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Vellore Institute of Technology
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SCHOOL OF COMPUTER SCIENCE AND ENGINEERING
Winter Semester 2020-2021

Course Code : CSE4015

Programme : B.Tech

Course Name: Human-Computer Interaction

Slot: C1

Project Report

Project Title

Prototyping mindfulness

Details of the batch members

Name	Registration No.	Branch	Responsibility
Anvita Gupta	18BCB0005	CSE(specialization bioinformatics)	Review Study of 5 papers, prototyping, implementation of mental health website.
Rajat Sharma	18BCB0065	CSE(specialization bioinformatics)	Review Study of 5 papers, implementation of the mental health website and emotion detector.

Aim

To prototype and design a mental health and mindfulness website based on review study results.

Scope

Product Description	To prototype and design a mental health and mindfulness website.
Target Audience	People of all kinds, those who are suffering from some mental illness, or those who wish to feel better in their daily life and intend to practice the principles of mindfulness, meditation, and a general sense of calmness in everyday activities.
Project Requirements	Interactive design Should Cater to Universal Usability Offer informative feedback Prevent Errors Permit easy reversal of actions Exploit constraints Aesthetic and Minimalist design Flexibility and efficiency of use
Project Constraints	Whether the website will be successfully able to communicate its message to the user
Project Assumptions	Performance issues The interface will be able to communicate ideas very well to the user.
Project Deliverables	Mental health and mindfulness website
Project Acceptance Criteria	Successful completion of the website. Improvements based on user feedback to be incorporated.

Project Objective and Problem Statement

Objectives:

1. A review study of how concepts of Human-Computer Interaction can help in achieving '*Techno-Spirituality*' and '*Slow Design*', thus establishing a connection between mindfulness and technology.
2. Through utilizing the points found as a result of our review study we aim to develop a new digital mindfulness prototype designed for stress reduction and positive computing.

Abstract

In this paper, we aim to study how the concepts of Human-Computer Interaction (HCI) can help in achieving '*Techno-Spirituality*' and '*Slow Design*'. The first term '*Techno-Spirituality*' is the study of how technology can assist humans' spiritually. Its co-aspects explore areas such as mindfulness, meditation, positive computing, and the overall well-being of an individual. We will also be focusing on the second term called '*Slow Design*' which is believed to help facilitate self-reflection and relaxation.

Based on the grounds of what we find out through our review study, we aim to develop a digital mindfulness prototype designed for stress reduction and positive computing. We will try to provide a new prototype or redesign the existing technology for facilitating more better interaction between humans and computers. We will be exploring innovative ways to utilize technology to support the wellbeing of humans through the use of HCI concepts. In this process, we will also seek to find out the challenges faced when aiming for a successful partnership between technology and mindfulness.

Keywords

Human-Computer Interaction; Techno-spirituality; Slow design; Mindfulness; Positive computing; positive psychology; Well-being; Meditation

Methodology

Stage 1: Analysis

The first step to building a product is to identify correctly what the user needs/wants. For this, we are going to review research papers and study '*Techno-Spirituality*' and '*Slow Design*' and how these concepts can be deployed in HCI to improve user experience.

Stage 2: Design

In the second stage of the project, we aim to design a potential solution according to the design guidelines and principles. We will use the storyboarding method to accomplish this.

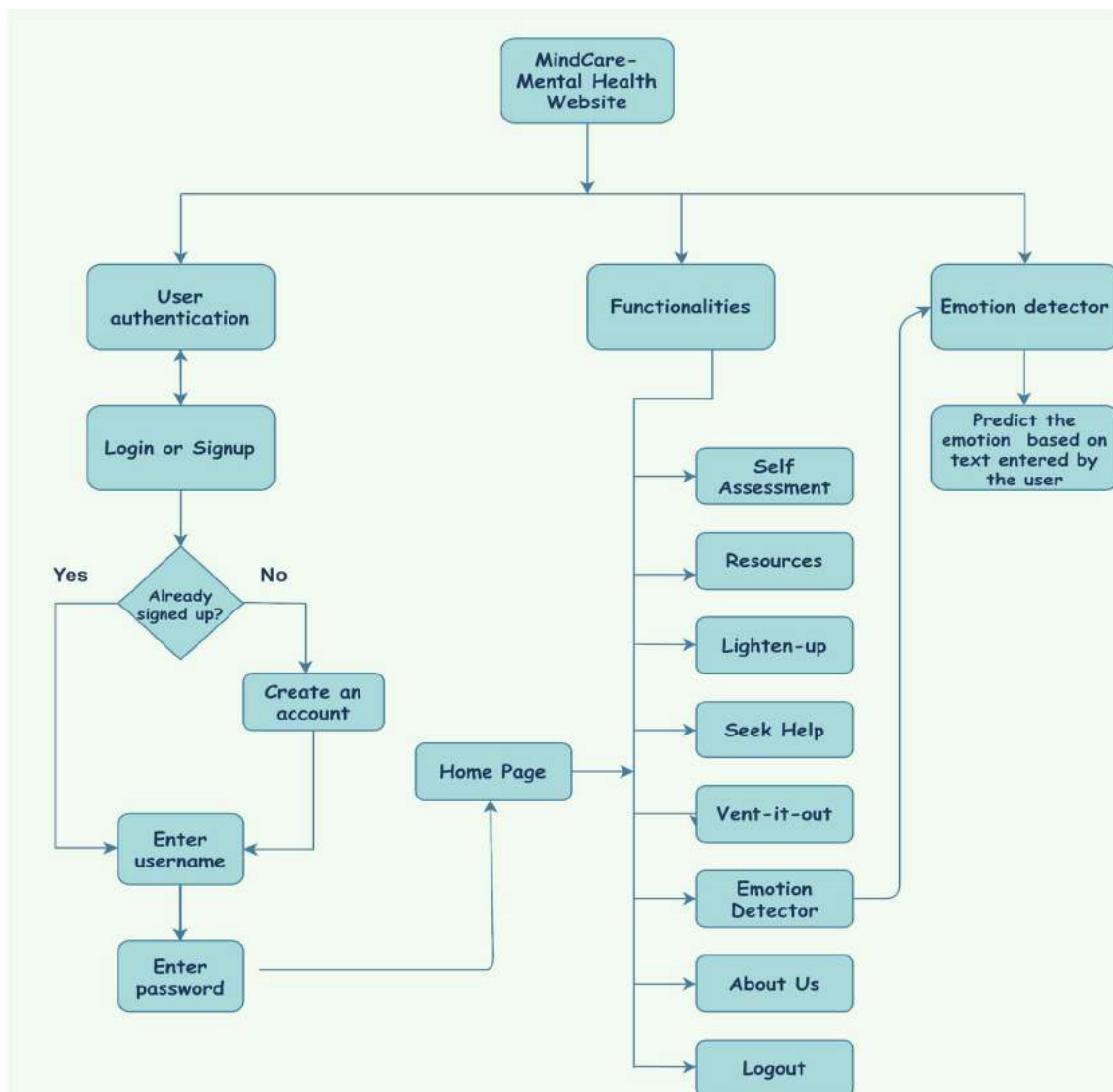
Stage 3: Prototype

The designed model will be further enhanced in this stage through evaluation and feedback by users.

Stage 4: Implement and deploy

The improved model will then be implemented and deployed.

Block diagram of the system (Design Model)



Hardware/Software and other requirements

Hardware Requirements:

1. **Processor** - with minimum 1.9 gigahertz (GHz) x86- or x64-bit dual-core processor with SSE2 instruction set
2. **Memory** - min 2 GB RAM
3. **Display** - Super VGA with a resolution of 1024 x 768

Software Requirements:

1. **Operating system:** Windows 7, Windows 8, Windows, Linux, and Mac compatible.
2. **Browser:** internet explorer, chrome firefox, and safari.

Network Requirements:

1. Bandwidth greater than 50 KBps (400 kbps)
2. Latency under 150 ms

Procedure:

1. Analysis and design:

Two terms that are gaining popularity in the areas of mindfulness and technology are ‘*Slow design*’ and ‘*Techno-spirituality*’.

Whenever we hear of the term slow we associate it with how long it takes to build or do some task. Rather, slow design is a term that describes an expanded state of awareness, accountability for daily actions, and the potential for a richer spectrum of experience for individuals and communities.

Following are the principles of slow design:

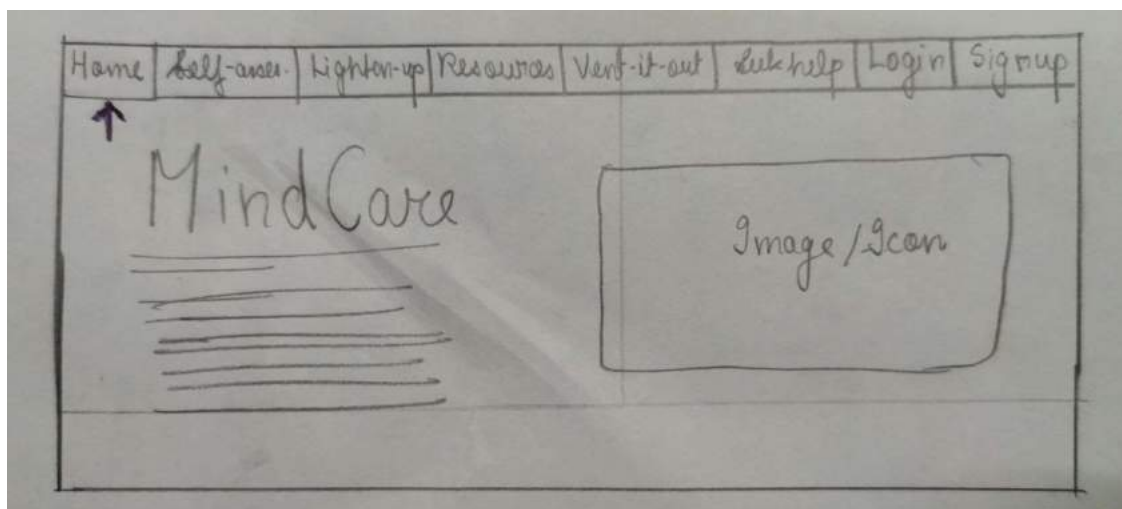
- Reveal
- Expand
- Reflect
- Engage
- Participate
- Evolve

This concept of slow design has not yet been applied to website designing. In our prototype, we will try to incorporate the above-mentioned principles.

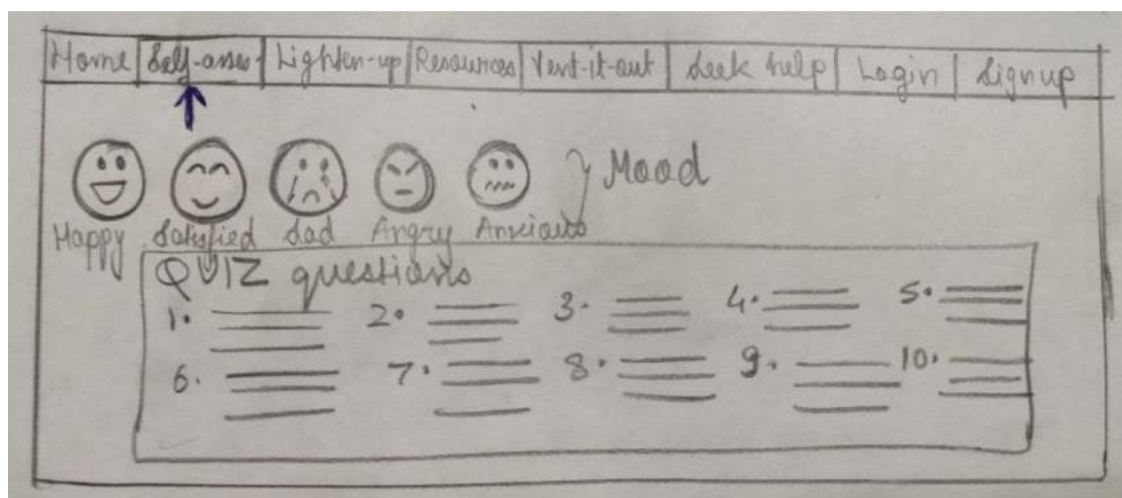
The second term, '*Techno-spirituality*' is defined as the concept of how spiritual practices are increasingly mediated through technology. Through the introduction of meditation music in our website prototype, we would like to take forward this concept and help the users gain a spiritual meaning in their lives. It would also help them cultivate calmness and peace in their daily lives.

2. Prototype:

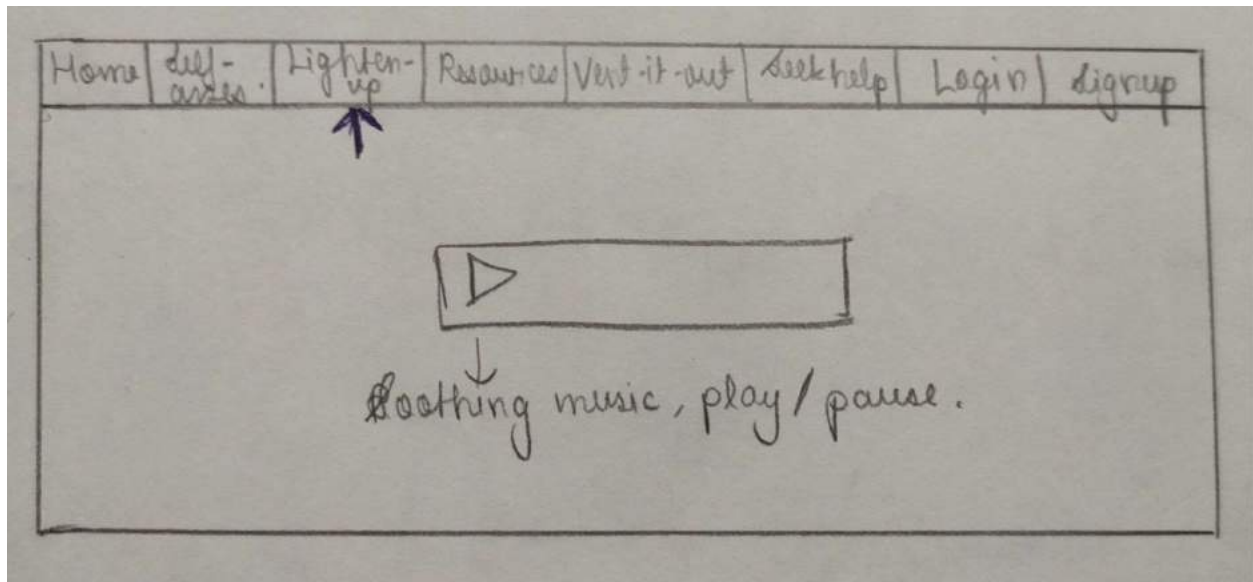
Storyboarding #1: Home page



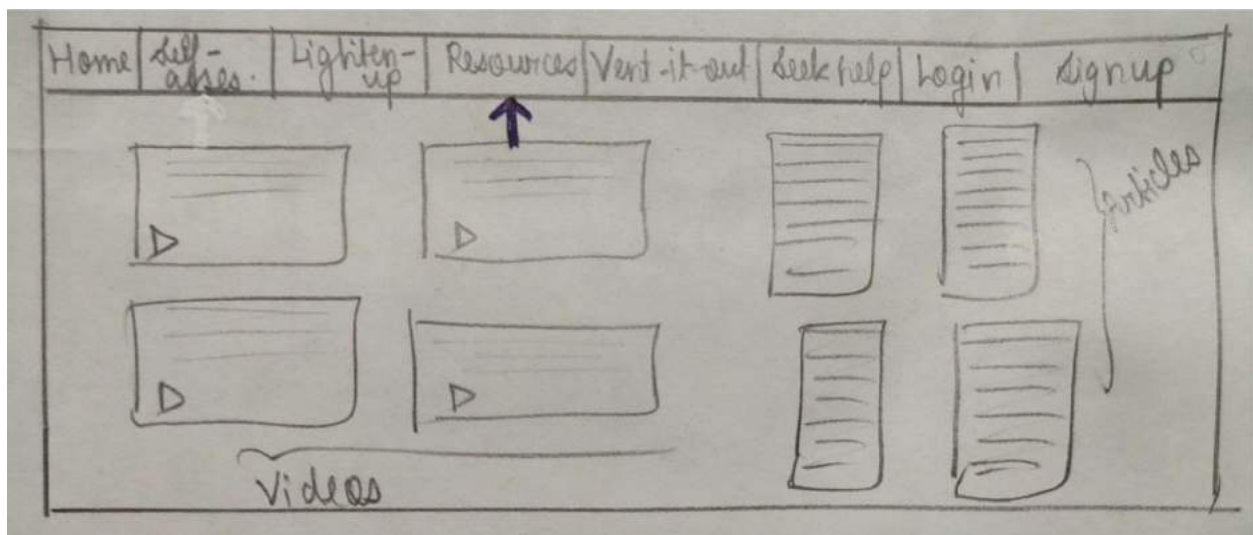
Storyboarding #2: Self-assessment



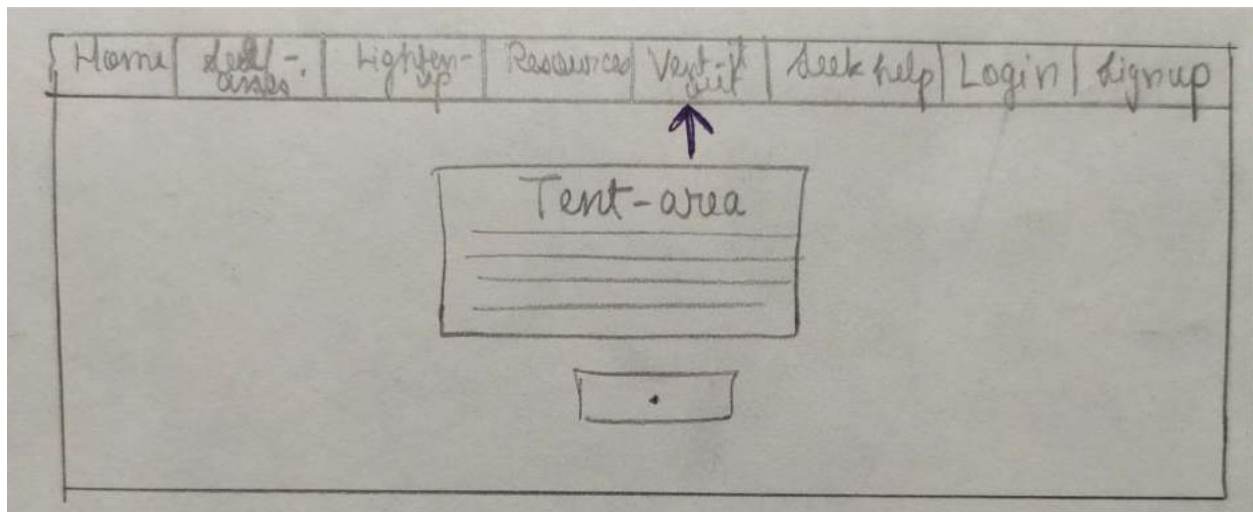
Storyboarding #3 : Lighten-up



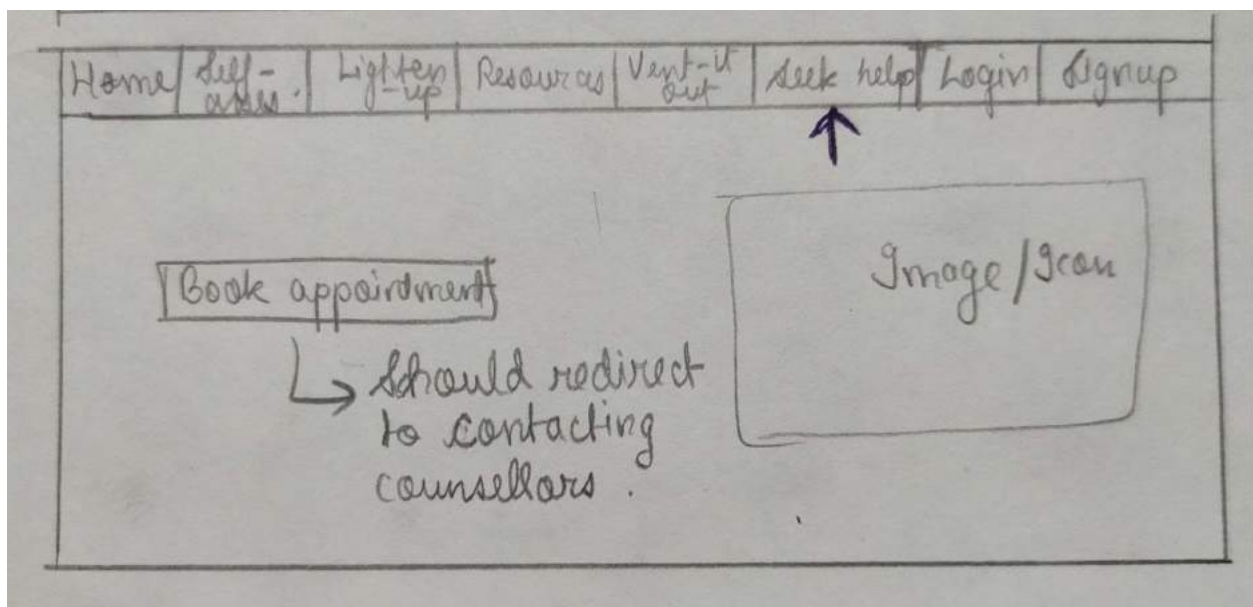
Storyboarding #4: Resources



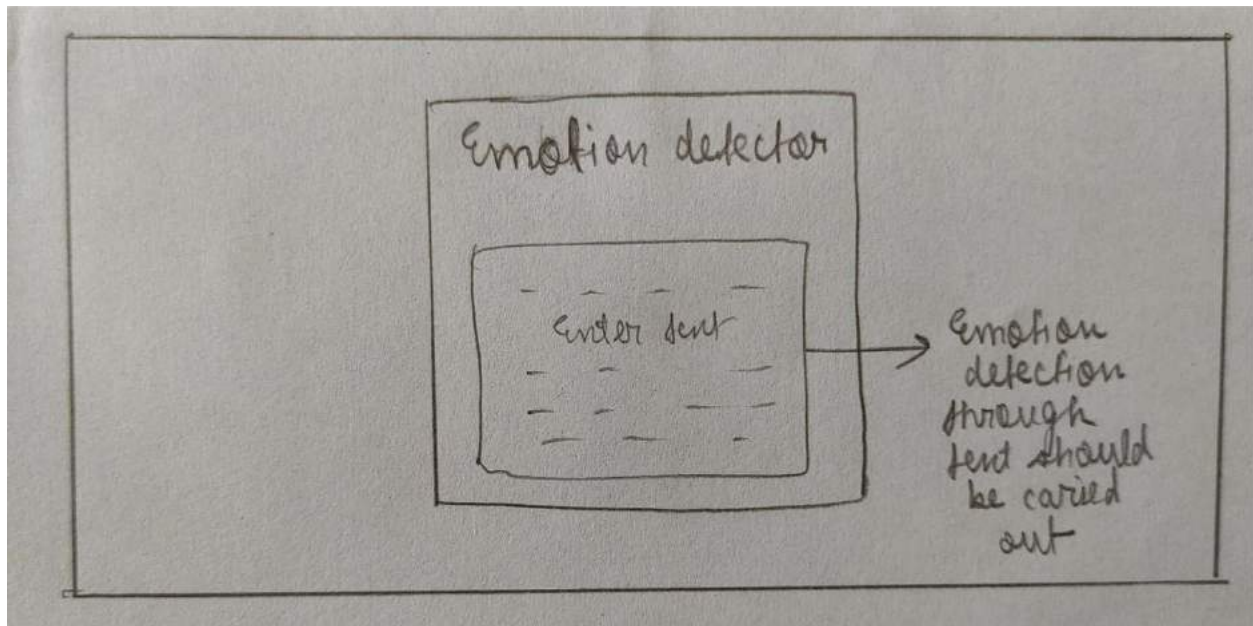
Storyboarding #5 : Vent-it-out



Storyboard #6: Seek Help



Storyboard #8 : Emotion detector



Storyboarding #7 : Login

A hand-drawn sketch of a login form. It features a rectangular border. At the top, the word "Login" is written in a cursive font. Below it are three input fields: the first is labeled "Username", the second is labeled "Password", and the third is a smaller box containing a single dot, likely representing a "Remember me" checkbox. The sketch is drawn on a light-colored, textured paper.

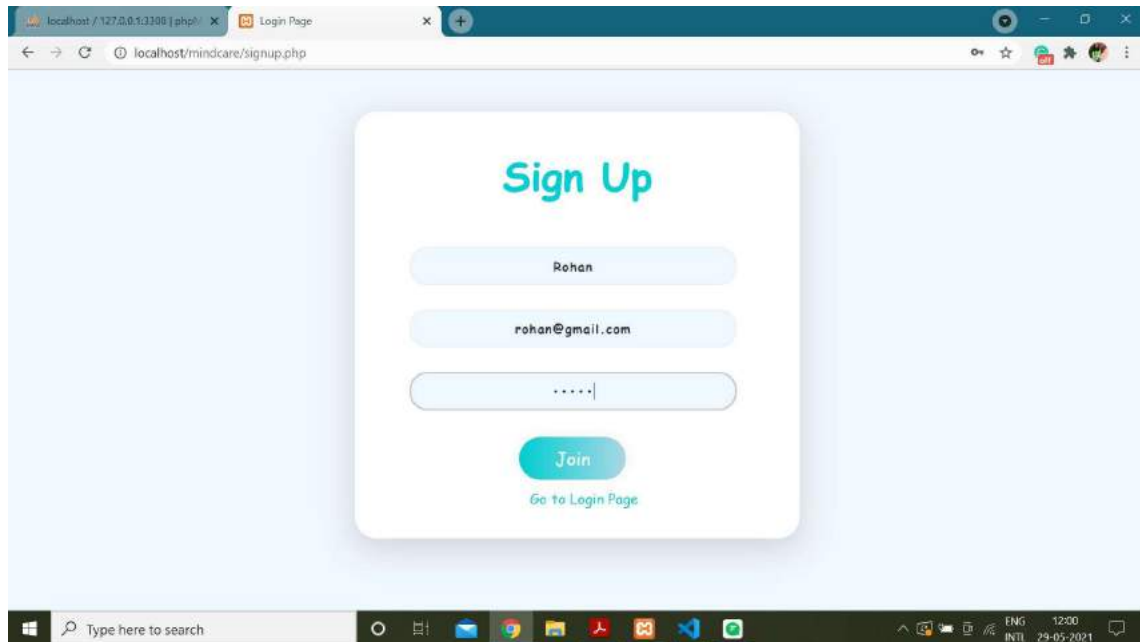
Storyboarding #8 : Signup

A hand-drawn sketch of a signup form. It features a rectangular border. At the top, the word "Signup" is written in a cursive font. Below it are three input fields: the first is labeled "Name", the second is labeled "Email", and the third is labeled "Password". At the bottom, there is a smaller box containing a single dot, likely representing a "Remember me" checkbox. The sketch is drawn on a light-colored, textured paper.

3. Results and Discussions

Signup page:

Creating a new account of the user:

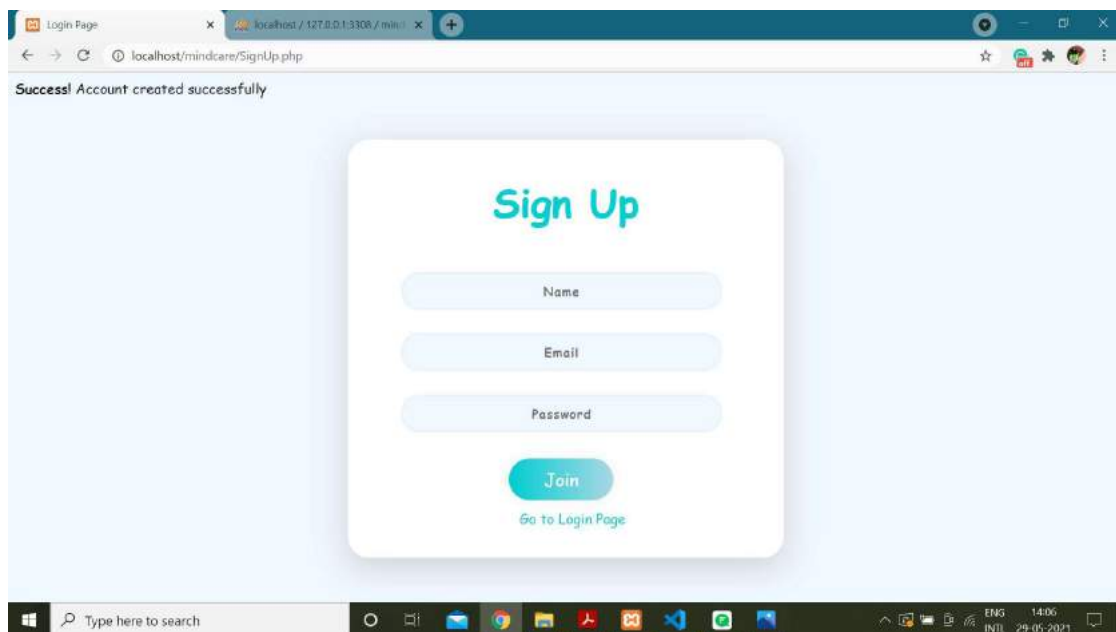


The screenshot shows a web browser window with the address bar displaying 'localhost/mindcare/signup.php'. The page features a 'Sign Up' form with the following fields and values:

- Name: Rohan
- Email: rohan@gmail.com
- Password:

Below the password field is a teal 'Join' button and a link that says 'Go to Login Page'.

Signup successful:



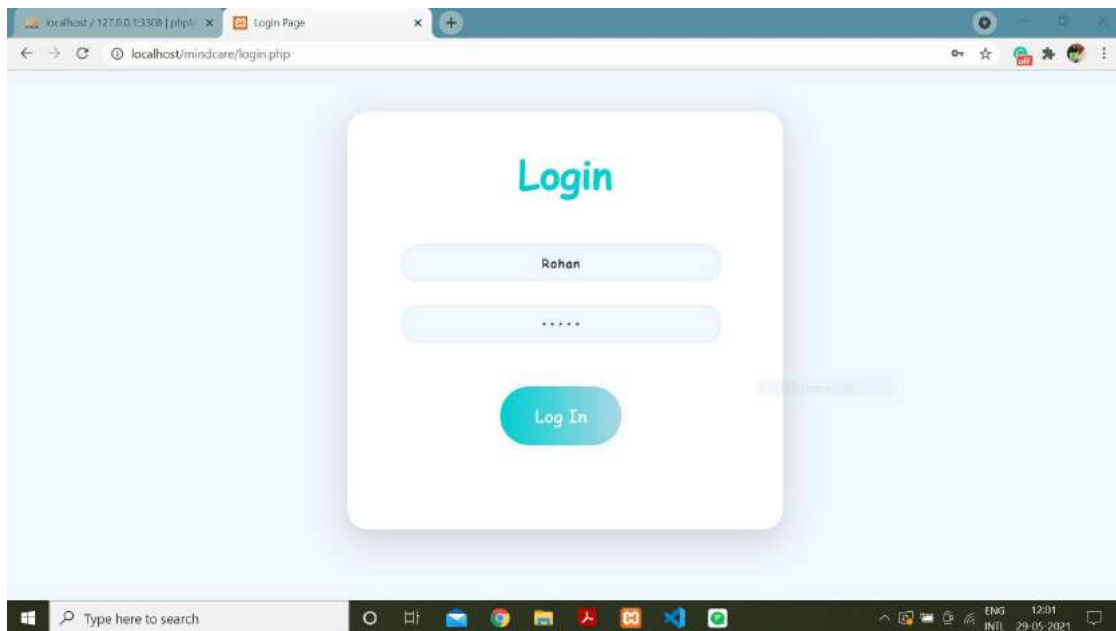
The screenshot shows the same 'Sign Up' form, but with a success message at the top: 'Success! Account created successfully'. The input fields are now empty:

- Name: Name
- Email: Email
- Password: Password

The 'Join' button and 'Go to Login Page' link remain at the bottom of the form.

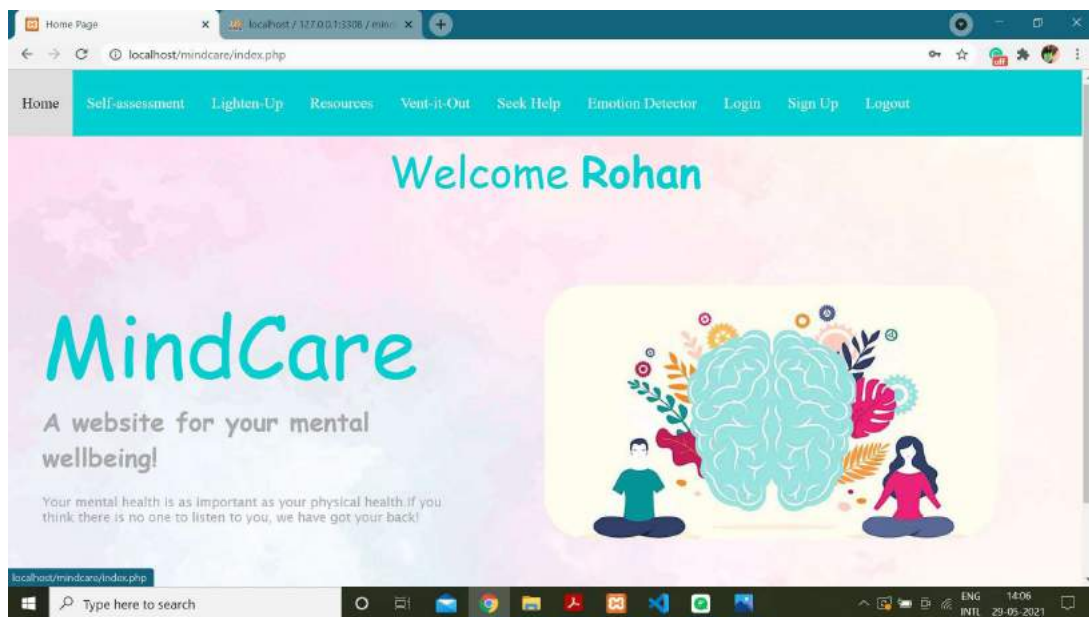
Login page:

Logging in with username and password:



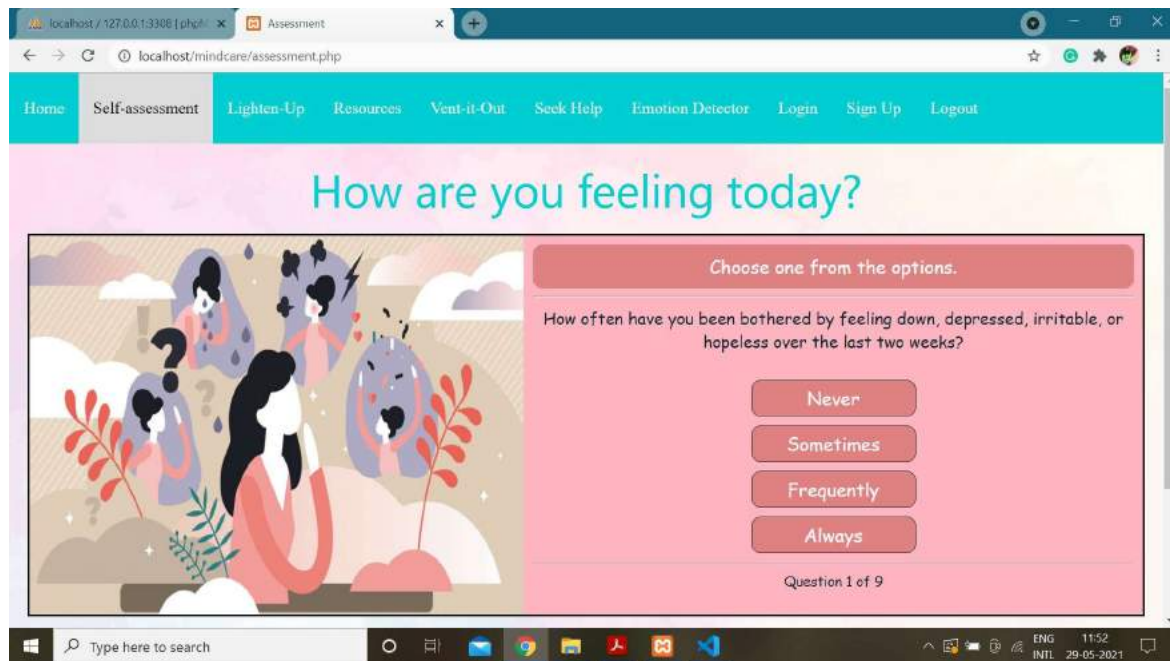
Home page:

Login successful and the user is redirected to Home Page:



Self-assessment:

In the self-assessment section the user is prompted to fill a standard quiz (consisting of 9 questions) to assess the mental health of the person:

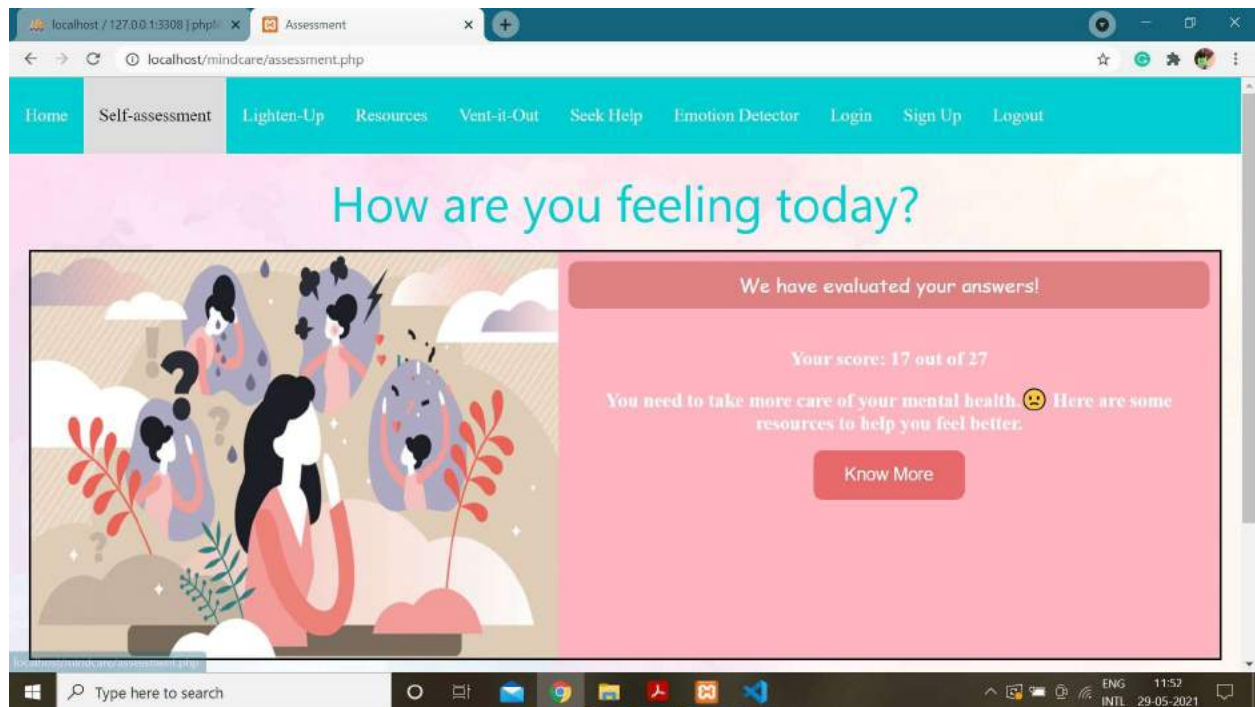


The score of the user is shown and then according to the obtained score the user is shown resources on clicking the “Know More” button. Following are the points for the option values:

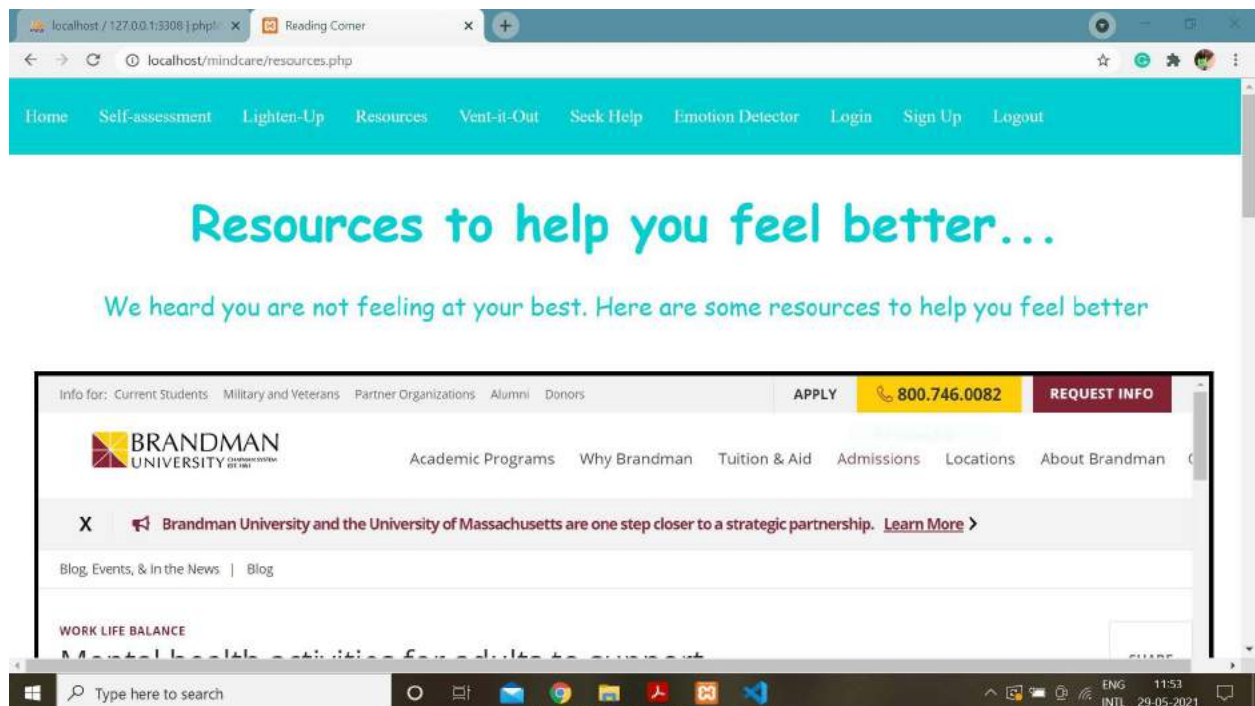
Never - 0
 Sometimes - 1
 Frequently - 2
 Always -3

The condition of the mental health of the user is decided using the below metrics:

Quiz Score	Mental health condition
$0 \leq \text{score} < 5$	Absolutely fit
$5 \leq \text{score} \leq 9$	Normal
$9 < \text{score} \leq 18$	Below average
$18 < \text{score} \leq 27$	Poor



Upon clicking the “Know More” button the user is directed to the resources page and is shown content according to the score:



localhost / 127.0.0.1:3308 | php | Reading Corner
localhost/mindcare/resources.php

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✓ Last Updated on January 12, 2021

3 Reasons Why Mental Health Is So Important

Sarah Browne
Sarah is a speaker, writer and activist [Read full profile](#)

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ADVERTISING

Mental health matters. Taking care of our mental health aids in our resilience and recovery from anything that happens.

Anyone can have a bad day, but it doesn't mean that it's a bad life. How we respond to it and take care of our mental health are what's important.

Type here to search

ENG 11:53
INTL 29-05-2021

localhost / 127.0.0.1:3308 | php | Reading Corner
localhost/mindcare/resources.php

The infographic features a central illustration of a human brain with two green thumbs pointing outwards from its sides. The background is a light green map-like texture. Surrounding the brain are two columns of bullet points, each starting with a green dot. The left column lists common misconceptions, while the right column lists common stereotypes or misunderstandings about mental health.

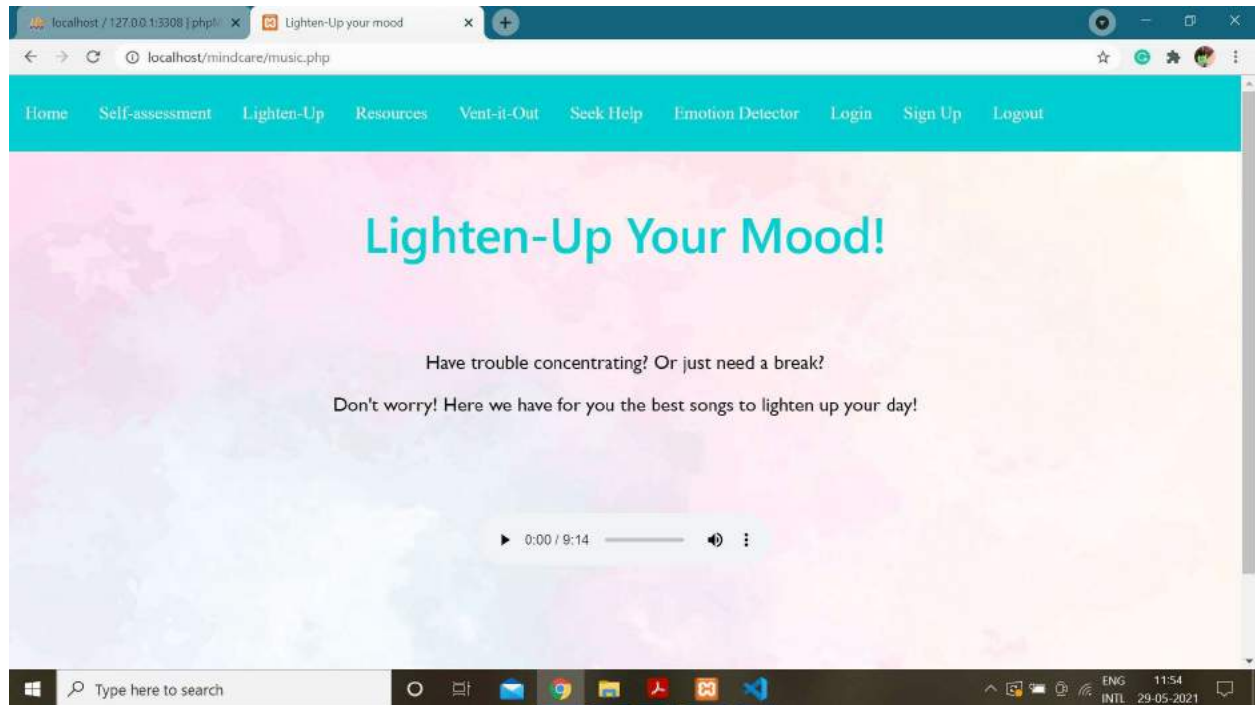
- of vital importance for you
- worth making time for
- evolving
- complex
- affecting us and our everyday life
- influenced by many factors
- linked to physical health
- part of you
- real

- a sign of weakness
- only the negative
- shameful
- "all in your mind"
- something you decide to have
- relevant only for those who struggle
- the same as mental illness
- something we start looking after only when it gets

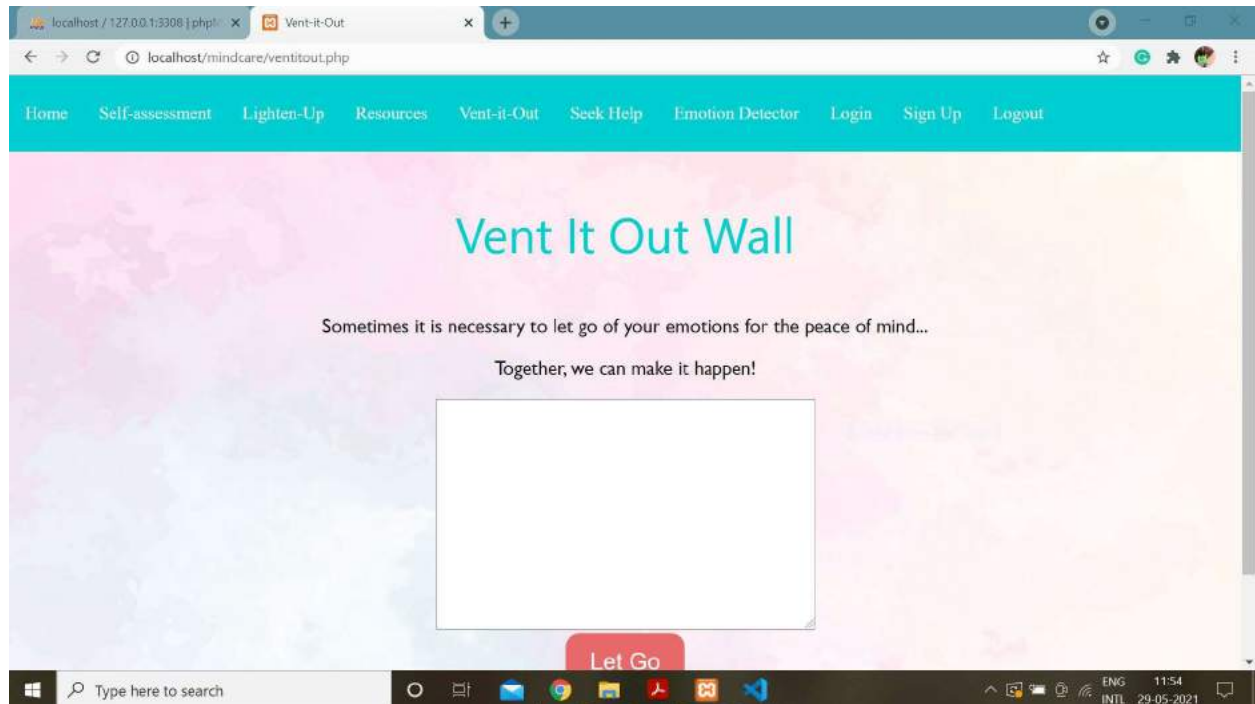
Type here to search

ENG 11:54
INTL 29-05-2021

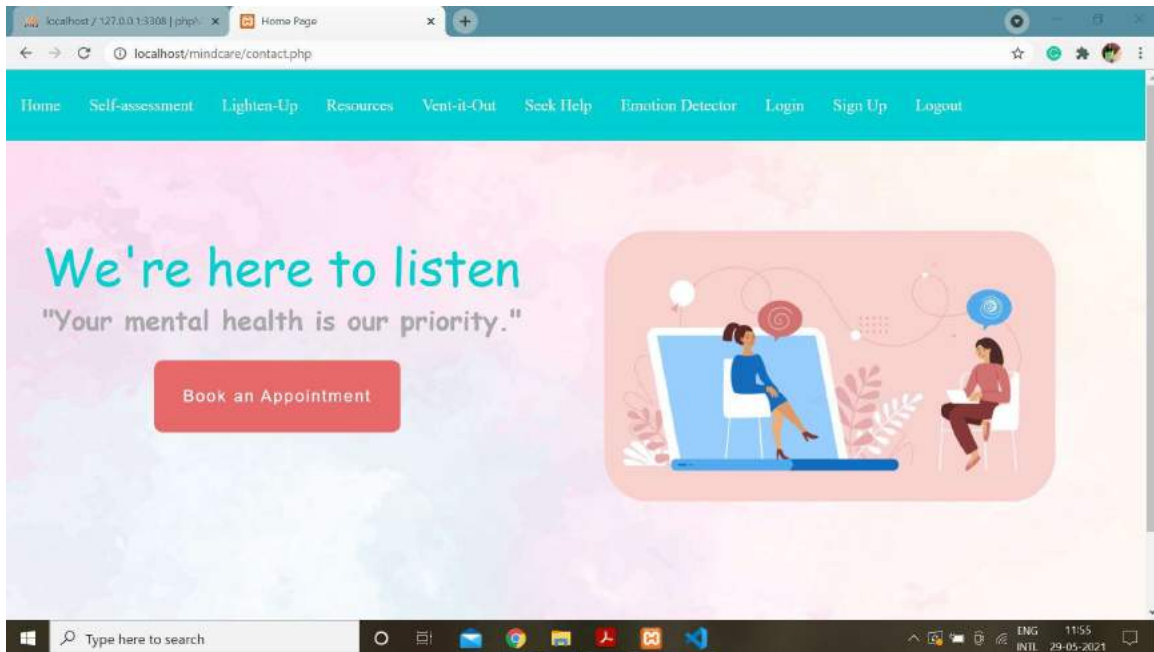
Lighten-up your mood page:



Vent-it out wall:

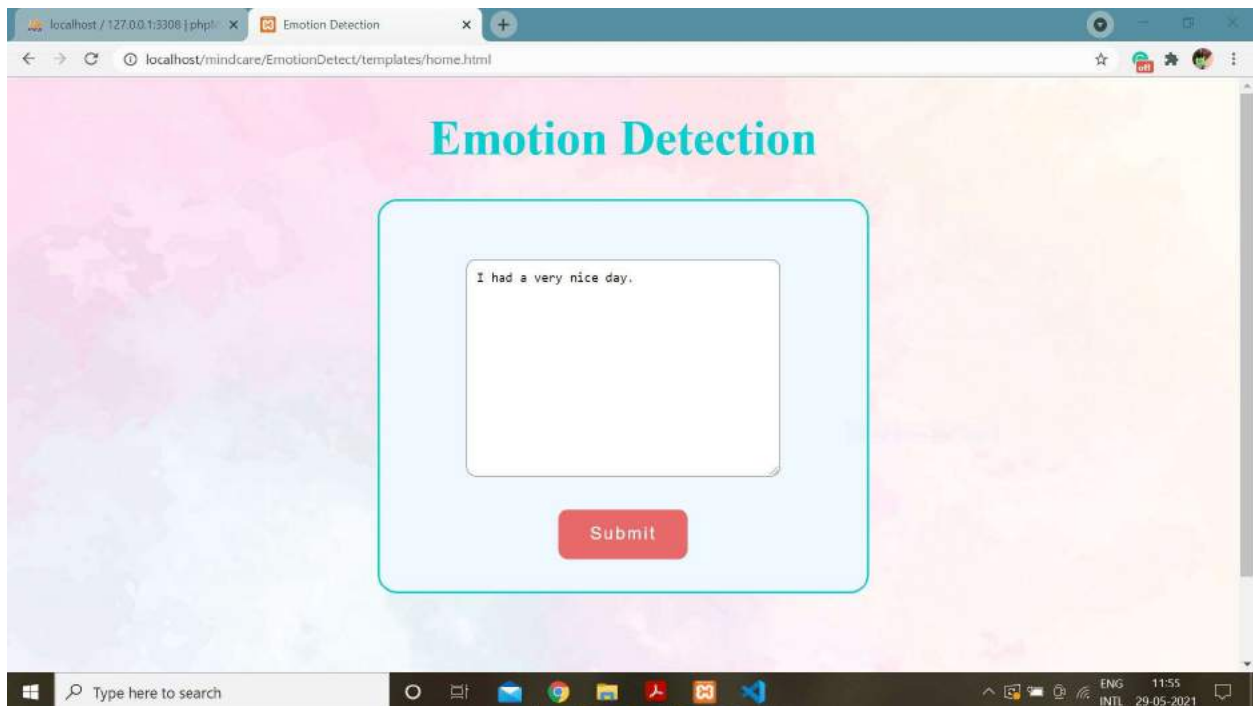


Seek help page:

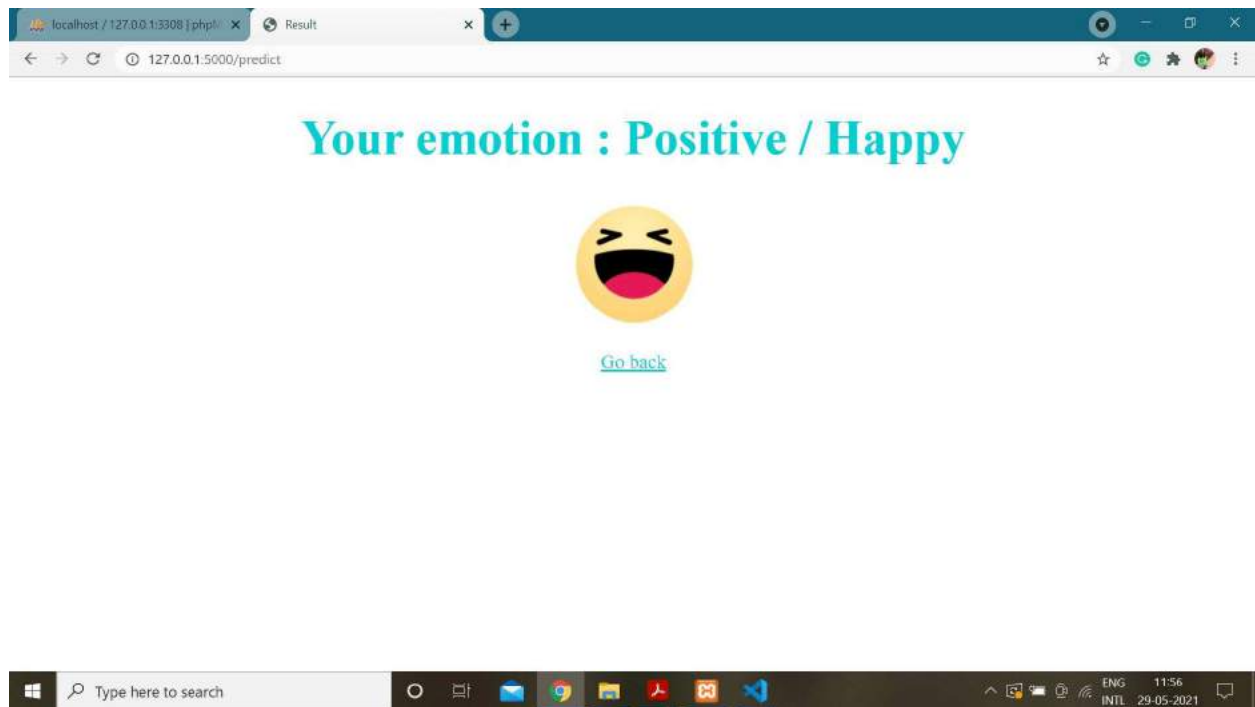


Emotion detector:

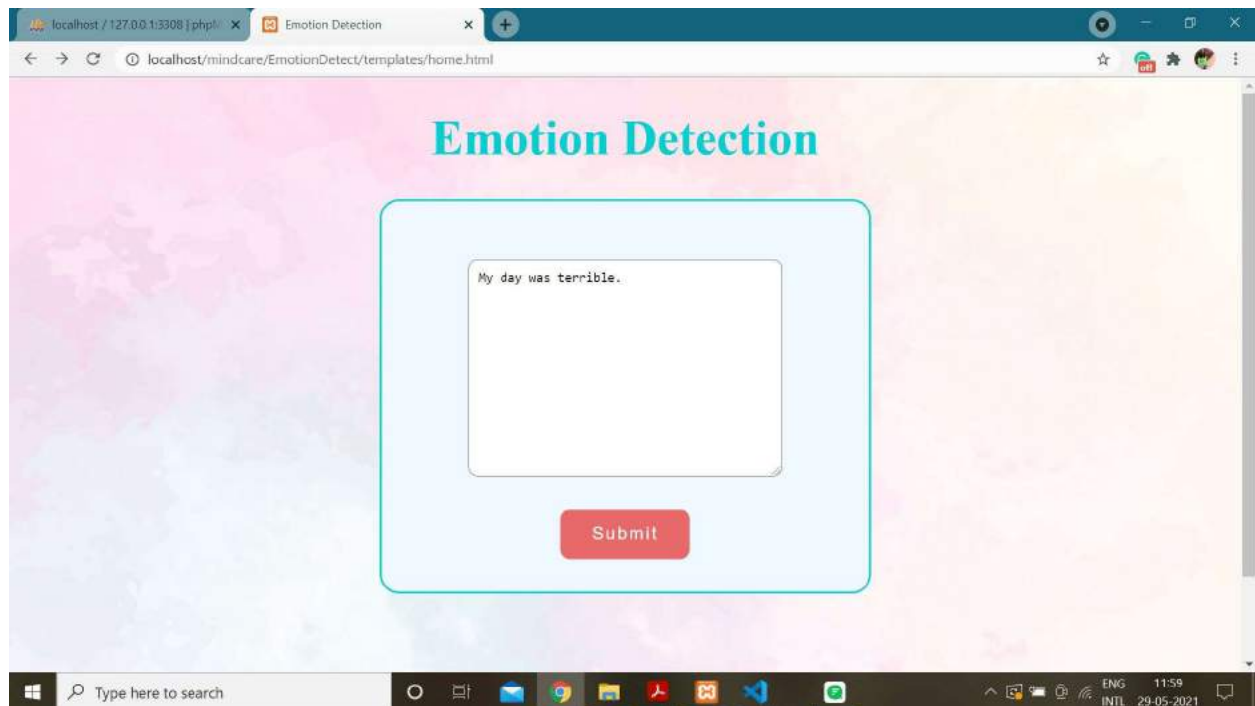
On entering the text "I had a very nice day"



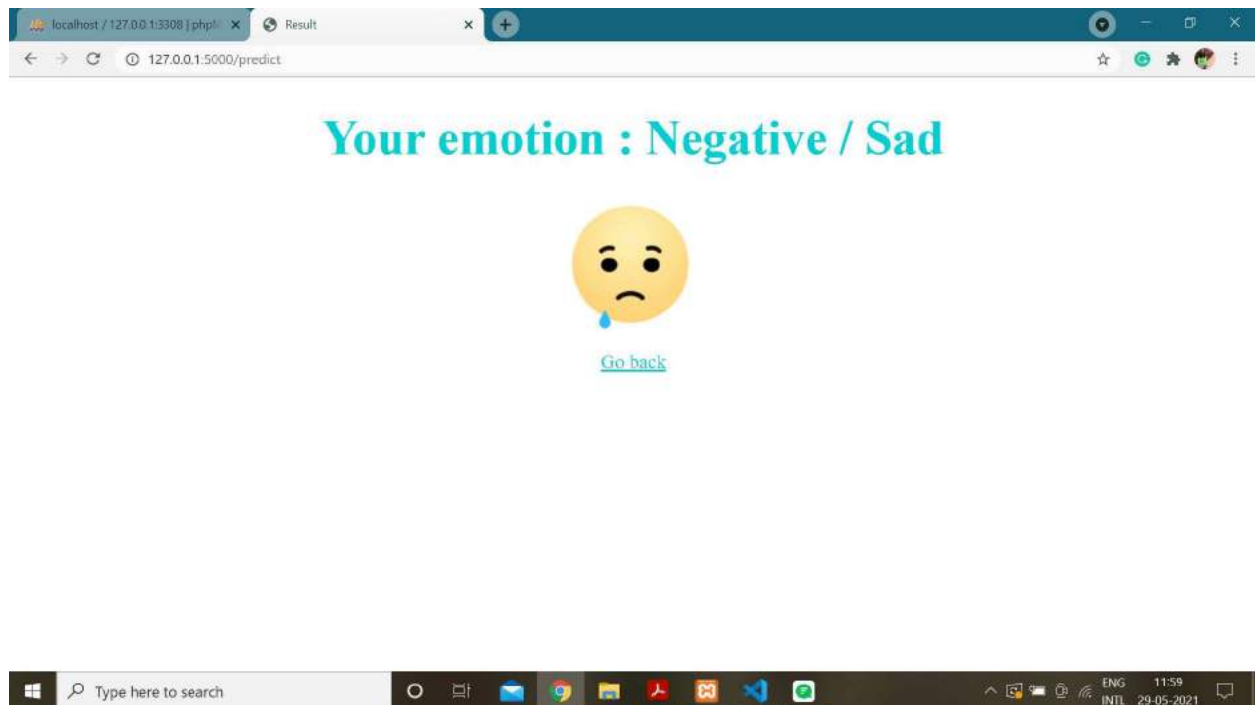
The emotion of the user is detected as “Positive/Happy”.



On entering the text “My day was terrible”.



The emotion of the user is detected as Negative/Sad.



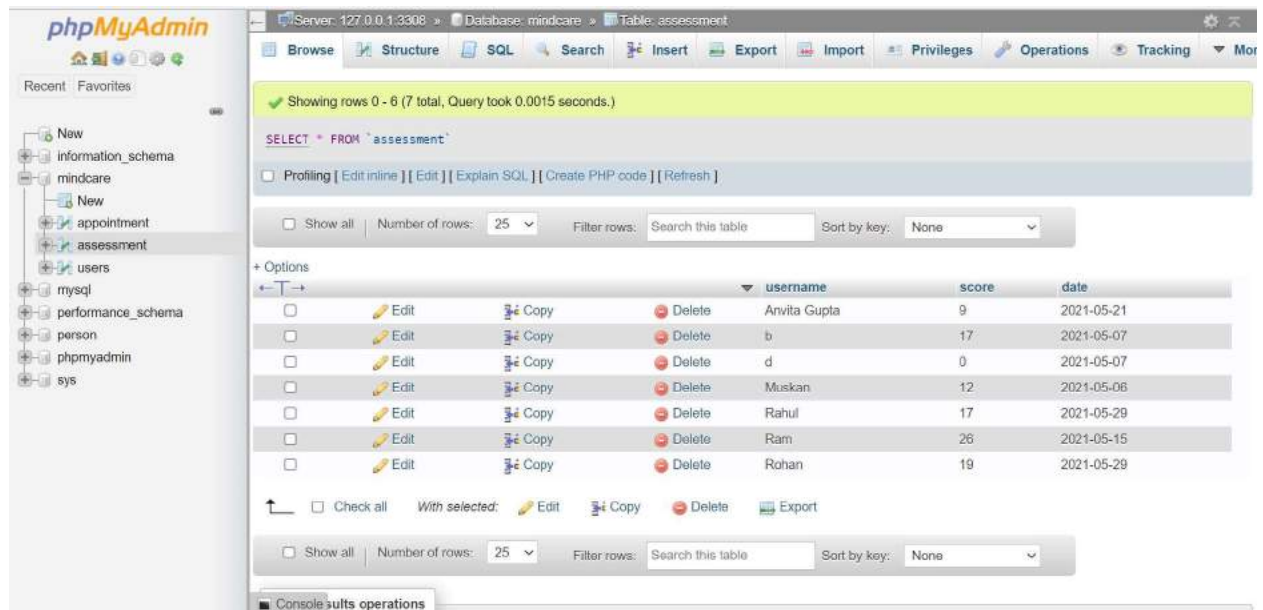
Tables in the database:

users table:

A screenshot of the phpMyAdmin interface. The left sidebar shows a database structure with 'mindcare' selected, containing tables like 'appointment', 'assessment', and 'users'. The main panel shows the 'users' table with 10 rows. The table has columns for 'username', 'email', and 'password'. Below the table, there are options to check all, edit, copy, delete, or export the selected rows.

	username	email	password
<input type="checkbox"/>	a	a@gmail.com	\$2y\$10\$okVxBcd2GggSv
<input type="checkbox"/>	anvita	anvita@gmail.com	anvita
<input type="checkbox"/>	Anvita Gupta	anvitagupta@gmail.co	anvita
<input type="checkbox"/>	b	b	b
<input type="checkbox"/>	c	c	c
<input type="checkbox"/>	d	d	d
<input type="checkbox"/>	Muskan	muskan@gmail.com	muskan
<input type="checkbox"/>	Rahul	rahul@gmail.com	rahul
<input type="checkbox"/>	Ram	ram@gmail.com	ram
<input type="checkbox"/>	Rohan	rohan@gmail.com	rohan

assessment table:



Server: 127.0.0.1:3308 » Database: mindcare » Table: assessment

Showing rows 0 - 6 (7 total, Query took 0.0015 seconds.)

`SELECT * FROM `assessment``

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

+ Options

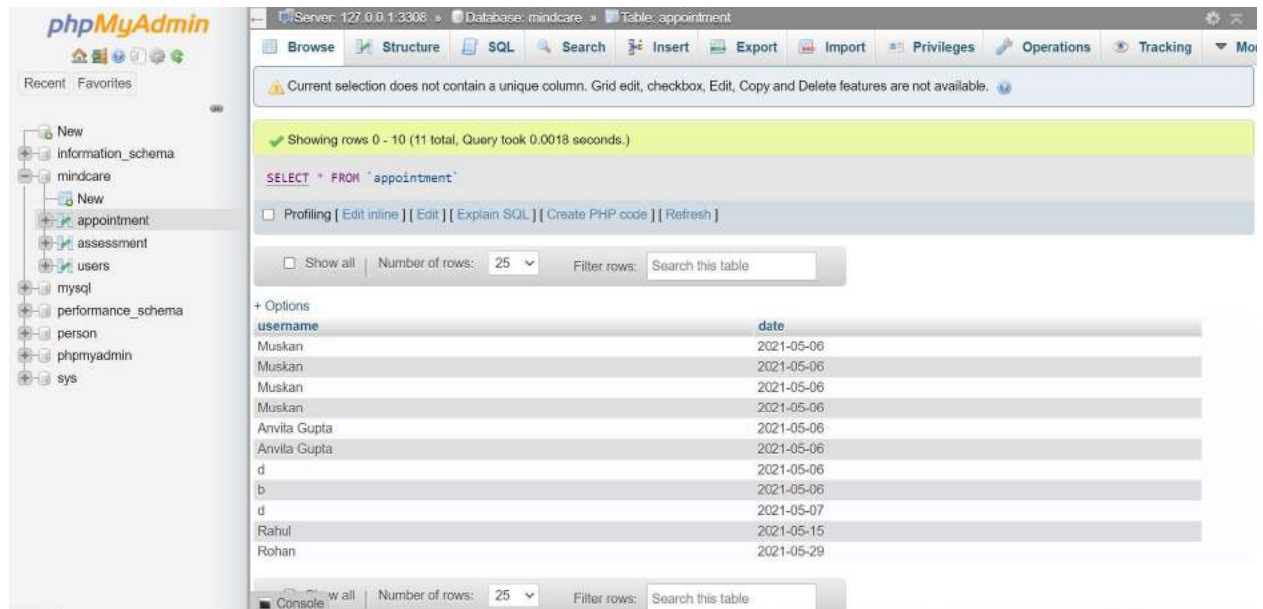
				username	score	date
<input type="checkbox"/>	Edit	Copy	Delete	Anvita Gupta	9	2021-05-21
<input type="checkbox"/>	Edit	Copy	Delete	b	17	2021-05-07
<input type="checkbox"/>	Edit	Copy	Delete	d	0	2021-05-07
<input type="checkbox"/>	Edit	Copy	Delete	Muskan	12	2021-05-06
<input type="checkbox"/>	Edit	Copy	Delete	Rahul	17	2021-05-29
<input type="checkbox"/>	Edit	Copy	Delete	Ram	26	2021-05-15
<input type="checkbox"/>	Edit	Copy	Delete	Rohan	19	2021-05-29

Check all | With selected: Edit Copy Delete Export

Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

Console | SQL operations

appointment table:



Server: 127.0.0.1:3308 » Database: mindcare » Table: appointment

Current selection does not contain a unique column. Grid edit, checkbox, Edit, Copy and Delete features are not available.

Showing rows 0 - 10 (11 total, Query took 0.0018 seconds.)

`SELECT * FROM `appointment``

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

Show all | Number of rows: 25 | Filter rows: Search this table

+ Options

username	date
Muskan	2021-05-06
Muskan	2021-05-06
Muskan	2021-05-06
Muskan	2021-05-06
Anvita Gupta	2021-05-06
Anvita Gupta	2021-05-06
d	2021-05-06
b	2021-05-06
d	2021-05-07
Rahul	2021-05-15
Rohan	2021-05-29

Show all | Number of rows: 25 | Filter rows: Search this table

Console

Conclusion

MindCare, a mental health website, included various features which would enhance the user's mental wellbeing, bringing calm and peace to their lives. It aims to give its users a calming experience and help them stay strong in tough times. It will make them aware of their current mental health conditions and also suggest the next steps according to their condition. This will help them to take steps to improve or sustain their mental health.

This website was prototyped and designed keeping in mind the principles of techno-spirituality and slow computing.

The website interface was designed applying the following principles of HCI: Interactive design, should cater to universal usability, offer informative feedback, prevent errors, permit easy reversal of actions, exploit constraints, aesthetic and minimalist design, flexibility and efficiency of use.

The novelty of our project is the Emotion Detector, which is integrated into our website. The emotion detector aims to detect the emotion of the user using text entered by the user. Having this functionality in the website interface will prove to be beneficial for the users as it will make the user aware of his/her mental condition. Awareness is the first step towards improving on something.

After the user is aware of how he/she feels through the emotion detector and the self-assessment, they can view resources according to how they are feeling and also listen to music. They can contact counselors if they feel the need to talk. There can also share their feelings in the Vent-it-out wall wherein we promise to ensure their privacy. Utilizing all these features will give the users a positive and holistic experience.

References

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JMIR Mental Health 2018;5(3):e50
URL: <https://mental.jmir.org/2018/3/e50>
DOI: 10.2196/mental.8594
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- [10] Wiese, L., Pohlmeier, A. E., & Hekkert, P. (2020). Design for Sustained Wellbeing through Positive Activities—A Multi-Stage Framework. *Multimodal Technologies and Interaction*, 4(4), 71. <https://doi.org/10.3390/mti4040071>

Prototyping mindfulness

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VIT University,Vellore

Abstract— In this paper, we aim to study how the concepts of Human-Computer Interaction (HCI) can help in achieving ‘Techno-Spirituality’ and ‘Slow Design’. The first term ‘Techno-Spirituality’ is the study of how technology can assist humans’ spiritually. Its co-aspects explore areas such as mindfulness, meditation, positive computing, and the overall well-being of an individual. We will also be focusing on the second term called ‘Slow Design’ which is believed to help facilitate self-reflection and relaxation.

Based on the grounds of what we find out through our review study, we aim to develop a digital mindfulness prototype designed for stress reduction and positive computing. We will try to provide a new prototype or redesign the existing technology for facilitating more better interaction between humans and computers. We will be exploring innovative ways to utilize technology to support the wellbeing of humans through the use of HCI concepts. In this process, we will also seek to find out the challenges faced when aiming for a successful partnership between technology and mindfulness.

Keywords— Human-Computer Interaction; Techno-spirituality; Slow design; Mindfulness; Positive computing; positive psychology; Wellbeing; Meditation

I. INTRODUCTION

Based on our study we have made a website incorporating all the factors that we found was required to make a fully equipped website that aims to provide mindfulness and tries to lower stress for the users. Our study resulted into numerous factors that can be used to provide mindfulness and well being for a person and so we have selected the top seven features out of it and incorporated into our website. With this we aim to provide techno spirituality and mindfulness to all the users.

II. LITERATURE SURVEY

Two terms that are gaining popularity in the areas of mindfulness and technology are ‘Slow design’ and ‘Techno-spirituality’.

Whenever we hear of the term slow we associate it with how long it takes to build or do some task. Rather, slow design is a term that describes an expanded state of awareness, accountability for daily actions, and the potential for a richer spectrum of experience for individuals and communities.

Following are the principles of slow design:

- Reveal
- Expand
- Reflect
- Engage
- Participate
- Evolve

This concept of slow design has not yet been applied to website designing. In our prototype, we will try to incorporate the above-mentioned principles.

The second term, ‘Techno-spirituality’ is defined as the concept of how spiritual practices are increasingly mediated through

technology. Through the introduction of meditation music in our website prototype, we would like to take forward this concept and

help the users gain a spiritual meaning in their lives. It would also help them cultivate calmness and peace in their daily lives.

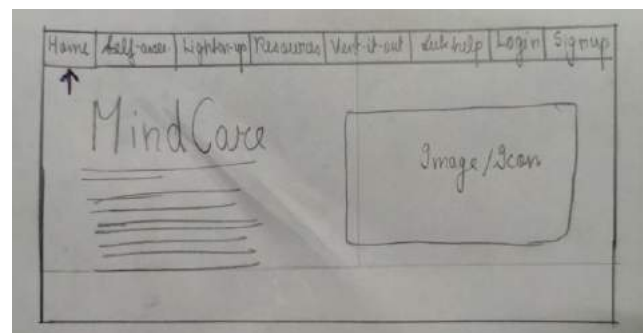
III. METHODOLOGY

1. Analysis and Design

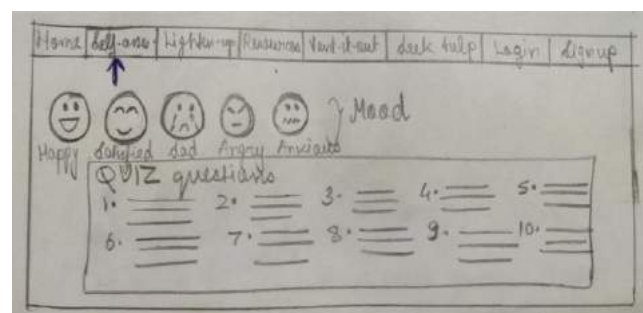
The concepts of slow design and techno-spirituality were analyzed and thoroughly as shown in the literature survey and then according to these principles prototyping for the website was conducted.

2. Prototype:

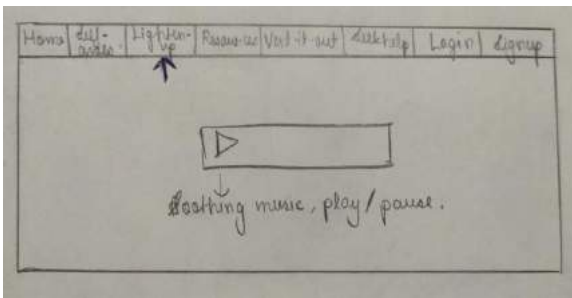
Storyboard #1: Home page



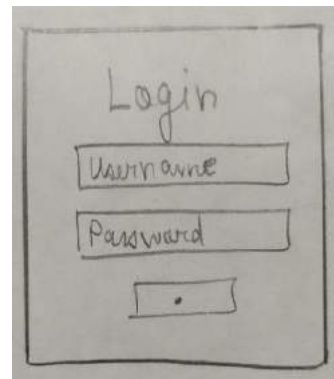
Storyboard #2: Self-assessment



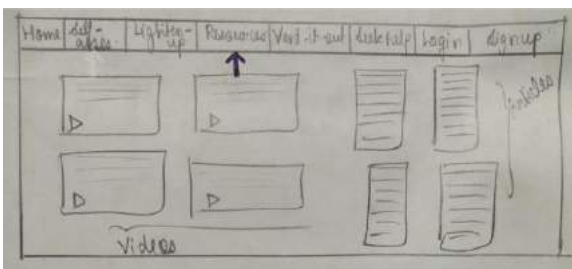
Storyboard #3 : Lighten-up



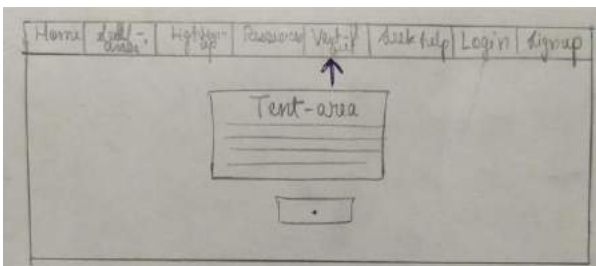
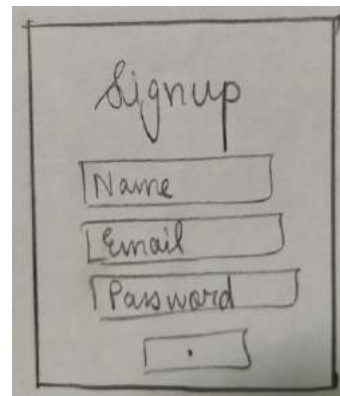
Storyboard #4: Resources



Storyboard #8 : Signup



Storyboard #5 : Vent-it-out

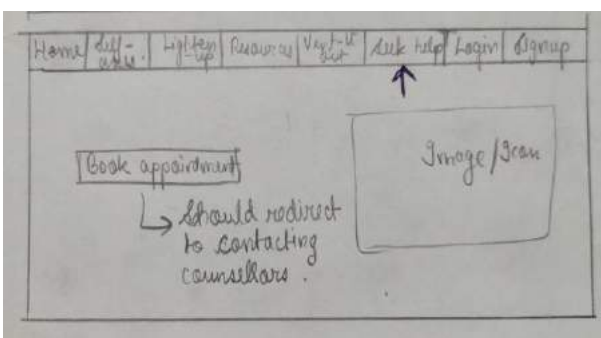


IV. RESULTS AND DISCUSSIONS

Signup page:

Creating a new account of the user:

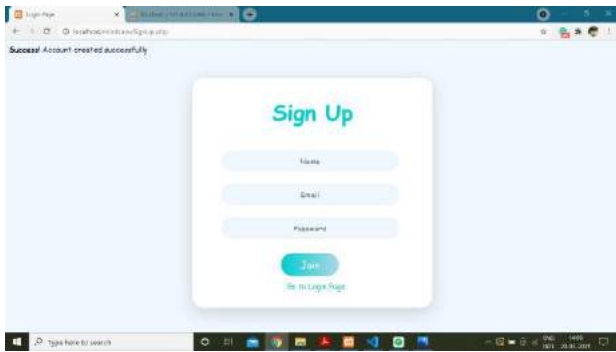
Storyboard #6: Seek Help



Storyboard #7 : Login

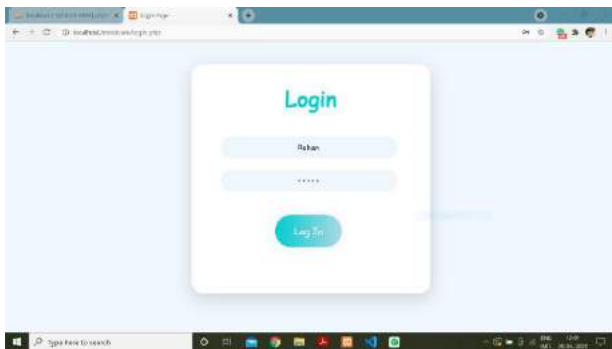


Signup successful:



Login page:

Logging in with username and password:



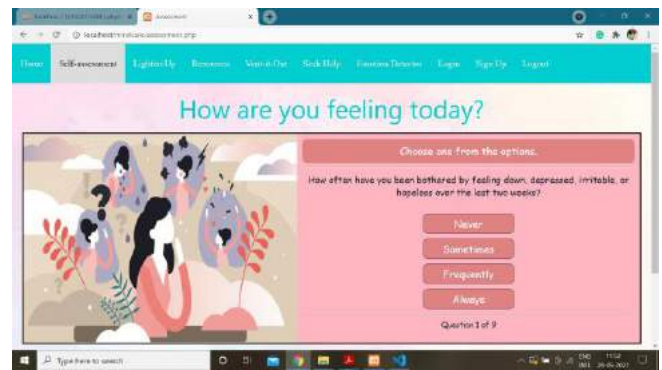
Home page:

Login successful and the user is redirected to Home Page:



Self-assessment:

In the self-assessment section, the user is prompted to fill a standard quiz (consisting of 9 questions) to assess the mental health of the person:

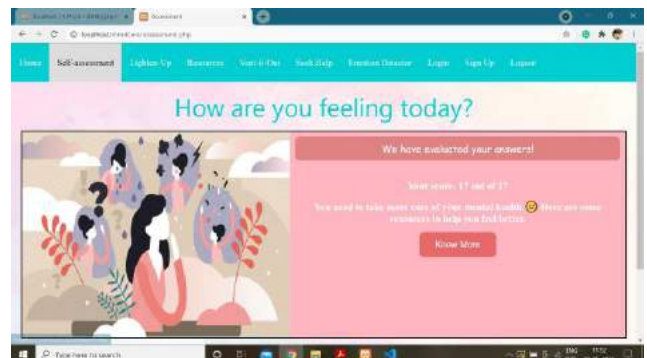


The score of the user is shown and then according to the obtained score the user is shown resources on clicking the “Know More” button. Following are the points for the option values:

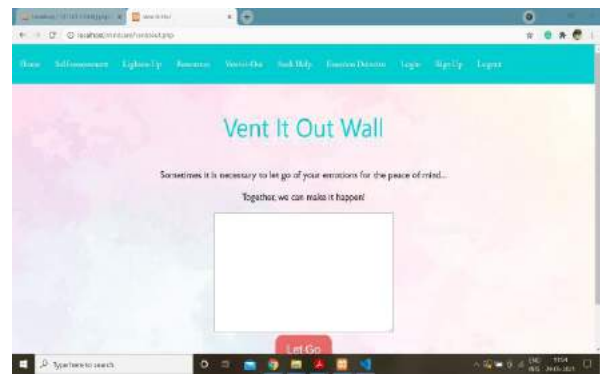
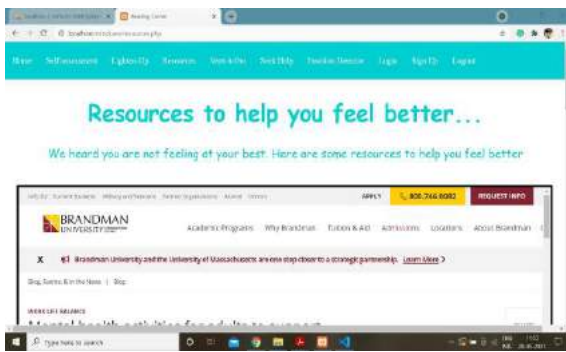
Never	- 0
Sometimes	- 1
Frequently	- 2
Always	-3

The condition of the mental health of the user is decided using the below metrics:

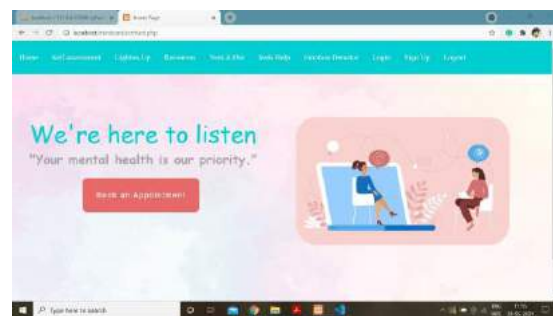
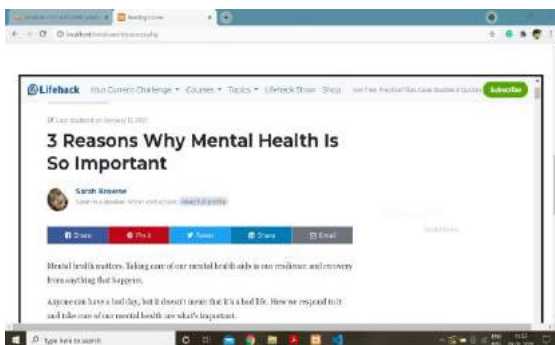
Quiz Score	Mental health condition
$0 \leq \text{score} < 5$	Absolutely fit
$5 \leq \text{score} \leq 9$	Normal
$9 < \text{score} \leq 18$	Below average
$18 < \text{score} \leq 27$	Poor



Upon clicking the “Know More” button the user is directed to the resources page and is shown content according to the score:



Seek help page:

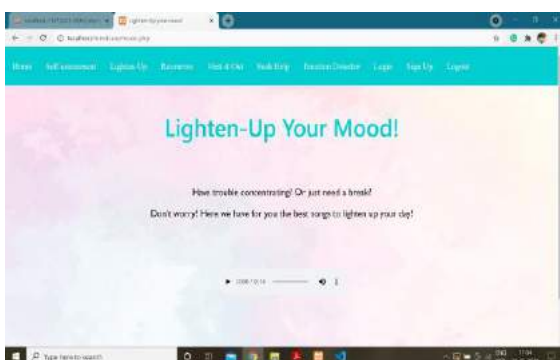


Emotion detector:

We have created a new algorithm that takes adverb, verb and adjectives into considerations while determining whether a sentence is positive or negative. The name that we have given to our algorithm is SAPSI that stands for Sentiment Analysis through Polarity Subjectivity and Intensity. The Polarity value ranges from -1 to 1 and the subjectivity value ranges from 0 to 1 same applies for the intensity value. The sentiment is analyzed with the help of these scores.

The SAPSI algorithm multiplies the intensity value of an adverb to the subjectivity value of the verb and then the average of this and the polarity is calculated. The resulting value then decides whether it's a positive or negative and up till what extend depending on the score generated.

Lighten-up your mood page:

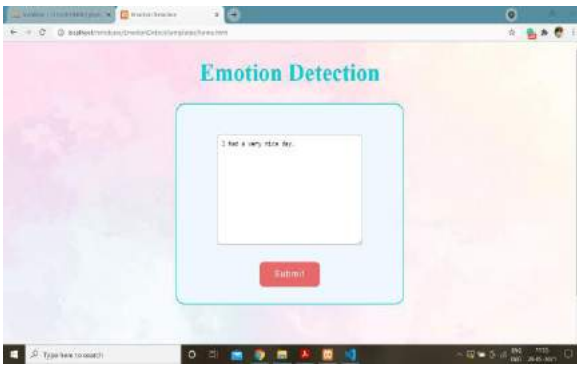


$$\text{Score} = (\text{polarity} + (\text{intensity} \times \text{subjectivity})) / 2$$

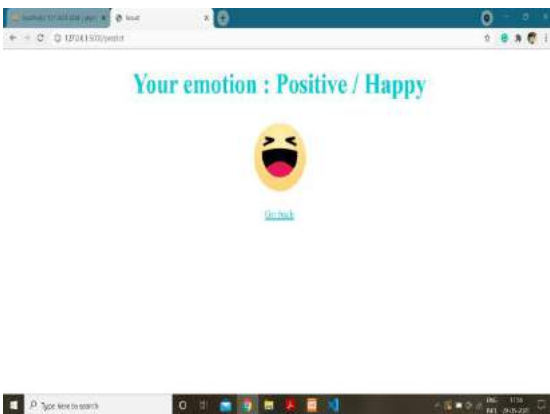
-1 to 0 ----> negative/sad
0 to 1 ----> positive/happy

On entering the text "I had a very nice day"

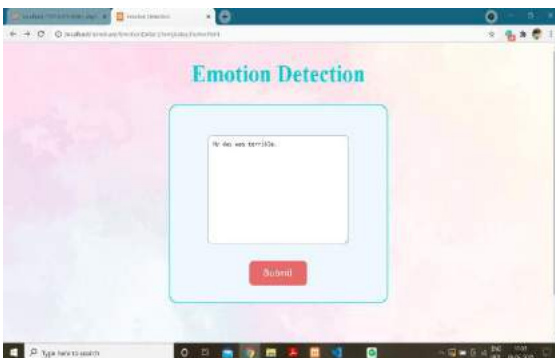
Vent-it out wall:



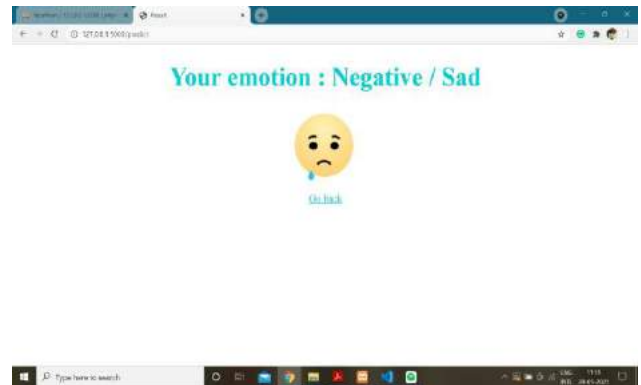
The emotion of the user is detected as “Positive/Happy”.



On entering the text “My day was terrible”.



The emotion of the user is detected as Negative/Sad.



Tables in the database:

users table:

The screenshot shows the phpMyAdmin interface for the "users" table. The table structure is as follows:

Field	Type	Collate	Null	Index	Comment
id	INT	NULL	NO	PRIMARY	
username	VARCHAR(50)	utf8mb4_unicode_ci	NO	INDEX	
password	VARCHAR(50)	utf8mb4_unicode_ci	NO	INDEX	
email	VARCHAR(50)	utf8mb4_unicode_ci	NO	INDEX	
name	VARCHAR(50)	utf8mb4_unicode_ci	NO	INDEX	

The table contains 5 records. The data is as follows:

id	username	password	email	name
1	admin	admin	admin@gmail.com	Admin
2	user	user	user@gmail.com	User
3	user	user	user@gmail.com	User
4	user	user	user@gmail.com	User
5	user	user	user@gmail.com	User

assessment table:

The screenshot shows the phpMyAdmin interface for the "assessment" table. The table structure is as follows:

Field	Type	Collate	Null	Index	Comment
id	INT	NULL	NO	PRIMARY	
username	VARCHAR(50)	utf8mb4_unicode_ci	NO	INDEX	
password	VARCHAR(50)	utf8mb4_unicode_ci	NO	INDEX	
email	VARCHAR(50)	utf8mb4_unicode_ci	NO	INDEX	
name	VARCHAR(50)	utf8mb4_unicode_ci	NO	INDEX	

The table contains 5 records. The data is as follows:

id	username	password	email	name
1	admin	admin	admin@gmail.com	Admin
2	user	user	user@gmail.com	User
3	user	user	user@gmail.com	User
4	user	user	user@gmail.com	User
5	user	user	user@gmail.com	User

appointment table:

The screenshot shows the phpMyAdmin interface for the "appointment" table. The table structure is as follows:

Field	Type	Collate	Null	Index	Comment
id	INT	NULL	NO	PRIMARY	
username	VARCHAR(50)	utf8mb4_unicode_ci	NO	INDEX	
password	VARCHAR(50)	utf8mb4_unicode_ci	NO	INDEX	
email	VARCHAR(50)	utf8mb4_unicode_ci	NO	INDEX	
name	VARCHAR(50)	utf8mb4_unicode_ci	NO	INDEX	

The table contains 5 records. The data is as follows:

id	username	password	email	name
1	admin	admin	admin@gmail.com	Admin
2	user	user	user@gmail.com	User
3	user	user	user@gmail.com	User
4	user	user	user@gmail.com	User
5	user	user	user@gmail.com	User

V. CONCLUSION

MindCare, a mental health website, included various features which would enhance the user's mental wellbeing, bringing calm and peace to their lives. It aims to give its users a calming experience and help them stay strong in tough times. It will make them aware of their current mental health conditions and also suggest the next steps according to their condition. This will help them to take steps to improve or sustain their mental health. This website was prototyped and designed keeping in mind the principles of techno-spirituality and slow computing.

The website interface was designed applying the following principles of HCI: Interactive design, should cater to universal usability, offer informative feedback, prevent errors, permit easy reversal of actions, exploit constraints, aesthetic and minimalist design, flexibility and efficiency of use.

The novelty of our project is the Emotion Detector, which is integrated into our website. The emotion detector aims to detect the emotion of the user using text entered by the user. Having this functionality in the website interface will prove to be beneficial for the users as it will make the user aware of his/her mental condition. Awareness is the first step towards improving on something. After the user is aware of how he/she feels through the emotion detector and the self-assessment, they can view resources according to how they are feeling and also listen to music. They can contact counselors if they feel the need to talk. There can also share their feelings in the Vent-it-out wall wherein we promise to ensure their privacy. Utilizing all these features will give the users a positive and holistic experience.

VI. REFERENCES

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A Process Evaluation of a Web-Based Mental Health Portal (WalkAlong) Using Google Analytics
JMIR Mental Health 2018;5(3):e50
URL: <https://mental.jmir.org/2018/3/e50>
DOI: 10.2196/mental.8594
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Prototyping mindfulness

Rajat Sharma
18BCB0065
VIT University,Vellore

Anvita Gupta
18BCB0005
VIT University,Vellore

Abstract— In this paper, we aim to study how the concepts of Human-Computer Interaction (HCI) can help in achieving 'Techno-Spirituality' and 'Slow Design'. The first term 'Techno-Spirituality' is the study of how technology can assist humans' spiritually. Its co-aspects explore areas such as mindfulness, meditation, positive computing, and the overall well-being of an individual. We will also be focusing on the second term called 'Slow Design' which is believed to help facilitate self-reflection and relaxation.^[6]

Based on the grounds of what we find out through our review study, we aim to develop a digital mindfulness prototype designed for stress reduction and positive computing. We will try to provide a new prototype or redesign the existing technology for facilitating more better interaction between humans and computers. We will be exploring innovative ways to utilize technology to support the wellbeing of humans through the use of HCI concepts. In this process, we will also seek to find out the challenges faced when aiming for a successful partnership between technology and mindfulness.

Keywords— Human-Computer Interaction; Techno-spirituality; Slow design; Mindfulness; Positive computing; positive psychology; Wellbeing; Meditation

I. INTRODUCTION

Based on our study we have made a website incorporating all the factors that we found was required to make a fully equipped website that aims to provide mindfulness and tries to lower stress for the users. Our study resulted into numerous factors that can be used to provide mindfulness and well being for a person and so we have selected the top seven features out of it and incorporated into our website. With this we aim to provide techno spirituality and mindfulness to all the users.

II. LITERATURE SURVEY

Two terms that are gaining popularity in the areas of mindfulness and technology are 'Slow design' and 'Techno-spirituality'.

Whenever we hear of the term slow we associate it with how long it takes to build or do some task. Rather, slow design is a term that describes an expanded state of awareness, accountability for daily actions, and the potential for a richer spectrum of experience for individuals and communities.

Following are the principles of slow design:

- Reveal
- Expand
- Reflect
- Engage
- Participate
- Evolve

This concept of slow design has not yet been applied to website designing. In our prototype, we will try to incorporate the above-mentioned principles.

The second term, 'Techno-spirituality' is defined as the concept of how spiritual practices are increasingly mediated through

technology. Through the introduction of meditation music in our website prototype, we would like to take forward this concept and

help the users gain a spiritual meaning in their lives. It would also help them cultivate calmness and peace in their daily lives.

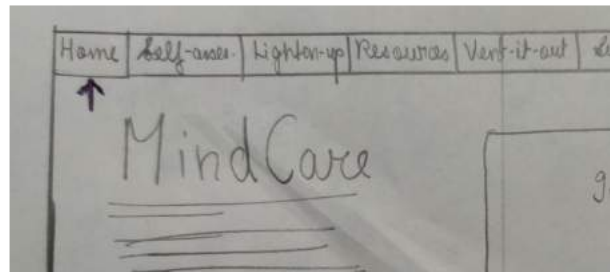
III. METHODOLOGY

1. Analysis and Design

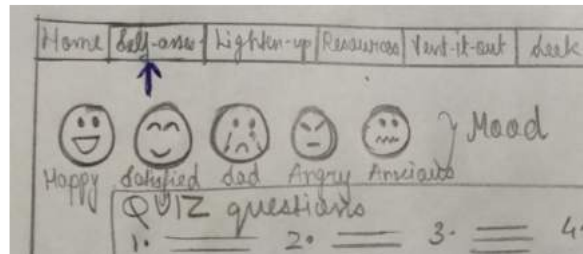
The concepts of slow design and techno-spirituality were analyzed and thoroughly as shown in the literature survey and then according to these principles prototyping for the website was conducted.

2. Prototype:

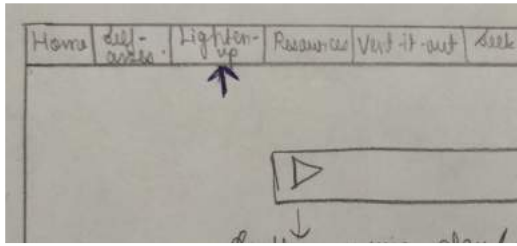
StoryBoarding #1: Home page



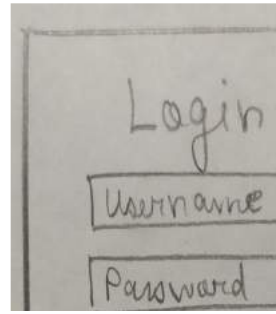
StoryBoarding #2: Self-assessment



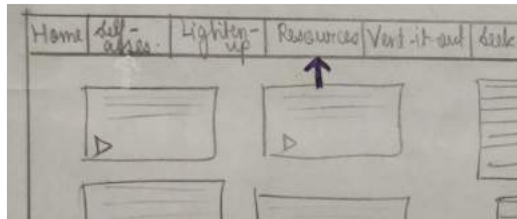
StoryBoarding #3 : Lighten-up



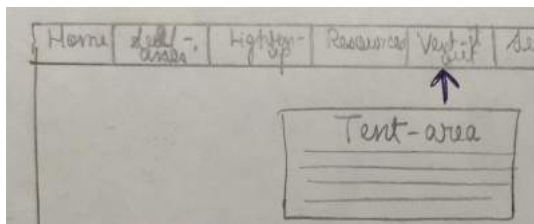
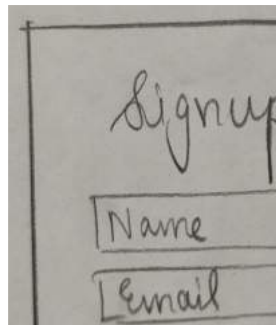
StoryBoarding #4: Resources



StoryBoarding #8 : Signup



StoryBoarding #5 : Vent-it-out

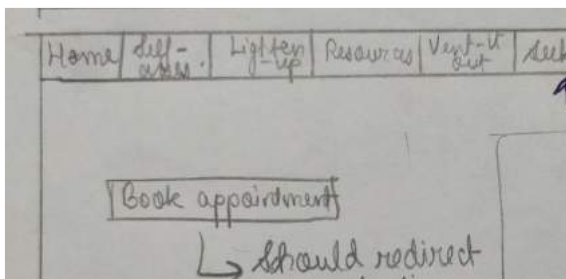


StoryBoarding #6: Seek Help

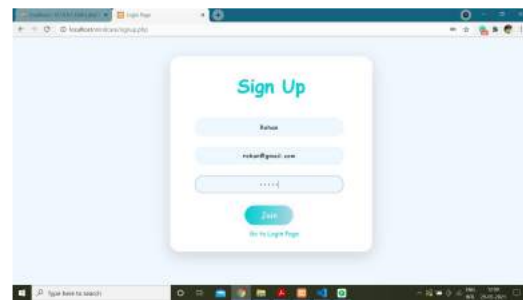
IV. RESULTS AND DISCUSSIONS

Signup page:

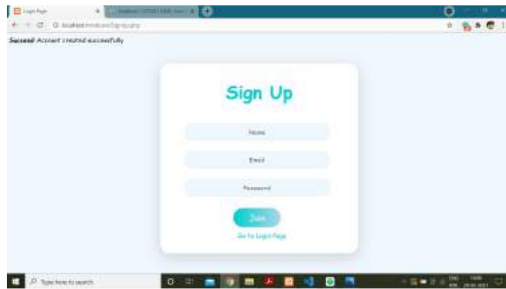
Creating a new account of the user:



StoryBoarding #7 : Login

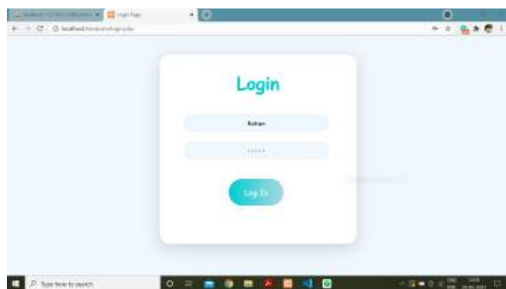


Signup successful:



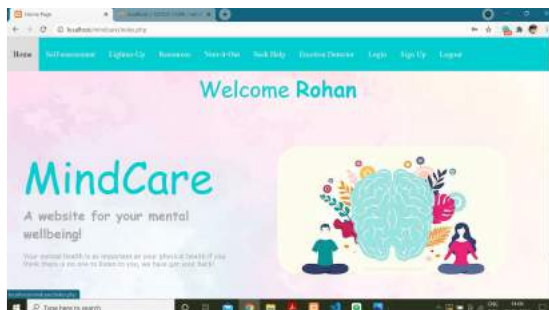
Login page:

Logging in with username and password:



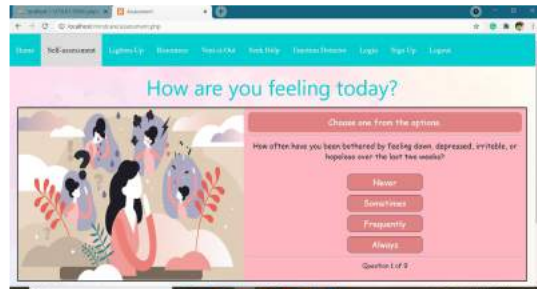
Home page:

Login successful and the user is redirected to Home Page:



Self-assessment:

In the self-assessment section, the user is prompted to fill a standard quiz (consisting of 9 questions) to assess the mental health of the person:

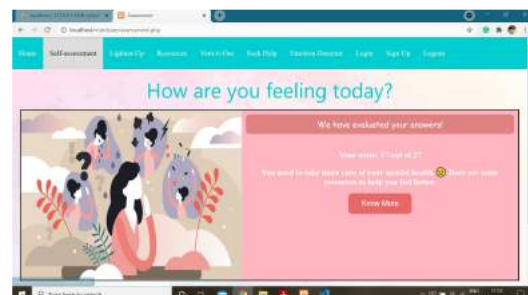


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Never - 0
Sometimes - 1
Frequently - 2
Always - 3

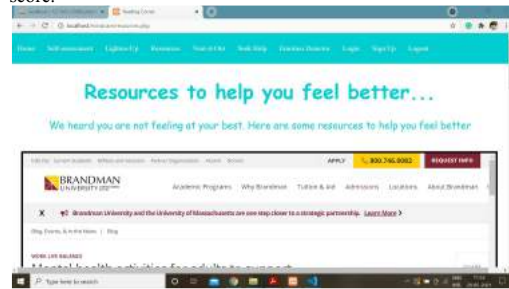
The condition of the mental health of the user is decided using the below metrics:

Quiz Score	Mental health condition
0 = score 5	Absolutely fit
5 = score =9	Normal
9 score =18	Below average
18 score =27	Poor

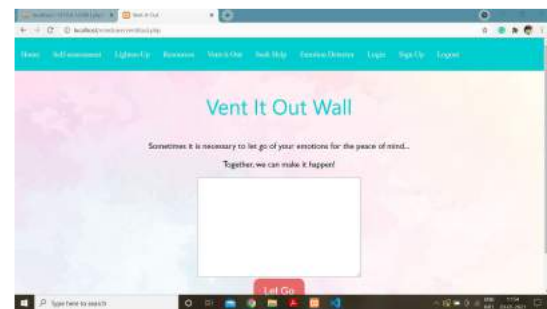


Upon clicking the “Know More” button the user is directed to the resources page and is shown content according to the

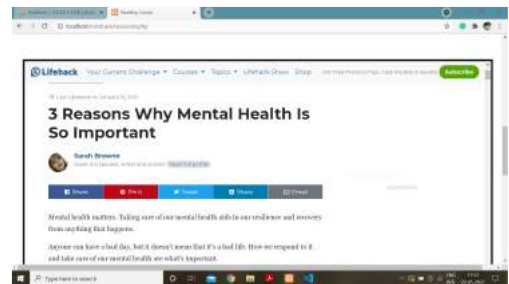
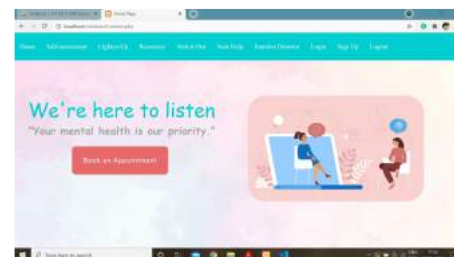
score:



Vent-it out wall:



Seek help page:

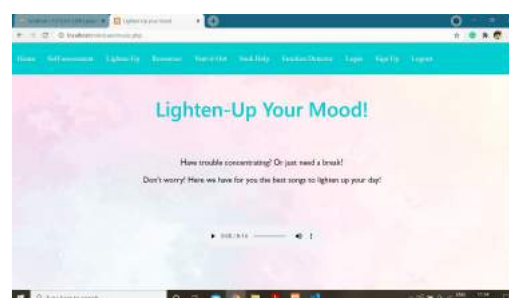


Emotion detector:

We have created a new algorithm that takes adverb, verb and adjectives into considerations while determining whether a sentence is positive or negative. The name that we have given to our algorithm is SAPSI that stands for Sentiment Analysis through Polarity Subjectivity and Intensity. The Polarity value ranges from -1 to 1 and the subjectivity value ranges from 0 to 1 same applies for the intensity value. The sentiment is analyzed with the help of these scores.

The SAPSI algorithm multiplies the intensity value of an adverb to the subjectivity value of the verb and then the average of this and the polarity is calculated. The resulting value then decides whether it's a positive or negative and up till what extend depending on the score generated.

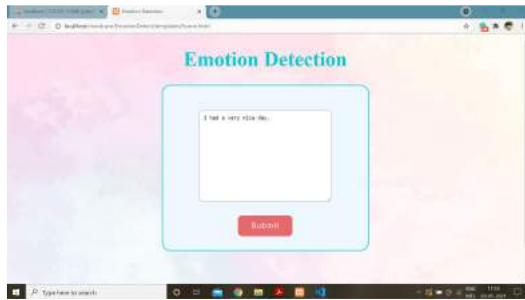
Lighten-up your mood page:



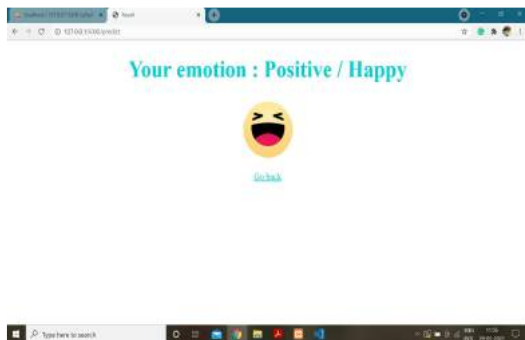
$$\text{Score} = (\text{polarity} + (\text{intensity} \times \text{subjectivity})) / 2$$

-1 to 0 ----> negative/sad
0 to 1 ----> positive/happy

On entering the text "I had a very nice day"



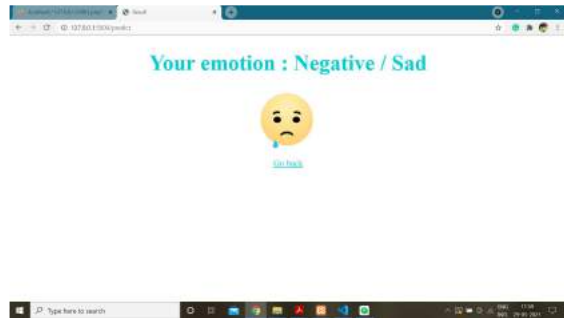
The emotion of the user is detected as “Positive/Happy”.



On entering the text “My day was terrible”.



The emotion of the user is detected as Negative/Sad.



Tables in the database:

users table:

id	username	password	email	phone
1	admin	admin	admin@gmail.com	9876543210
2	user	user	user@gmail.com	1234567890
3	user	user	user@gmail.com	1234567890
4	user	user	user@gmail.com	1234567890
5	user	user	user@gmail.com	1234567890
6	user	user	user@gmail.com	1234567890
7	user	user	user@gmail.com	1234567890
8	user	user	user@gmail.com	1234567890
9	user	user	user@gmail.com	1234567890
10	user	user	user@gmail.com	1234567890

assessment table:

id	username	password	email	phone
1	admin	admin	admin@gmail.com	9876543210
2	user	user	user@gmail.com	1234567890
3	user	user	user@gmail.com	1234567890
4	user	user	user@gmail.com	1234567890
5	user	user	user@gmail.com	1234567890
6	user	user	user@gmail.com	1234567890
7	user	user	user@gmail.com	1234567890
8	user	user	user@gmail.com	1234567890
9	user	user	user@gmail.com	1234567890
10	user	user	user@gmail.com	1234567890

appointment table:

id	username	password	email	phone
1	admin	admin	admin@gmail.com	9876543210
2	user	user	user@gmail.com	1234567890
3	user	user	user@gmail.com	1234567890
4	user	user	user@gmail.com	1234567890
5	user	user	user@gmail.com	1234567890
6	user	user	user@gmail.com	1234567890
7	user	user	user@gmail.com	1234567890
8	user	user	user@gmail.com	1234567890
9	user	user	user@gmail.com	1234567890
10	user	user	user@gmail.com	1234567890

V. CONCLUSION

MindCare, a mental health website, included various features which would enhance the user's mental wellbeing, bringing calm and peace to their lives. It aims to give its users a calming experience and help them stay strong in tough times. It will make them aware of their current mental health conditions and also suggest the next steps according to their condition. This will help them to take steps to improve or sustain their mental health. This website was prototyped and designed keeping in mind the principles of techno-spirituality and slow computing.

The website interface was designed applying the following principles of HCI: Interactive design, should cater to universal usability, offer informative feedback, prevent errors, permit easy reversal of actions, exploit constraints, aesthetic and minimalist design, flexibility and efficiency of use.

The novelty of our project is the Emotion Detector, which is integrated into our website. The emotion detector aims to detect the emotion of the user using text entered by the user. Having this functionality in the website interface will prove to be beneficial for the users as it will make the user aware of his/her mental condition. Awareness is the first step towards improving on something. After the user is aware of how he/she feels through the emotion detector and the self-assessment, they can view resources according to how they are feeling and also listen to music. They can contact counselors if they feel the need to talk. There can also share their feelings in the Vent-it-out wall wherein we promise to ensure their privacy. Utilizing all these features will give the users a positive and holistic experience.

VI. REFERENCES

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