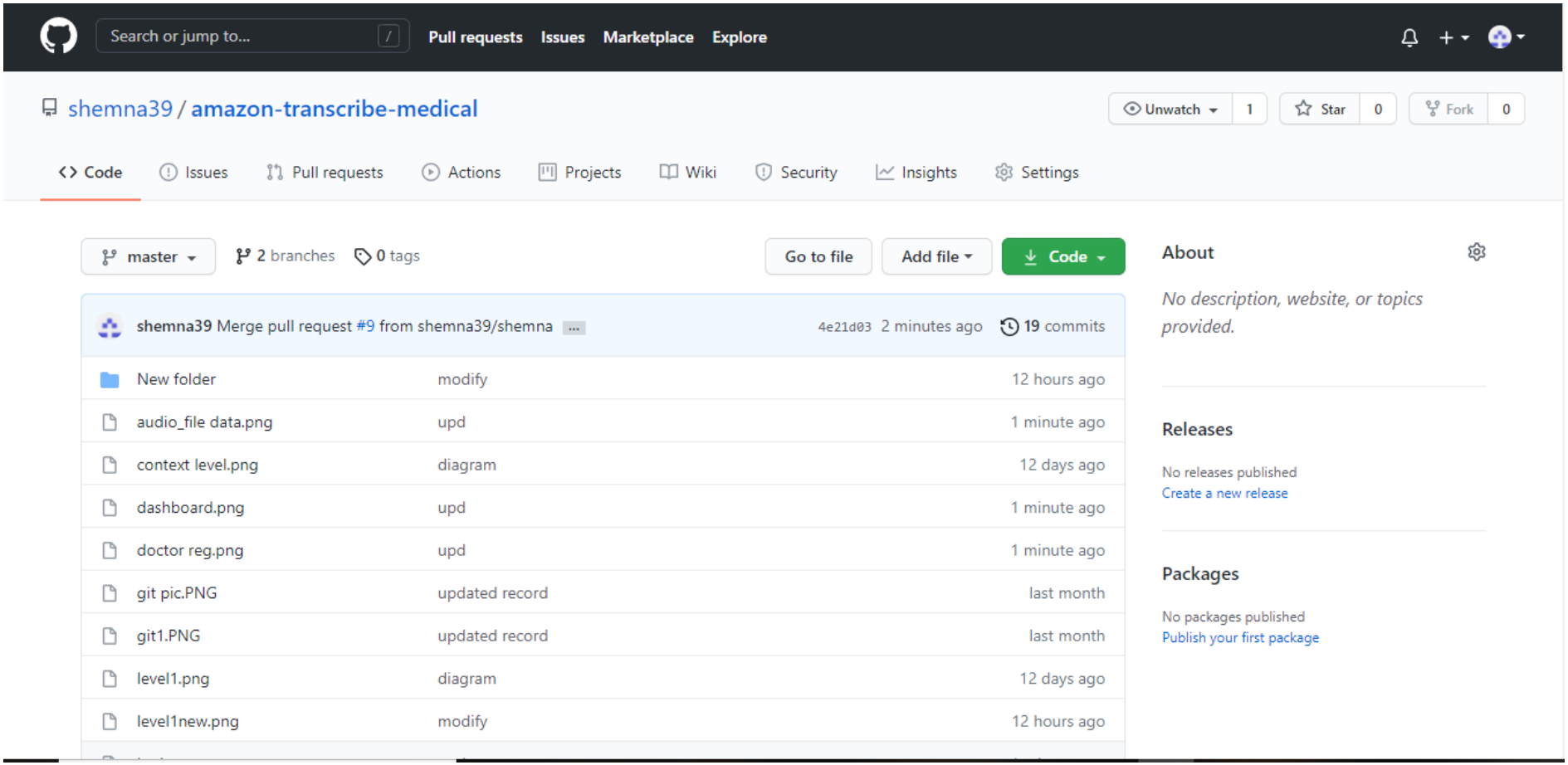


Figure: Audio file upload

GIT SCREEN SHOT



CONCLUSION

- Reliable software.
- It accurately transmit the medical terminologies.
- Manage the works of a medical transcriptionist.
- Provide easy maintenance and security .
- Efficient utilization of time.

The End