COMPANION OF INTELLIGENT CHATBOT

GAYATHRI K

MES20MCA-2019

PRODUCT OWNER:Prof. HYDERALI K

TABLE OF CONTENTS

1.INTRODUCTION

- Language plays an import role in the field of communication, as through languages you can express your feeling emotions etc. Emotion involves in feelings, behaviors, experience and cognitions.
- An emotion could be any strong feelings through some circumstances or mood or relationship. Exchange of emotion can be done through text, feelings, speech, video, audio etc.
- Human can recognize their feelings, emotions but this is a challenge that how a system recognize humans feelings in the form of text, video, audio.
- Here we propose a system (Application) that recognize the emotion of the humans from their text. The system will monitor the messages shared by users.
- From these information users mental disorder can be find out .
- And result may forward to their relatives if any negative thought may detected.

2.MODULES

1.Admin

- Login
- Verify Counsellors
- View Emotion Graphs
- View Feedback

2.User

- Registration
- Add Post
- Send Friend Request
- Accept Friend Request
- Get Counselling Tips
- View Post

3.Counsellor

- Registration
- View Emotion Graphs
- Provide Counselling Tips

BASIC FUNCTIONALITIES OF PROJECT

1.This app shall provide with login to access their specified account using a username and unique password.

2.During login process the app will verify the specific user account .

3.App contains three sections Admin, user, psychiatrist.

4.The system shall be developed as an android application.

5.Administrator should contain the following functional requirements.

METHODOLOGY

- Today online Social Network Mental Disorder Detection (SNMDD) are usually treated at a late stage.
- The application is fed with various details and the stress associated with those details. The application allows user to share their stress related issues.
- To address this issue, we propose an approach, new to the current practice of SNMD detection, by mining data logs of OSN users to actively identify potential SNMD cases early. We develop a machine learning framework for detecting SNMDs, namely Social Network Mental Disorder Detection (SNMDD).
- This application can be used to identifying the stress level and its management.
- Moreover, we design and analyze many features from OSNs, such as parasociality, self-disclosure, etc., which serve as important factors or proxies for identifying SNMDs.
- The proposed framework can be deployed as a software program to provide an early alert for potential patients and their advisors.
- The System also provides an emotion graph which helps to know about the emotion levels of various users.
- Stress is a physiological kickback to the social, behavioral or other physical issues that people face in their real-life activities, including in their environments like workplace, household, etc.
- Continued stress consumption can lead to some serious and extreme health issues, such as causing physical illness through its physiological consequences, changes in behavior, and problems with social isolation. Stress affects tons of individuals in their life like mood, behavior, health and quality of life.

DEVELOPING ENVIRONMENT

Hardware Requirements

- Processor : 64 bit
- RAM : Min 3 GB
- Hard Disk : 10 GB

Software Requirements

- OPERATING SYSTEM: WINDOWS 10
- FRONT END: HTML, CSS, JAVASCRIPT
- BACK END: Mysql
- IDE: Jetbrains Pycharm, Android studio
- TECHNOLOGY USED: PYTHON,JAVA
- FRAME WORK USED: Flask

Algorithm used

POLARITY ANALYZER ALGORITHM

Process of computationally identifying and categorizing opinions from piece of text,and determine whether the writer's attitude towards a particular topic or the product,is positive,negative or neutral.

Step 1:Tokenization(Dividing a para in to a different set of statements.)

*The
*Movie
*Was
*Great
*!

Example:The Movie Was Great!

Step 2:Cleaning the Data(Remove the special characters.)

*The
*Movie
*Was
*Great
*!→

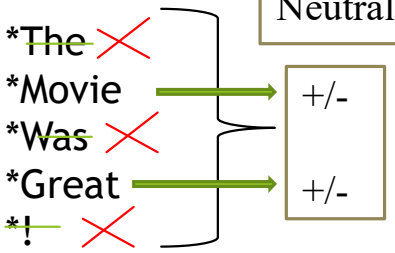
Step 3:Removing Stop Words.

*The
*Movie
*Was
*Great
*!

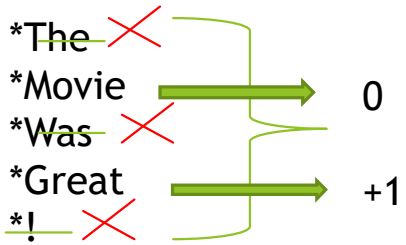
Step 4:Classification

Positive:+1
Negative:--1
Neutral:-0

Eg:



Step 5:Apply Supervised Algorithm for Classification.



Step 6:Calculation

eg:+1+0=1
Since the Polarity is greater than 0 So the given Statement is positive.(The Movie Was Great.)

TERM FREQUENCY-INVERSE DOCUMENT FREQUENCY ALGORITHM(TF-IDF)

Sentence 1:He is a good boy.

Sentence 2:She is a good girl.

Sentence 3:Boy and girl are good.

Remove the stop words like he,is,a,she,and , etc.

After removing stop words,

Sent 1:good boy

Sent 2:good girl

Sent 3:Boy girl good

Words	Frequency
Good	3
Boy	2
Girl	2

Vectors

	Good(f1)	Boy(f2)	Girl(f3)
Sent 1	1	1	0
Sent 2	1	0	1
Sent 3	1	1	1

$$TF = \frac{\text{No: of repetition of words in sentence}}{\text{No: of words in Sentence}}$$

$$IDF = \log\left[\frac{\text{No: of Sentences}}{\text{No: of Sentences containing words}}\right]$$

TF			
	Sent 1	Sent 2	Sent 3
Good	½	½	1/3
Boy	½	0	1/3
Girl	0	½	1/3

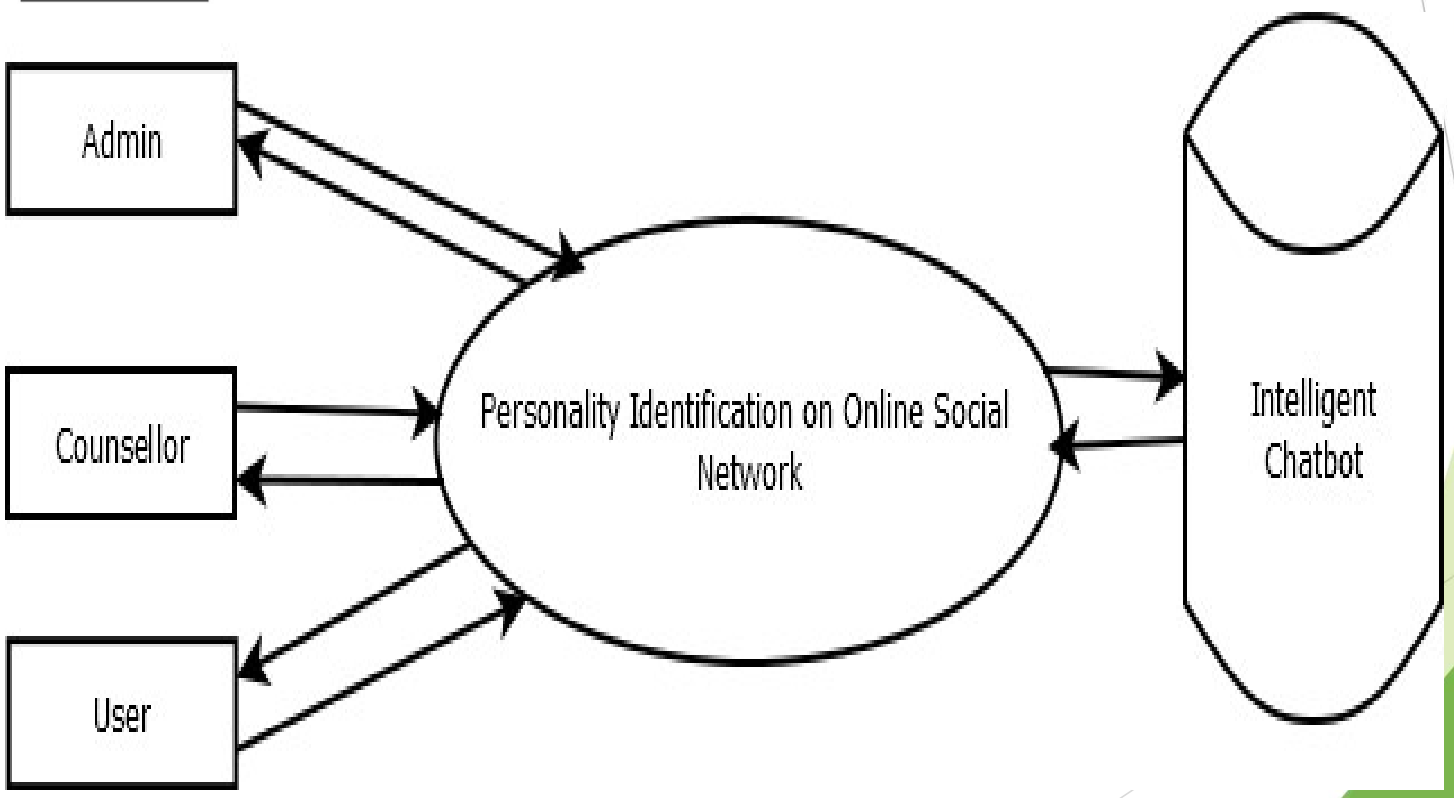
IDF	
Good	log(3/3)=0
Boy	log(3/2)
Girl	log(3/2)

Finally ,TF-IDF=TF*IDF

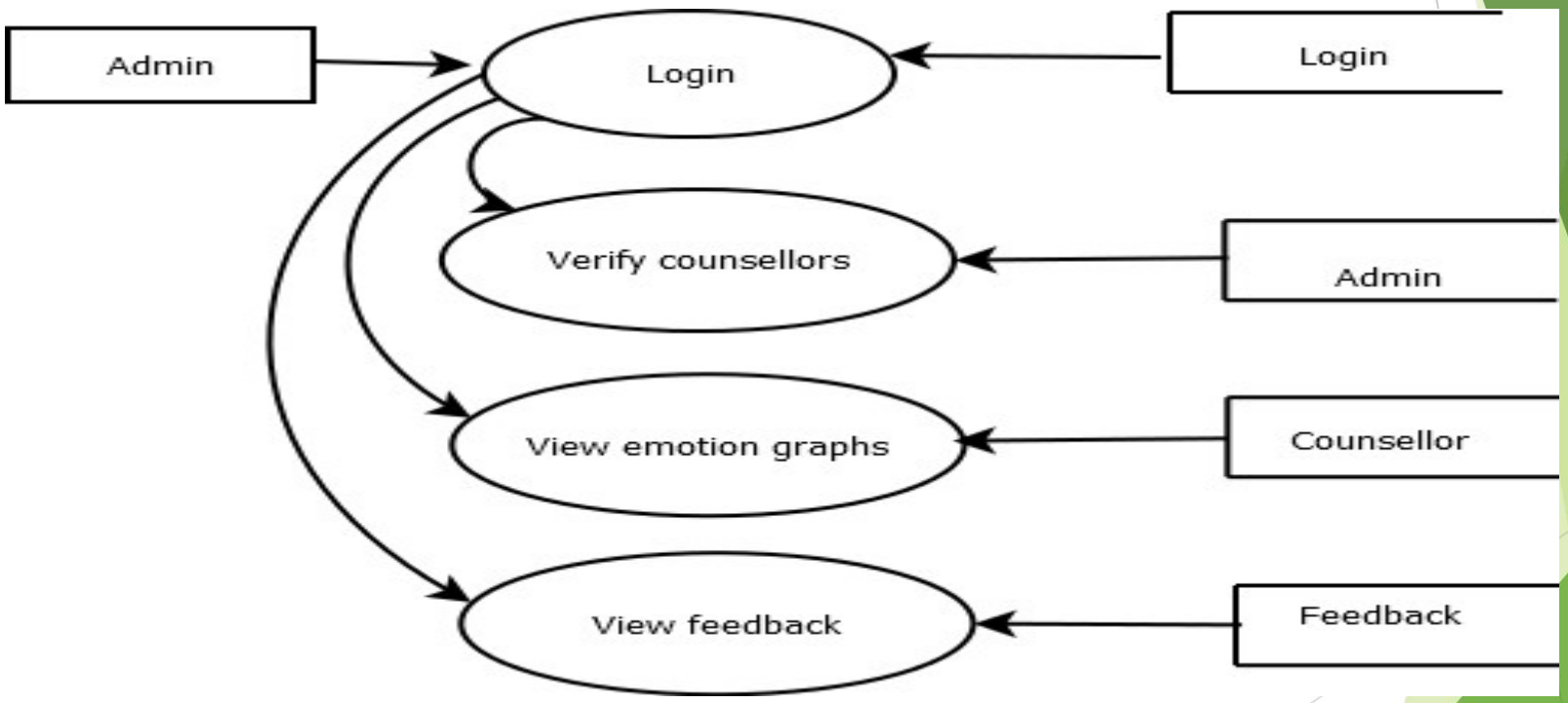
	F1	F2	F3
	Good	Boy	Girl
Sent 1	0	½*log(3/2)	0
Sent 2	0	0	½*log(3/2)
Sent 3	0	1/3*log(3/2)	1/3*log(3/2)

DATA FLOW DIAGRAM

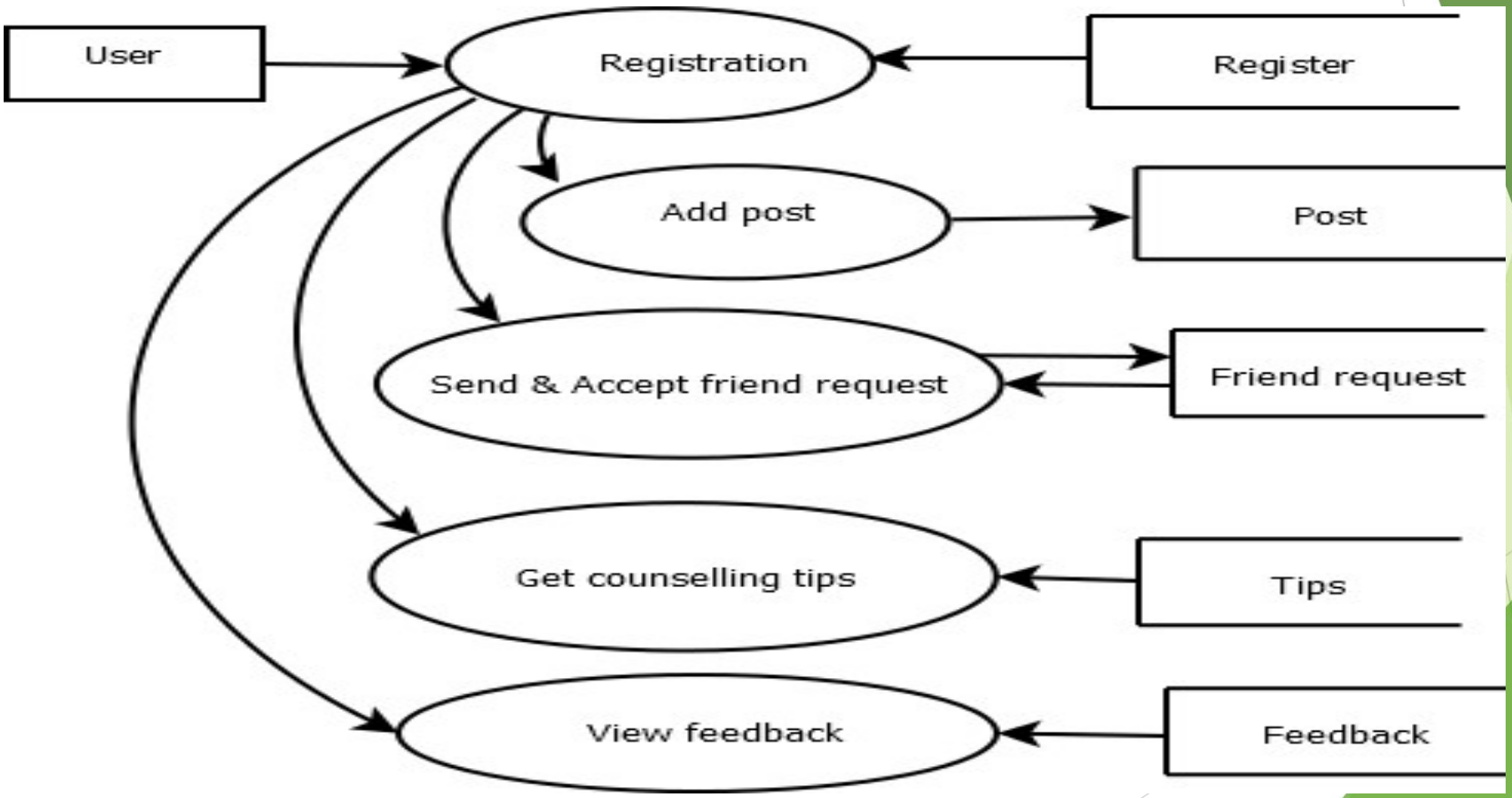
Level 0



Level 1.1


Admin
Login
Login
Verify counsellors
Admin
View emotion graphs
Counsellor
View feedback
Feedback

Level 1.2


User
Registration
Register
Add post
Post
Send & Accept friend request
Friend request
Get counselling tips
Tips
View feedback
Feedback

Level 1.3

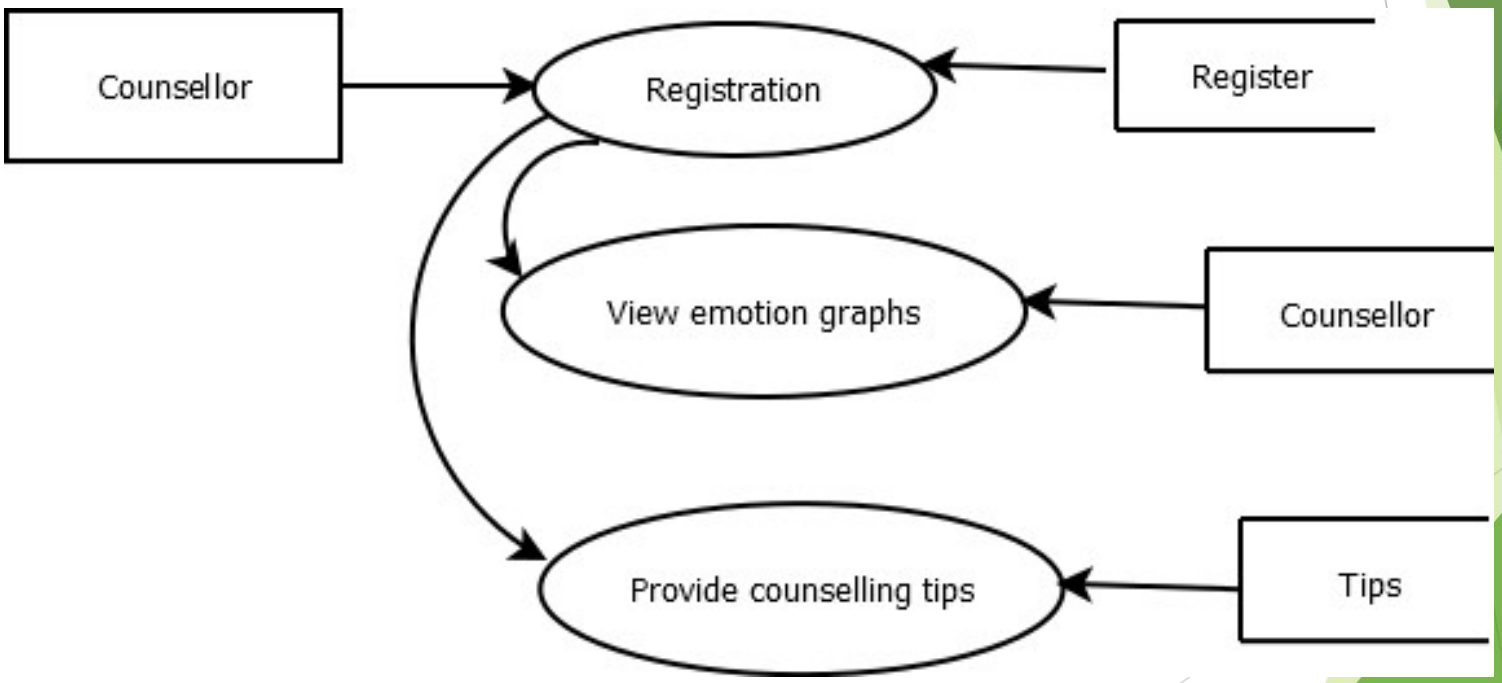

Counsellor
Registration
Register
View emotion graphs
Counsellor
Provide counselling tips
Tips

TABLE DESIGN

Counsillor

1 Messages | 2 Table Data | 3 Info

Limit rows First row 0 # of rows 1000

counsellor_id	login_id	fname	lname	dob	gender	place	post	pincode	qualification	phone_no	email_id
2	26	Devika	S	1999-07-01	Female	ponnani	ponnani	679577	MSW	9539670328	devika@gmail.com
3	32	Gayathri	k	2000-02-17	Female	Ponnani	ponnani	679577	MSC Psychology	9539580328	gayathrikottisala@gmail.com
(Auto)	(NULL)	(NULL)	(NULL)	(NULL)	(NULL)	(NULL)	(NULL)	(NULL)	(NULL)	(NULL)	(NULL)

Friend Request

1 Messages | 2 Table Data | 3 Info

Fid	Fromid	Toid	Date	Status
1	2	18	2022-06-02	accepted
7	31	2	2022-06-05	pending
8	18	3	2022-06-05	accepted
9	3	19	2022-06-05	accepted
10	19	34	2022-06-05	accepted
11	35	2	2022-06-05	pending
12	16	35	2022-06-05	pending
13	19	35	2022-06-05	accepted
14	19	18	2022-06-05	pending
15	34	35	2022-06-05	pending
16	18	35	2022-06-05	accepted
17	18	34	2022-06-05	pending
18	3	35	2022-06-05	pending
(Auto)	(NULL)	(NULL)	(NULL)	(NULL)

Login

1 Messages | 2 Table Data | 3 Info

id	username	password	usertype
1	admin	123	admin
2	user	user	user
3	QWE	54321	user
16	anupama	qwerty	user
18	anupama123	qwerty	user
19	gayathri	gayathri	user
26	devu	devu@123	counsellor
27	gayu	gayu@123	user
30	gayathrik	gayu@123	user
32	gayathrigayu	asdf@123	counsellor
34	nasri	nasri@123	user
35	achu	achu@123	user
(Auto)	(NULL)	(NULL)	(NULL)

Tips

1 Messages | 2 Table Data | 3 Info

Copy Data

counsellor_id	tips		date
26	ghfhf	5B	2022-06-01
26	very good	9B	2022-06-01
(NULL)	(NULL)	0K	(NULL)

Post

1 Messages | 2 Table Data | 3 Info

Pid	Userid	Post	Date	Status
1	2	hello	2022-06-02	PENDING
2	2	hello	2022-06-02	pending
3	18	good	2022-06-05	pending
4	19	hai	2022-06-05	pending
5	19	hai	2022-06-05	pending
(Auto)	(NULL)	(NULL)	(NULL)	(NULL)

Users

1 Messages | 2 Table Data | 3 Info

uid	lid	fname	lname	place	phone	email	image
1	2	anu	p	calicut	9922334455	anu@gmail.com	a.jpg
2	3	jjn	kkk	clt	8925658908	bbb@gm.com	b.jpg
5	18	anu	k	ponnani	9842153698	anupama@gmail.com	c.jpg
6	19	Gayathri	k	ponnani	6532854725	gayathri@gmail.com	d.jpg
7	34	nasrin	ashraf	maranchery	5869321478	nasrin@gmail.com	d.jpg
8	35	archana	p	alathiyir	5874236985	achu@gmail.com	d.jpg
(Auto)	(NULL)	(NULL)	(NULL)	(NULL)	(NULL)	(NULL)	(NULL)

PRODUCT BACKLOG

User Story ID	Priority <High/Medium/Low>	Size (Hours)	Sprint <#>	Status <Planned/In progress/Completed>	Release Date	Release Goal
1	Medium	2	1	Completed	20/04/2022	Table design
2	High	3		Completed	22/04/2022	Form design
3	High	5		Completed	23/04/2022	Basic coding
4	High	5	2	Completed	23/04/2022	Creation of Datasets
5	Medium	5		Completed	23/04/2022	Simulate Conversation with human users
6	High	5	3	Completed	29/05/2022	Counsellor
7	high	5		Completed	30/05/2022	Machine learning
8	Medium	5	4	Completed	5/06/2022	Testing data
9	High	5		Completed	06/07/2022	Output generation

USER STORIES

UserStoryID	As a <type of user>	I want to	So that I can
1	Admin	login	login successful with correct username and password
2	Admin	Verify councellors	Can approve registered counsellors
3	Admin	View emotion graphs	Can view person's emotion status
4	Admin	View feedback	Can view user feedback
5	User	Registration	user's can register with this app
6	User	Add Post	user's can add post
7	User	Send and accept friend request	User can send and accept friend request
8	User	Get counselling tips	User can get suggestions from counsellor
9	User	Add feedback	User can add feedback
10	**Counsellor**	**Registration**	**councillors can register with this app**
11	Counsellor	View emotion graphs	Can view person's emotion status
12	Counsellor	Provide counselling tips	Councillor can give suggestions

PROJECT PLAN

User Story ID	Task Name	Start Date	End Date	Days	Status
1	Sprint 1	27-12-2021	20-04-2022		Completed
2		28-12-2021	22-04-2022	4	Completed
3	Sprint 2	29-12-2021	23-04-2022		Completed
4		15-01-2022	23-04-2022	4	Completed
5	Sprint 3	23-01-2022	29-05-2022		Completed
6		30-01-2022	05-06-2022	8	Completed
7	Sprint 4	06-02-2022	12/02/2022		Completed
8		16-02-2022	06/07/2022	4	Completed

SPRINT PLAN

Backlog Item	Status & completion date	Original estimate in hours	Day1	Day2	Day3	Day4	Day5	Day6	Day7	Day8	Day9	Day10	Day11	Day12	Day13	Day14
User story #1,#2,#3		hrs	hrs	hrs	hrs	hrs	hrs	hrs	hrs	hrs	hrs	hrs	hrs	hrs	hrs	hrs
Table design	20/04/2022	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Form design	22/04/2022	3	0	0	0	1	1	1	0	0	0	0	0	0	0	0
Basic Coding	23/04/2022	5	0	0	0	0	0	0	0	0	0	1	1	1	1	1
User story #4,#5																
Creation of datasets	23/04/2022	5	1	1	0	1	0	1	0	1	0	0	0	0	0	0
Simulate conversation with human users	23/04/2022	5	0	0	0	0	0	0	0	0	0	1	1	1	1	1
User story #6,#7																
Councillor	29/06/2022	5	1	1	1	1	1	0	0	0	0	0	0	0	0	0
Machine learning	30/06/2022	5	0	0	0	0	0	0	0	1	0	1	1	1	0	1
User story #8,#9																
Testing data	05/06/2022	5	1	1	1	1	1	0	0	0	0	0	0	0	0	0
Output generation	06/07/2022	5	0	0	0	0	0	0	0	0	0	2	1	1	1	1
Total		40	4	4	2	4	3	2	0	2	0	5	4	4	3	4

SPRINT ACTUAL

Backlog Item	Status & completion date	Original estimate in hours	Day1	Day2	Day3	Day4	Day5	Day6	Day7	Day8	Day9	Day10	Day11	Day12	Day13	Day14
User story #1,#2,#3		hrs	hrs	hrs	hrs	hrs	hrs	hrs	hrs	hrs	hrs	hrs	hrs	hrs	hrs	hrs
Table design	20/04/2022	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Form design	22/04/2022	3	0	0	0	1	1	1	0	0	0	0	0	0	0	0
Basic Coding	23/04/2022	5	0	0	0	0	0	0	0	0	0	1	1	1	1	1
User story #4,#5																
Creation of datasets	23/04/2022	5	1	1	0	1	0	1	0	1	0	0	0	0	0	0
Simulate conversation with human users	23/04/2022	5	0	0	0	0	0	0	0	0	0	1	1	1	1	1
User story #6,#7																
Councillor	29/06/2022	5	1	1	1	1	1	0	0	0	0	0	0	0	0	0
Machine learning	30/06/2022	5	0	0	0	0	0	0	0	1	0	1	1	1	0	1
User story #8,#9																
Testing data	05/06/2022	5	1	1	1	1	1	0	0	0	0	0	0	0	0	0
Output generation	06/07/2022	5	0	0	0	0	0	0	0	0	0	2	1	1	1	1
Total		40	4	4	2	4	3	2	0	2	0	5	4	4	3	4

THANK YOU