Bariatrics Measurement and Tracking System

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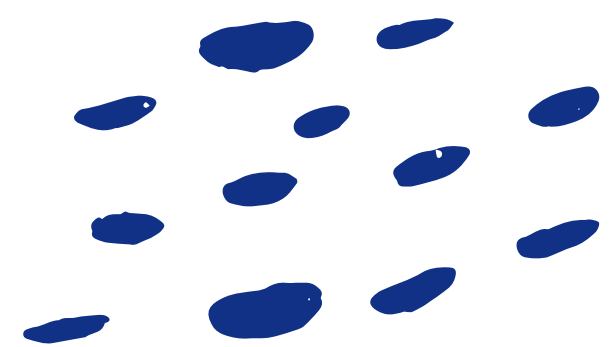PRESENTED BY
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SCOPE AND OBJECTIVE

BMATS - THIS IS A WEB APPLICATION, AS THE NAME SUGGESTS, IT'S A TRACKING SYSTEM THAT WILL ALLOW THE USERS TO TRACK THEIR DIET, FOOD NUTRIENTS, BMI, AND BMR. IT ALSO PROVIDES DIET PLANS TO MAINTAIN, GAIN AND LOSE WEIGHT BASED ON THE USER'S BASAL METABOLIC RATE. DIET PLANS ARE SUGGESTED BY SOME OF THE WORLD'S BEST BARIATRICIANS.

ABSTRACT

IN THE VIEW OF DEVELOPING TECHNOLOGY, CHANGING LIFESTYLES, AND BUSY SCHEDULES, PEOPLE OFTEN TEND TO NEGLECT THEIR HEALTH. THIS HAS LED TO AN OUTCRY ABOUT HEALTH-RELATED ISSUES AMONG ALL AGE GROUPS. THE YOUNGSTERS ARE THE MAJOR VICTIMS OF HEALTH PROBLEMS AS THEIR UNEVEN SCHEDULE MAKES IT DIFFICULT TO KEEP THE TRACK OF THE NUTRITIONAL VALUE OF THEIR MEAL INTAKE AND MAINTAIN DAILY HEALTH RECORDS MANUALLY. SINCE IT IS A WELL-KNOWN FACT THAT WHAT YOU EAT WHILE YOU ARE YOUNG IS WHAT YOU WILL BE WHEN YOU ARE OLD. THE POPULARITY AND USAGE OF SMARTPHONE APPLICATIONS LEAD TO THE NEED FOR AN APPLICATION THAT CAN CATER TO THE NEED FOR HEALTH MANAGEMENT AMONGST YOUNGSTERS. THIS PAPER PRESENTS THE DETAILS OF A FULLY FUNCTIONAL ANDROID APPLICATION FOR HEALTH MANAGEMENT SPECIFICALLY TARGETING YOUNG PEOPLE IN INDIA. THE DEVELOPED APPLICATION SOLVES THE MAJOR PRACTICAL PROBLEMS FACED DURING HEALTH MANAGEMENT AND MEAL INTAKE

TECH STACK

REACT JS
FRONT-ENFD/CLIENT-SIDE

SQL-SERVER
FOR DATA BASE

NODE JS & EXPRESS JS
FOR SERVER SIDE APPLICATION / BACK-END-API

HEROKU AND NETLIFY
FOR HOSTING BACK-END & FRONT-END RESPECTIVELY

SOFTWARE SPECIFICATION

REACT JS

REACT IS A FREE AND OPEN-SOURCE FRONT-END JAVASCRIPT LIBRARY FOR BUILDING USER INTERFACES BASED ON UI COMPONENTS. IT IS MAINTAINED BY META AND A COMMUNITY OF INDIVIDUAL DEVELOPERS AND COMPANIES.

SASS

SASS IS A PREPROCESSOR SCRIPTING LANGUAGE THAT IS INTERPRETED OR COMPILED INTO CASCADING STYLE SHEETS. SASSSCRIPT IS THE SCRIPTING LANGUAGE ITSELF. SASS CONSISTS OF TWO SYNTAXES. THE ORIGINAL SYNTAX, CALLED "THE INDENTED SYNTAX," USES A SYNTAX SIMILAR TO HAML.

AXIOS

AXIOS IS A PROMISE-BASED HTTP CLIENT FOR NODE. JS AND THE BROWSER. IT IS ISOMORPHIC (= IT CAN RUN IN THE BROWSER AND NODEJS WITH THE SAME CODEBASE). ON THE SERVER-SIDE IT USES THE NATIVE NODE. JS HTTP MODULE, WHILE ON THE CLIENT (BROWSER) IT USES XMLHTTPREQUESTS.

PASSPORT JS

PASSPORT IS AUTHENTICATION MIDDLEWARE FOR NODE.JS. EXTREMELY FLEXIBLE AND MODULAR, PASSPORT CAN BE UNOBTRUSIVELY DROPPED IN TO ANY EXPRESS-BASED WEB APPLICATION. A COMPREHENSIVE SET OF STRATEGIES SUPPORT AUTHENTICATION USING A USERNAME AND PASSWORD, FACEBOOK, TWITTER, AND MORE.

NODE JS

NODE.JS IS AN OPEN-SOURCE, CROSS-PLATFORM, BACK-END JAVASCRIPT RUNTIME ENVIRONMENT THAT RUNS ON THE V8 ENGINE AND EXECUTES JAVASCRIPT CODE OUTSIDE A WEB BROWSER.

EXPRESS JS

EXPRESS.JS, OR SIMPLY EXPRESS, IS A BACK END WEB APPLICATION FRAMEWORK FOR NODE.JS, RELEASED AS FREE AND OPEN-SOURCE SOFTWARE UNDER THE MIT LICENSE. IT IS DESIGNED FOR BUILDING WEB APPLICATIONS AND APIS. IT HAS BEEN CALLED THE DE FACTO STANDARD SERVER FRAMEWORK FOR NODE.JS

SQL SERVER

MICROSOFT SQL SERVER IS A RELATIONAL DATABASE MANAGEMENT SYSTEM DEVELOPED BY MICROSOFT. AS A DATABASE SERVER, IT IS A SOFTWARE PRODUCT WITH THE PRIMARY FUNCTION OF STORING AND RETRIEVING DATA AS REQUESTED BY OTHER SOFTWARE APPLICATIONS— WHICH MAY RUN EITHER ON THE SAME COMPUTER OR ON ANOTHER COMPUTER ACROSS A NETWORK.

SOFTWARE REQUIREMENTS

SUPPORTED BROWSERS:

EDGE

FIREFOX

CHROME

SAFARI

EXISTING SYSTEM

HEALTHIFYME

HEALTHIFYME IS AN INDIAN DIGITAL HEALTH AND WELLNESS PLATFORM THAT PROVIDES SERVICES SUCH AS CALORIE TRACKING, ONE-ON-ONE NUTRITION AND FITNESS COACHING, AND DIET AND WORKOUT PLANS.

HEALTHY BUDDY

HEALTHIFYBUDDY IS ALSO DEVELOPED A BUNCH OF COLLEGE STUDENTS FOR THEIR FINAL YEAR PROJECT. IT IS ALSO PROVIDED CALORIE TRACKING AND DIET TRACKING FEATURES.

PROPOSED SYSTEM

UNLIKE OTHER APPLICATIONS JUST FOCUSING ON A SINGLE FEATURE, BMATS BRINGS MORE FEATURES IN ONE APPLICATION. AND IT ALSO BRINGS THE UNIQUE FEATURE OF TRACKING FRIENDS WITH WHICH NOW USERS CAN CHECK THEIR FACEBOOK FRIEND'S DIETS (IF THEY HAVE ONE) STATUS .WHICH WILL HELP THEM TO STAY MOTIVATED.
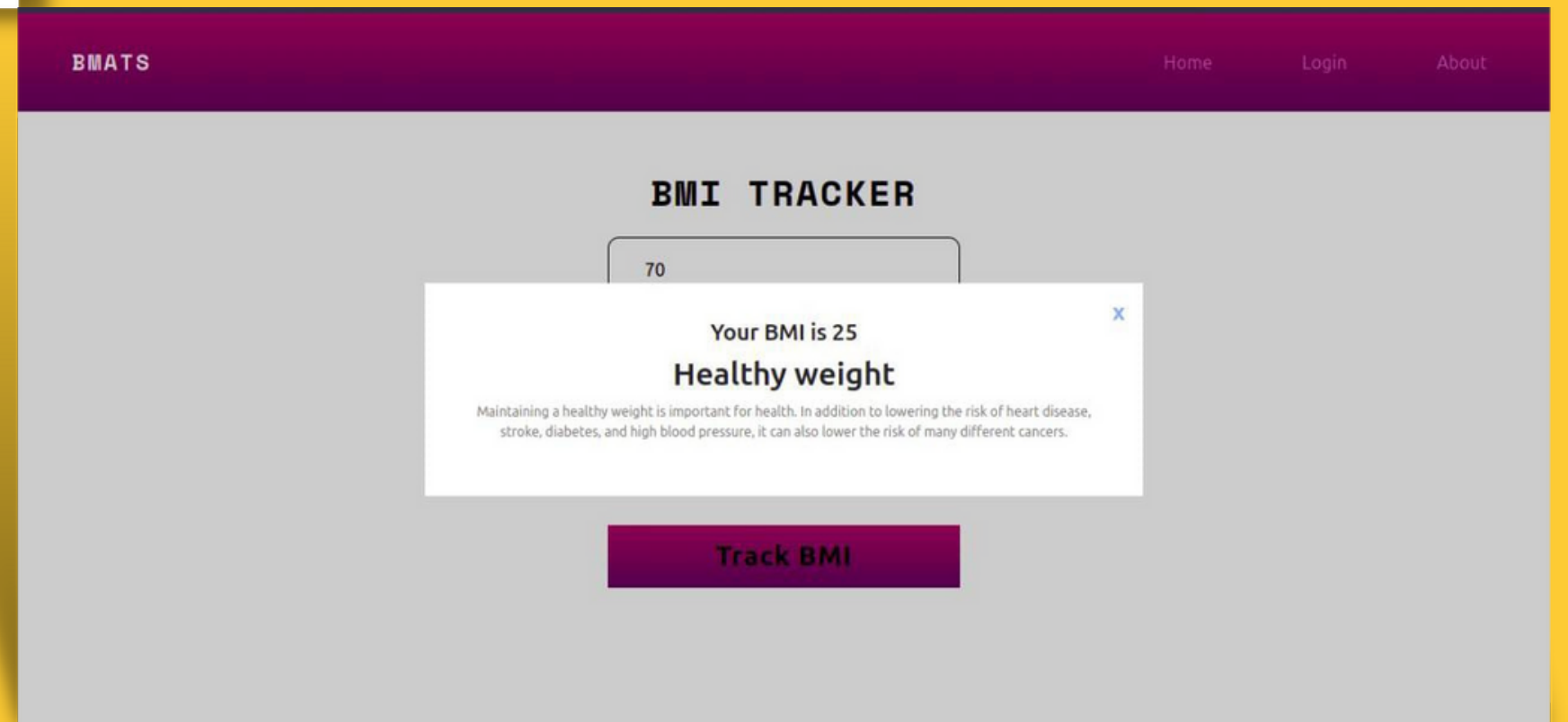
LITERATURE SURVEY

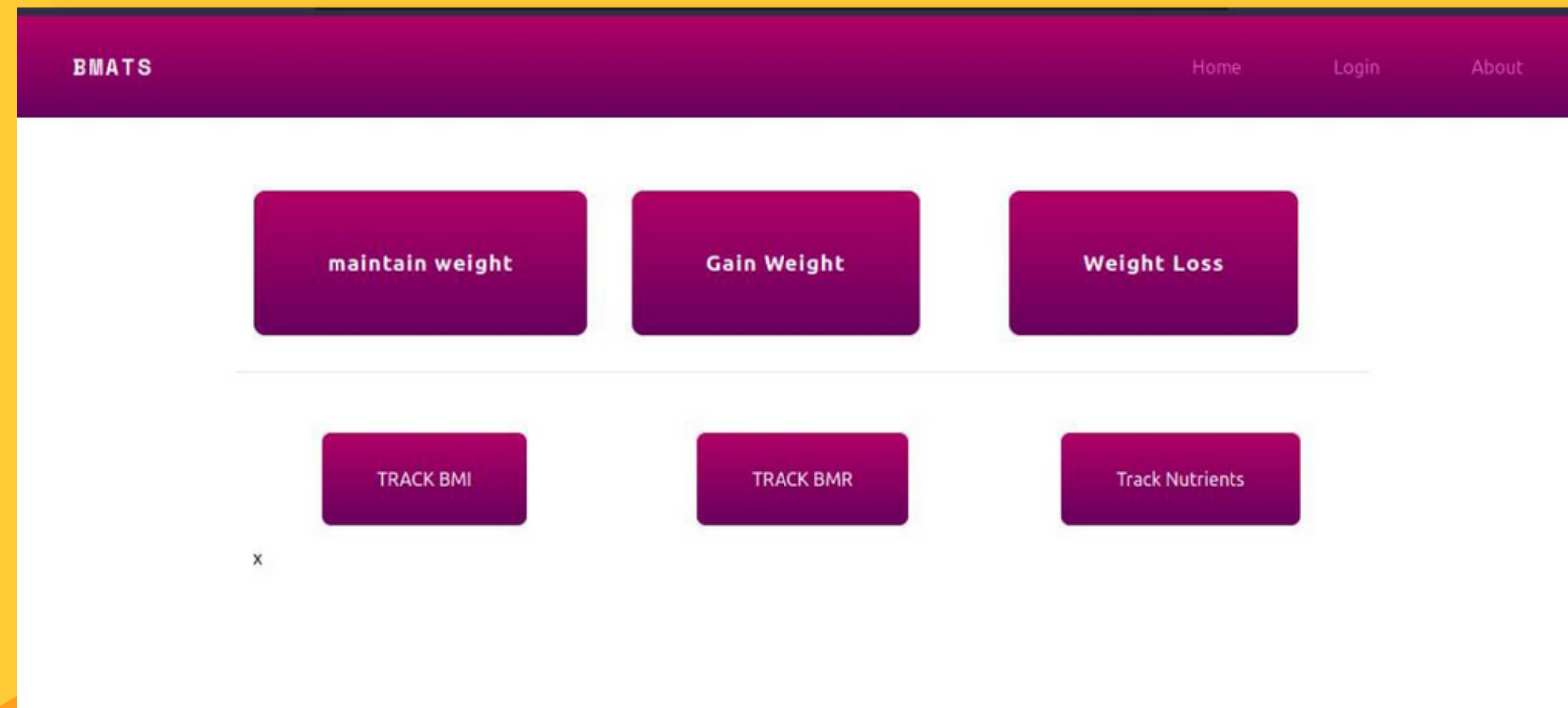"All individuals need the same nutrients for the same body function. The only variation is in the amounts of each nutrient required according to age, size, and activity" as Proposed by S.R.Mudambi and M.V.Rajagopal

"Obesity and its management pose a tremendous economic burden on affected individuals and society, predominantly in the form of increased healthcare expenditures and lost productivity" – Jason Fung MD

BMATS

Home   Login   About

maintain weight   Gain Weight   Weight Loss

TRACK BMI   TRACK BMR   Track Nutrients

x

BMATS

Home   Login   About

BMI TRACKER

70

Your BMI is 25

Healthy weight

Maintaining a healthy weight is important for health. In addition to lowering the risk of heart disease, stroke, diabetes, and high blood pressure, it can also lower the risk of many different cancers.

Track BMi

apple

Nutrition Result

Name	Serving Size	Calories	Total Fat	Saturated Fats	Cholestrol	carbohydrates	Sodium	Fibre	Sugar	Protien
apple	100g	100kcal	100g	100g	100g	100g	100g	100g	100g	100g

Get Nutrition

```
 import React from 'react';
import BMIPopup from './BMIPopup';
// import { Link } from 'react-router-dom';
// import { useState } from 'react';
import {useState} from 'react'
function Bmitracker() {
 const [trigger , setTrigger] = useState(false)
  const [height,setHeight] = useState(0)
  const [weight,setWeight] = useState(0);
 function discription(){
    if(bmiScore() > 25 )
    return "according to a new study showing people who are even a little overweight
face increased risk for many serious diseases, including diabetes, heart disease,
colon cancer, high blood pressure, and gallstones."
```

```
else if (bmiScore() < 18)
   return 'underweight may also be the reason for fatigue and lethargy as well as low
blood pressure, heart rate and blood sugar levels, which can cause night sweats,
having cold fingers and toes and muscle problems,'
 else if (bmiScore() > 30)
  return 'Being obese can also increase your risk of developing many potentially
serious health conditions, including: type 2 diabetes. high blood pressure. high
cholesterol and atherosclerosis (where fatty deposits narrow your arteries), which
can lead to coronary heart disease and stroke.'
   else
     return'Maintaining a healthy weight is important for health. In addition to
lowering the risk of heart disease, stroke, diabetes, and high blood pressure, it can
also lower the risk of many different cancers.'
}
```

```
function bmiBariatrics(){
    if(bmiScore() > 25 )
     return 'overweight'
    else if (bmiScore() < 18)
       return 'underweight'
    else if (bmiScore() > 30)
       return 'obesity'
    else
       return'Healthy weight'
}
  function bmiScore(){
  if (height >= 15){
      setHeight(height/10);
      return (weight/height*height)
  }
```

```
else{
return (Math.floor(weight/(height*height)))
}
}

function triggerPopup(){
console.log(bmiScore())
setTrigger(true)
}

return (
    <div className="bmi">
        <div className="bmi-form">
            <label htmlFor="">BMI TRACKER</label>
<input className='side-border weight' type="number" onChange=
{(e)=>setWeight(e.target.value)} placeholder='Weight in KG' name='weight' />
            <input className='side-border' type="number" onChange=
{(e)=>setHeight(e.target.value)} name="height" placeholder='height in cm' />
```

```jsx
            <input className='side-border' type="number" placeholder='Age' name='Age' />
                <select name="gender" id="gender">
                <option value="male">Male</option>
                <option value="female">Female</option>
            </select>
                <BMIPopup trigger={trigger} bmi={bmiScore()} bariatrics=
{bmiBariatrics()} discription={discription()} />
 <button id='bmiTracker' type='submit' onClick={triggerPopup} > Track BMI
</button>
                </div>
</div>
    );
}
export default Bmitracker;
```

SASS Module : BMI Tracker

Coding:

```scss
@use 'variables' as v ;
input{
    display: block;
   padding:1rem 1rem ;
   margin: auto;
//  border-radius: 5px;
   border: none ;
   border-bottom:solid 1px black ;
}
select{
    display: block;
```

```css
    padding: 1rem;
    margin: auto;
    width: 17.8rem;
    border-color: black;
    border-top:none ;
    background: white;
    border-bottom-left-radius: 10px;
    border-bottom-right-radius: 10px;
}
input:after{
    box-decoration-break:none ;
}
.bmi{
    width: 100%;
    place-items: center;
    align-items: center;
    text-align: center;
```

```css
    margin: 1rem 0;
}
 .bmi-form{
    margin: auto;
    text-align: center;
    align-items: center;
    place-items: center;
}
.side-border{
    border-left: solid 1px black;
    border-right: solid 1px black;
}
.weight{
    border-top:solid 1px black;
    border-top-right-radius:10px;
    border-top-left-radius:10px;
}
```

```scss
label{
    color: black;
    // background: v.$blueGradient;
    font-family: v.$primeFont;
    padding: 0 2rem;
    font-size: 2rem;
    font-weight: 600;
    letter-spacing: 2px;
    // margin: 2rem 0 ;
    margin: 2rem 0px 1rem 0px ;
}
#bmiTracker{
    padding: 10px 5rem;
    margin: 2rem 0 ;
    background: v.$blueGradient;
    border: none;
    font-size: 1.5rem;
```

```css
 font-weight: 600;
    letter-spacing: 1px;
}
@media screen and (min-width: 1080px) {
  input{
      padding:1rem 2rem ;
   }
   select{
      width: 19.5rem;
   }
   #bmiTracker{
      padding: 10px 6rem;}
  }

  @media screen and (max-width: 480px) {
   input{
      padding:1rem 2rem ;
```

```css
  }
    select{
      width: 17.8rem;
    }
    #bmiTracker{
      padding: 10px 5.2rem;}
  }
```

React Module BMI Popup:

Coding:

```jsx
 import React from 'react';
// import { useState } from 'react';
function BMIPopup(props) {
    // const [close ,setClose] = useState(false);
    // const closed = props.trigger = false
    return (props.trigger) ? (<div className='bmipopup'>
```

```jsx
<div className="bmipopup-child">
        {/* <FontAwesomeIcon icon="fa-solid fa-xmark" /> */}
        <button className="close" ><a href="/bmi-tracker">x</a> </button>
        <h5>Your BMI is <span> {props.bmi}</span> </h5>
        <h3>{props.bariatrics}</h3>
        <p>{props.discription}</p>
        </div>


    </div>):''
    ;
}
export default BMIPopup;
```

CONCLUSION & FUTURE ENCHANCEMENTS

THE ABOVE-PROPOSED METHOD IS USED TO ENHANCE THE UNDERSTANDING OF FOOD NUTRITION AND TO IMPROVE THE USER'S DIET AND IT WILL PROVIDE THE USER WITH A BETTER OUTLOOK TO ACHIEVE THEIR FITNESS GOALS BY EXACTLY SHOWING THEM THE IDEA BEHIND THE RELATIONSHIP BETWEEN FOOD INTAKE AND WEIGHT GOALS.

IN THIS PAPER, WE HAVE PRESENTED BMI, BMR, AND NUTRITION TRACKERS ONLY, IN THE FUTURE WE WOULD LIKE TO FINISH THE APPLICATION BY EXPANDING THE APPLICATION WITH A PROPER PERSONALIZED TRACKING SYSTEM FOR INDIVIDUAL USERS WITH PERSONALIZED DIET PLANS AND ALSO ALLOWING THE USER TO LOGIN TO THEIR FACEBOOK ACCOUNTS AND ALSO WE ARE PLANNING TO COME UP WITH A UNIQUE FEATURE WHICH ALLOWS THE USERS TO CONNECT WITH THEIR FACEBOOK FRIENDS AND TRACK THEIR ACCOMPLISHMENTS.
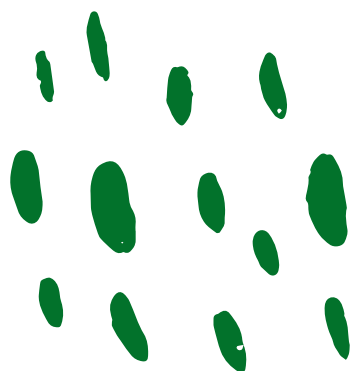
THANK YOU EVERYONE!

EAT HEALTHY, STAY HEALTHY