

A Project Report on

An Interactive Web Framework to Know Your Foot Health

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

Bachelor of Engineering

in

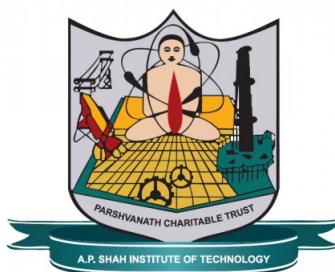
Information Technology

By

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Under the Guidance of

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UNIVERSITY OF MUMBAI
Academic Year 2020-2021

Approval Sheet

This Project Report entitled "***An Interactive Web Framework to Know Your Foot Health***" Submitted by "***Tanmay S. Rajadhyaksha (17104025)*** is approved for the partial fulfillment of the requirement for the award of the degree of ***Bachelor of Engineering*** in ***Information Technology*** from ***University of Mumbai***.

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Date:

CERTIFICATE

This is to certify that the project entitled "***An Interactive Web Framework to Know Your Foot Health***" submitted by "***Tanmay S. Rajadhyaksha (17104025)*** for the partial fulfillment of the requirement for award of a degree ***Bachelor of Engineering*** in ***Information Technology***, to the University of Mumbai, is a bonafide work carried out during academic year 2020-2021.

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Acknowledgement

We have great pleasure in presenting the report on **An Interactive Web Framework to Know Your Foot Health.** We take this opportunity to express our sincere thanks towards our guide **Dr. Sameer Nanivadekar** Department of IT, APSIT thane for providing the technical guidelines and suggestions regarding line of work. We would like to express our gratitude towards his constant encouragement, support and guidance through the development of project.

We thank **Prof. Kiran B. Deshpande** Head of Department,IT, APSIT for his encouragement during progress meeting and providing guidelines to write this report.

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We also thank the entire staff of APSIT for their invaluable help rendered during the course of this work. We wish to express our deep gratitude towards all our colleagues of APSIT for their encouragement.

Student Name: Tanmay S. Rajadhyaksha

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Declaration

We declare that this written submission represents our ideas in our own words and where others' ideas or words have been included, We have adequately cited and referenced the original sources. We also declare that We have adhered to all principles of academic honesty and integrity and have not misrepresented or fabricated or falsified any idea/data/fact/source in our submission. We understand that any violation of the above will be cause for disciplinary action by the Institute and can also evoke penal action from the sources which have thus not been properly cited or from whom proper permission has not been taken when needed.

Tanmay Rajadhyaksha(17104025)

Date:



KAN INNOVATIONS

CIN Number: U93090MH2019PTC323862

Date: 15th May 2021

Project Completion Letter

TO WHOM IT MAY CONCERN

This is to certify that Mr. Abhishek Pote, Mr. Tanmay Rajadhyaksha and Mr. Abhishek Rai have successfully completed a project titled, 'An Interactive Web Framework to Know Your Foot Health' at Kan Innovations Pvt. Ltd. from May 2020 to May 2021, under the guidance of Mr. Pradeep Nakhate, Co-founder at Kan Innovations. The project was completed with the co-ordination of our team members including Ms. Chaitali Gadvi (Graphic Designer) and Dr. Neha Sawant (Research Associate – Physiotherapist).

During their tenure we found them to be very focused, dedicated and hardworking. We hope they continue to succeed in their aspirations and wish them the best for their future endeavours.

Sincerely,

Riday Nakhate

Co-founder & M.D.

Kan Innovations Private Limited

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Abstract

In today's modern era people are suffering from many acute conditions and diseases which are never heard of many a times people also get joints pain or fractures due to some disease or accidents happening eventually, considering your legs as vital function in your day to day activities its really important and sensitive to take care of foot problems one might be facing due to any accident or disease. One may face problem recognizing the causes of these foot problems ,the symptoms associated with them and also possible treatment which might help solve foot problems. Many a times wearing wrong fit shoes or footwear can also cause some serious heel and forefoot pain which only gets worsen by time if not treated. For this we are developing foohealth a website which will brief many patients regarding their conditions, symptoms and possible treatment. For such conditions which are severe and should be brought into light for treatment is one of the purpose the company to develop the website which will post information related to foot conditions, symptoms, treatment and prevention which will be medically reviews by physiotherapists and then will be uploaded to this website to make people aware of possible injuries to be coming and how to avoid them. The website will include many different features such as demonstration through 3D modelling for better understandability by user regarding their conditions. This website also contains the advertisement of new technology developed by company to tackle foot problems effectively and make patients realise that this product can help save them injuries in near future. The technological stack used here is Django's MVT(Model,View,Template) structure for backend processing of the website which will be effective in handling the website without any consent of web developer once it is live. The backend database used here for storage and retrieval purpose is MYSQL because of its easy integration and relational database properties. Frontend of this website is powered by JavaScript, HTML, CSS and Bootstrap which are powerful tools for efficient as well as desktop and mobile friendly websites. Using Django gives more flexible and dynamic control to website for future upgrades.

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List of Abbreviations

HTML:	Hyper Text Markup Language
CSS:	Cascading Style Sheets
WYSIWYG :	What You See Is What You Get
PHP:	Hypertext Preprocessor
CM:	Content Manager

Chapter 1

Introduction

The development of Foohealth website is considered regarding the increasing foot pain conditions ,symptoms and treatments regarding foot. Normal patients as well as athletes suffer a lot of foot injuries which gets worsen with time because of improper attention or treatment and ignoring behaviour towards the condition. For such conditions which are severe and should be brought into light for treatment is one of the purpose the company to develop the website which will post information related to foot conditions, symptoms, treatment and prevention which will be medically reviews by physiotherapists and then will be uploaded to this website to make people aware of possible injuries to be coming and how to avoid them. The website will include many different features such as demonstration through 3D modelling for better understanding by user regarding their conditions. This website also contains the advertisement of new technology developed by company to tackle foot problems effectively and make patients realise that this product can help save them injuries in near future.

1.1 Scope

One may face problem recognizing the causes of their foot problems ,the symptoms associated with them and also possible treatment which might help solve foot problems. Many a times wearing wrong fit shoes or footwear can cause some serious heel and forefoot pain which only gets worsen by time if not treated. For this we are developing foohealth a website which will brief many patients regarding their conditions, symptoms and possible treatment. For such conditions which are severe and should be brought into light for treatment is one of the purpose the company to develop the website which will post information related to foot conditions, symptoms, treatment and prevention which will be medically reviews by physiotherapists and then will be uploaded to this website to make people aware of possible injuries to be coming and how to avoid them.

1.2 Objectives

- To develop a blog and product advertisement website for foot health/physiotherapy product based company
- To develop fully fledged, functional and dynamic website for organization.
- To integrate 3D models for demonstration of foot conditions.
- To develop remote assessment using 3D model and forms.
- To provide with an easy to post content and product advertisement website.

1.3 Overview

The project is nothing but a Website where indented users can identify their foot pain and health issues regarding their foot. This website will have an 3d foot model interface to where the user can detect and mark their foot pain and can know all about their foot health issu, if the person wants some expert advice or want to contact the experts physiotherapist they can fill the registration form and mark the area of pain in the 3d model that is integrated with the form and submit it.After some time one of the expert will contact to the person regarding his/her issues.

The following hardware,software's and libraries were used to create this Website:

1.3.1 Hardware:

System with

- 1 GB RAM
- 80 GB HARD DISK
- AMD OR INTEL PROCESSOR

1.3.2 Software:

- 1. VS Code:**

Visual Studio Code is a freeware source-code editor made by Microsoft for Windows, Linux and Mac OS. Features include support for debugging, syntax highlighting, intelligent code completion, snippets, code refactoring, and embedded Git.

- 2. Browsers:**

At least three different browsers are needed to for the cross browser testing.

1.3.3 Libraries:

- 1. HTML:**

The Hypertext Markup Language, or HTML is the standard markup language for documents designed to be displayed in a web browser. It can be assisted by technologies such as Cascading Style Sheets and scripting languages such as JavaScript.

- 2. CSS:**

Cascading Style Sheets is a style sheet language used for describing the presentation of a document written in a markup language such as HTML. CSS is a cornerstone technology of the World Wide Web, alongside HTML and JavaScript.

- 3. JavaScript:**

JavaScript, often abbreviated as JS, is a programming language that conforms to the ECMAScript specification. JavaScript is high-level, often just-in-time compiled, and multi-paradigm. It has curly-bracket syntax, dynamic typing, prototype-based object-orientation, and first-class functions.

- 4. Three.js:**

Three.js is a cross-browser JavaScript library and application programming interface used to create and display animated 3D computer graphics in a web browser using WebGL.

- 5. Django:**

Django is a Python-based free and open-source web framework that follows the model-template-views architectural pattern. It is maintained by the Django Software Foundation, an American independent organization established as a 501 non-profit.

Chapter 2

Literature Review

The current websites related to foot health lacks some or other functionality which we will be incorporating inside our website which solely focus on providing foot problems, their symptoms, treatment and prevention alongside with product designed to company to help identify physiotherapists the foot problem one might be facing and coming up with solid solutions to help tackle those problems. Currently websites providing this information doesn't have appropriate product to be introduced to patients which will help for their foot treatment while this side will be having number of product ranges which will be used by physiotherapists to help tackle the problem. For instance, consider foot.com [6] where information is introduced on foot conditions which is quiet minimal information to be posted considering a medical condition. Also it will be more informative for patients to understand when information will be broken down into much detail by already masters in this field which are the doctors associated with organization who will be providing with much of a detail view and information related to conditions and also accurate treatments or prevention's to be posted. This website would also include the product, it's use and nearby physiotherapists to users location which use this technology to treat their patients. Unlike others it will also be include some special section for diabetic patients which will include the different set of information for their conditions ,treatment and prevention. There is also an connect to expert section where users or patients can interact with experts on their conditions and can get a real insight into what can be best possible ways to tackling the conditions. The current technology stacks used by website consist of either Word Press or PHP for their content management while we are using Django along with some WYSIWYG editors for our content management which will make an easy to upload articles or blogs functionality for content manager(CM) of website. The content management system is a core part of uploading articles and blogs which will be take care by ck editor for our website Considering rest foot conditions related websites doesn't incorporate 3D models for better understanding and usability by users. The proposed 3D models in [3] can be used to integrate in website for foot conditions but we will try to incorporate our 3D foot model which will be interactive and responsive and will also give information regarding the pain area on model which will be responsive as user clicks on foot region where he/she feels pain and then it will pop up with the article showcasing what kind of condition it is and may redirect to related article where its cause, treatment and prevention must be posted Embedding 3D models inside website will not only help in better understanding but also will give a broad overview about what can possibly happen when one ignores the foot conditions they might be facing. This can also be effective in demonstrating the long-term effects one might encounter if enough care is not taken into problems. Apart

from all these this website includes special part called athletes arena which is not included in current websites where information will be posted for athletes who face a lot of foot injuries while playing. Most of early foot injury symptoms are neglected by athletes during practices which eventually leads to injuries during games. Such an informative thing for athletes which can be vital piece of information for preventing injuries can be made use of for betterment of athlete's health. This website design consists of overall functionality and content for medical review of foot conditions which can be a vital piece of information for someone in need. There will be also monthly events happening on website which will be helpful for patients as well as doctors to help contribute to foot health research and treatments.

Chapter 3

Proposed Methodology/Working:

3.1 Proposed Architecture

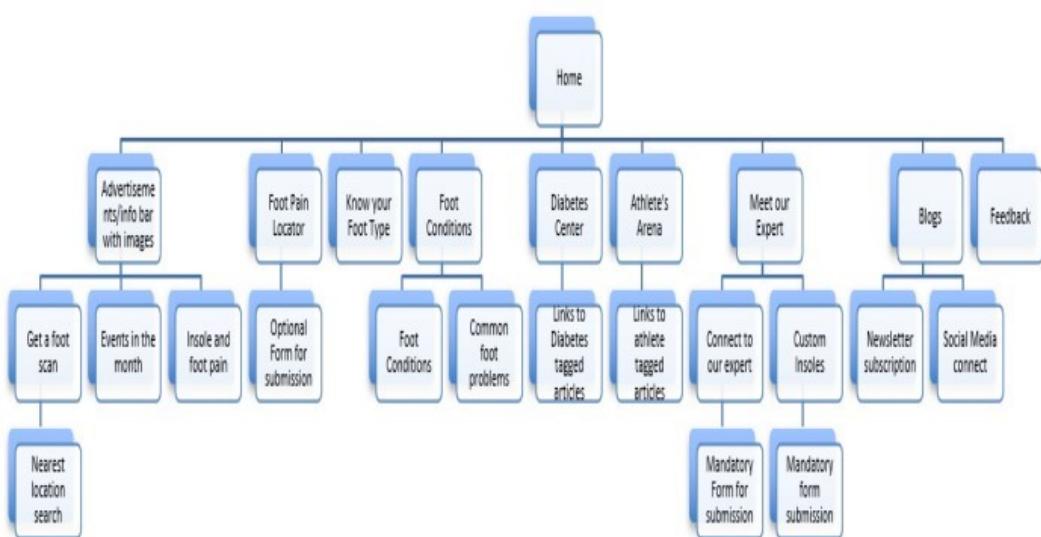


Figure 3.1: Figure 1:Proposed Architecture

- Linking to pages within the site will be at several places as per individual page layouts for.e.g. Get a foot scan would appear as a banner(link) on many pages.
- External links to Amazon, Flip-kart, social media may also appear as banners/buttons and links to them
- External links to Step test or Ohm3000 (www.ohmsmat.com) can also be provided

Administrative panel

Access control

- Content manager (CM)
- Site administrator (SA)
- Access to customer forms, feed back databases (Gen)

Content addition (CM)

- Advertising panel (top of home page)
- Organization of ads (3/5)
- Store all old ads
- First to view on opening home page
- Add new articles (many tags need to be created so that they can be cross referenced)
- In foot conditions and common foot problems
- In diabetes center
- In athletes corner
- Add new blog articles
- Organization of blog articles (which one first etc)
- Edit external links – e-com, social media etc (SA)
- Cross linking social media (SA)
- Edit forms, articles and blogs, newsletters (SA)
- Edit Images in articles (change) (CM)
- Add new branch on home page (SA)
- Add new branch on sub pages (SA)
- Newsletter service management (Gen)
- Security and Privacy policies (SA)

3.2 Database Architecture

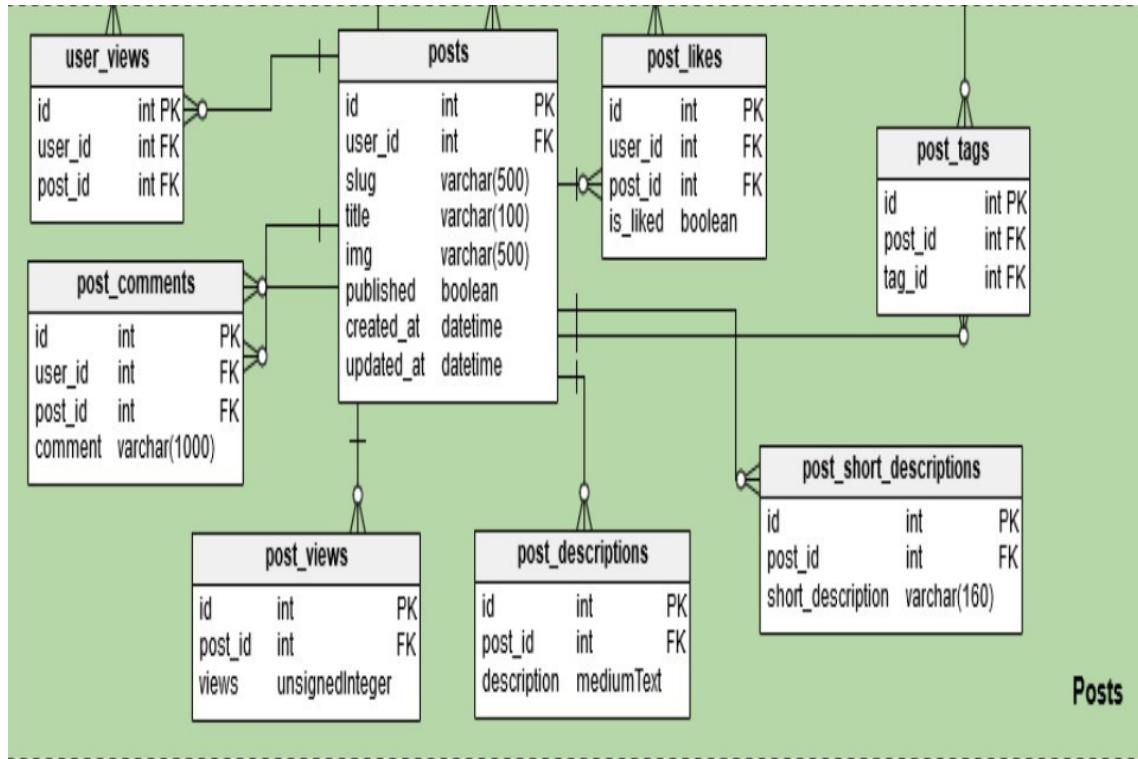


Figure 3.2: Database Architecture

This figure is a reference database for blogs or articles to be posted on website which includes different constraints for storing post information as well as its retrieval and view to be reflected on site. The whole website database will also be designed subsequently as the website development progresses further.

3.3 Gantt Chart

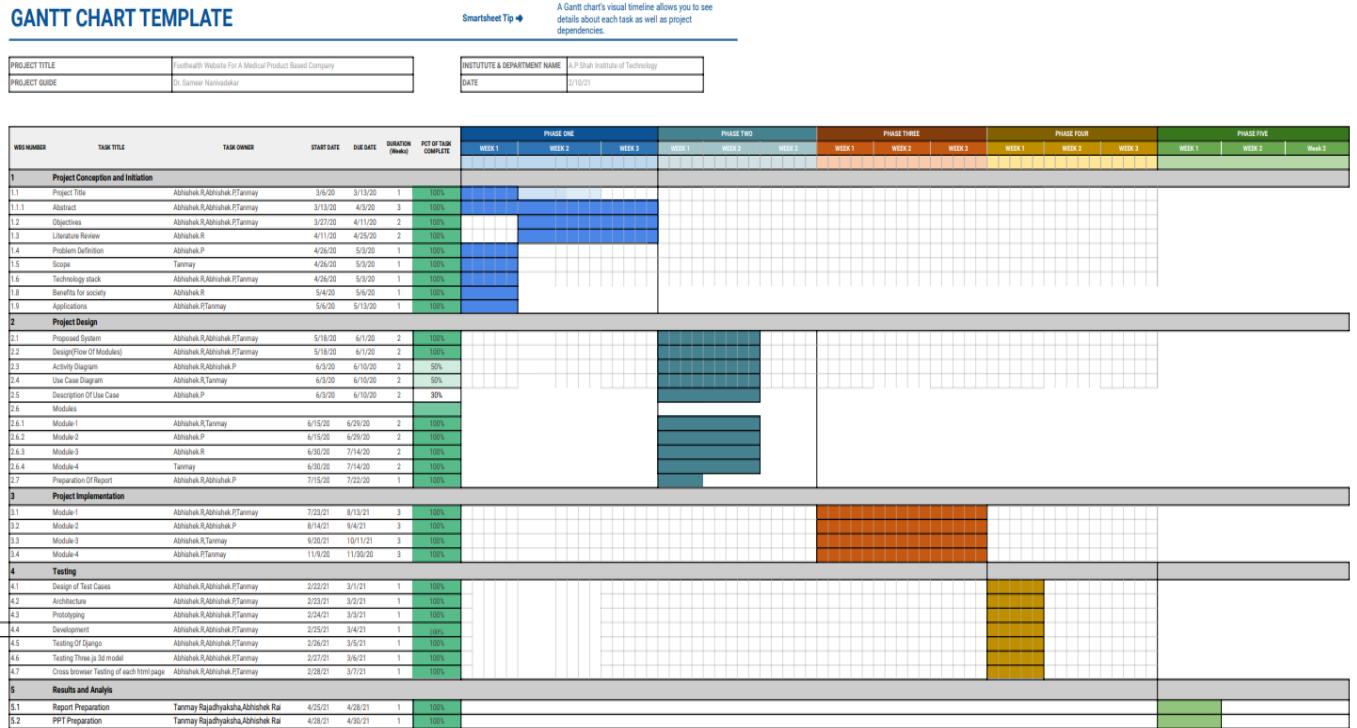


Figure 3.3: Gantt Chart

Chapter 4

Design

4.1 User Use-case Diagram

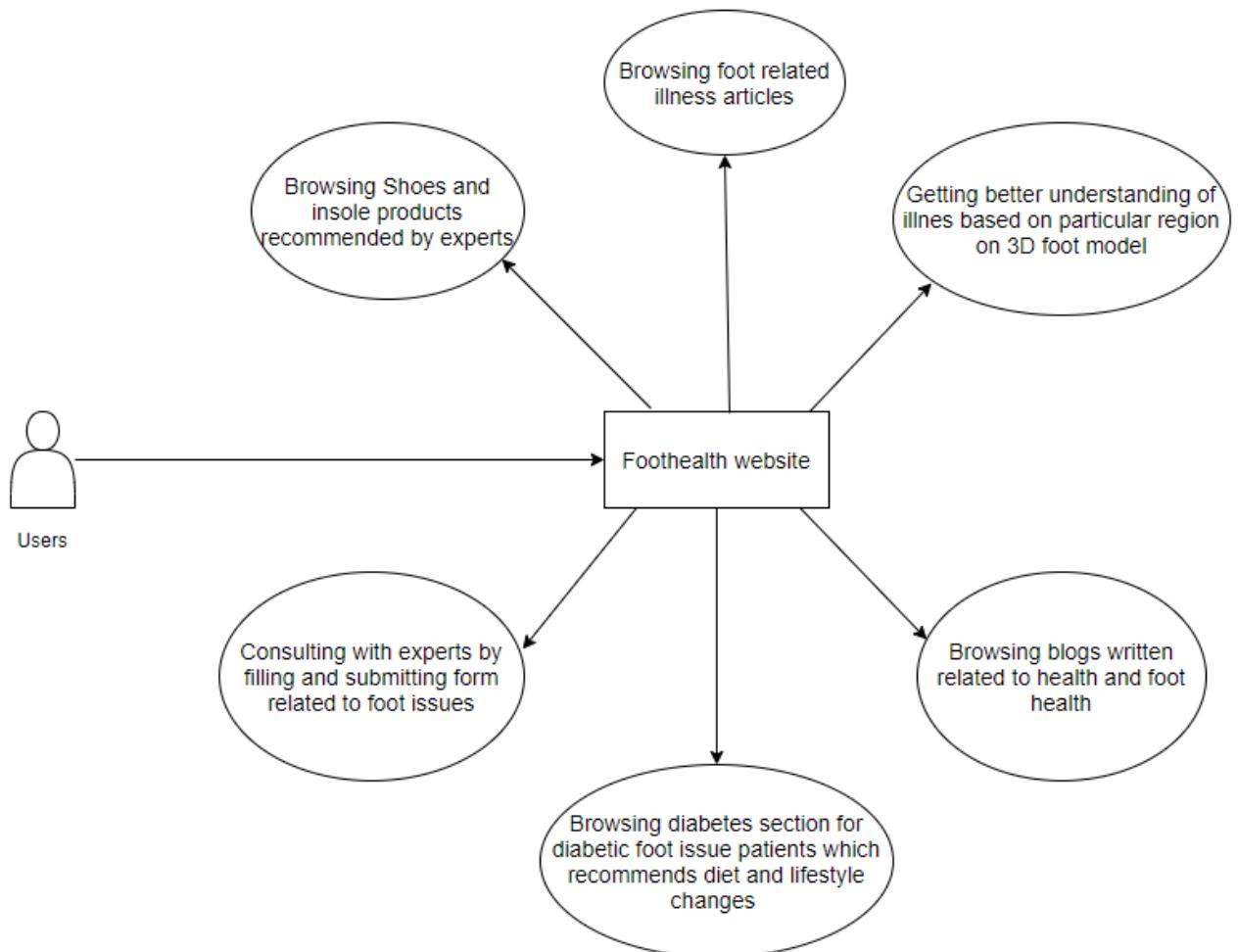


Figure 4.1: User Use Case Diagram

Here,in the above diagram, User can able to visualize the Website and various pages in our website

4.2 Class Diagram

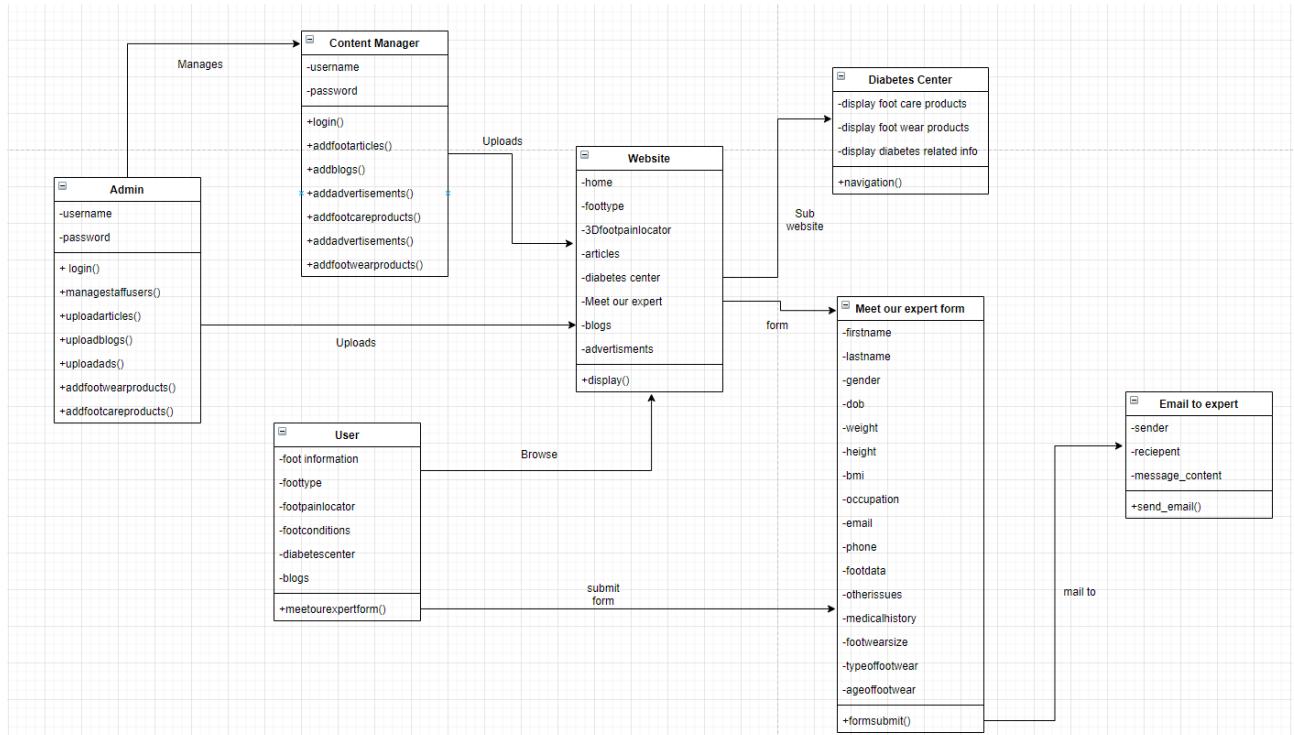


Figure 4.2: Class Diagram

The above diagram depicts the class diagram for this project which consists of various attributes and their methods. As shown in the diagram, the content manager and the Admin keep the track of all the Articles and the blogs uploading . And hence is linked with the Website.

4.3 Activity Diagram

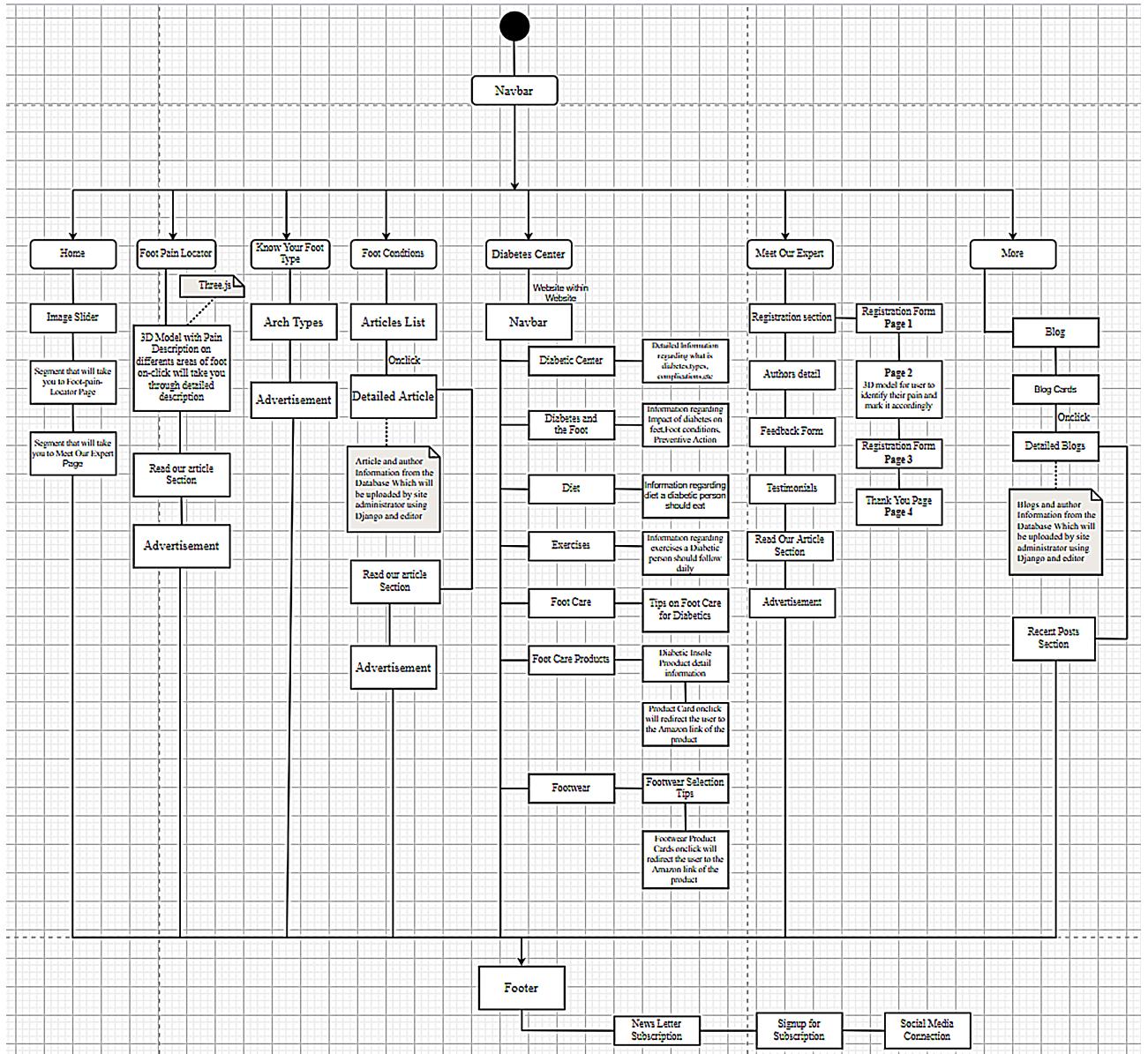


Figure 4.3: Activity Diagram

As the above activity diagram depicts, all the pages present in our website and the links of those pages are also their in our navbar. With those links user can navigate our website.

4.4 Sequence Diagram

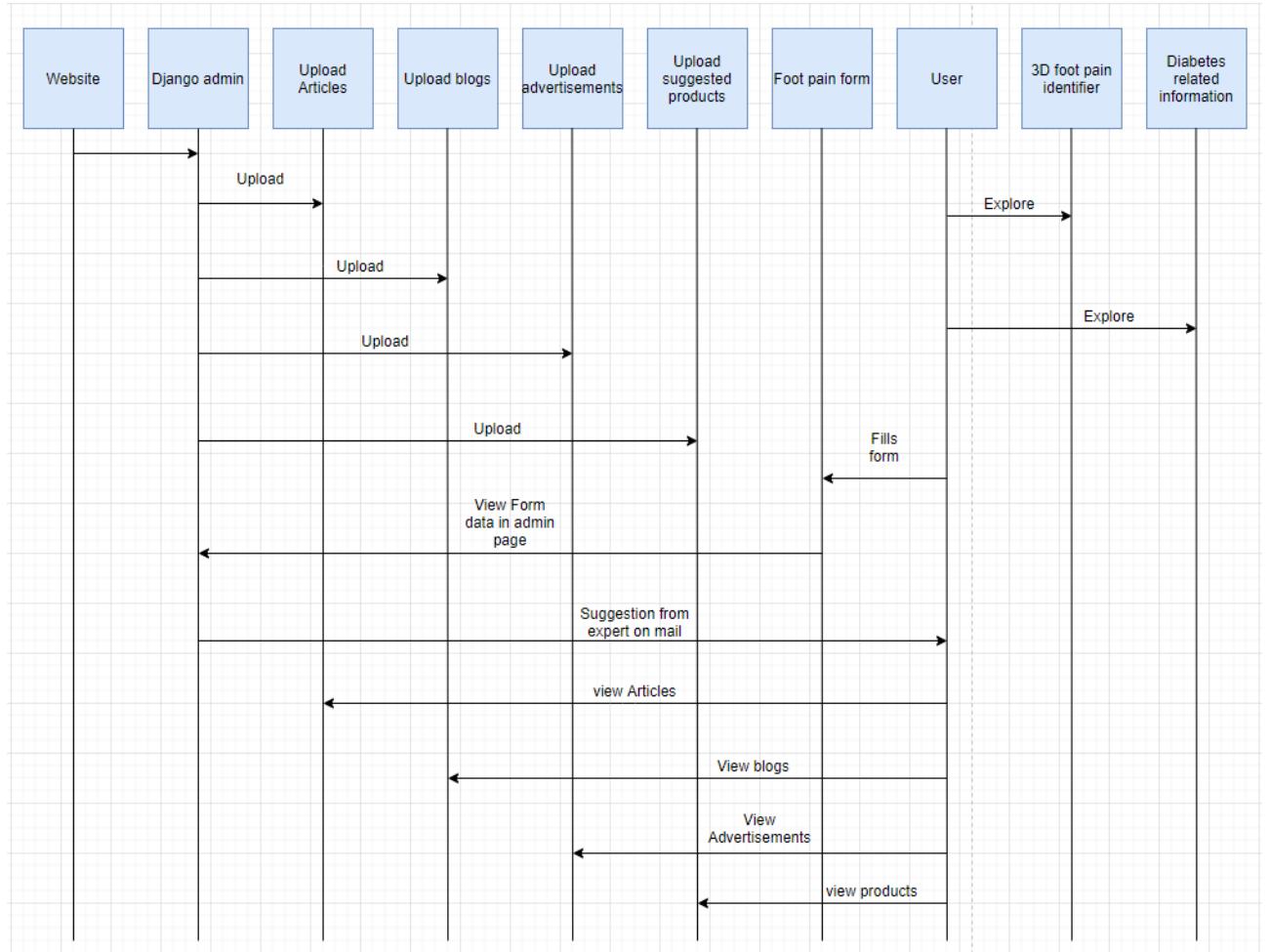


Figure 4.4: Sequence Diagram

Here,in the above diagram, we can see the whole sequence of the website where content manager manages all the uploading in our website whereas user can traverse through the various pages of our website.

Chapter 5

Implementation

5.1 Base.html

```
GitHub > Foohealth > templates > base.html > ...
51   <!----.Navbar Start---->
52
53   <nav class="navbar navbar-expand-lg navbar-light fixed-top " ...
54     <div class="container-fluid flex-lg-column align-items-start navigationbar px-xl-4">
55       <a class="navbar-brand align-items-start" href="#" ...
56         |   
57       </a>
58       <button class="navbar-toggler mt-1" type="button" data-toggle="collapse" data-target="#navbarNav" aria-controls="navbarNav" aria-expanded="false" aria-lab ...
59         <span class="navbar-toggler-icon"></span>
60     </button>
61
62
63     <div class="collapse navbar-collapse align-items-center" id="navbarNav">
64       <ul class="navbar-nav">
65         <li class="nav-item">
66           |   <a class="nav-link first {{ homepage }}" href="{% url 'home' %}">Home <span class="sr-only">(current)</span></a>
67         </li>
68         <li class="nav-item">
69           |   <a class="nav-link second {{ footpain }}" href="{% url 'FootPain' %}">Foot Pain Locator</a>
70         </li>
71         <li class="nav-item">
72           |   <a class="nav-link third {{ foottype }}" href="{% url 'foottype' %}">Know Your Foot Type</a>
73         </li>
74         <li class="nav-item">
75           |   <a class="nav-link fourth {{ article }}" href="{% url 'post_list' %}">Foot Condition </a>
76         </li>
77         <li class="nav-item">
78           |   <a class="nav-link fifth {{ diabetes }}" href="{% url 'DiabetesHome' %}" target="_blank">Diabetes Center</a>
79         </li>
80         <li class="nav-item">
81           |   <a class="nav-link sixth {{ MOI }}" href="{% url 'MeetOurExpert' %}">Meet Our Expert</a>
82         </li>
83         <li class="nav-item dropdown">
84           |   <a href="#" class="nav-link seventh " data-toggle="dropdown">More...</a>
85           |   <div class="dropdown-content">
86             |     <a href="{% url 'blog_list' %}" class="dropdown-item {{ blog }}>Blog</a>
87             |     <a href="" class="dropdown-item">Athlete's Arena</a>
88           |   </div>
89         </li>
90
91       </ul>
92     </div>
93   </nav>
94
95   <!----.Navbar End---->
96
97
98   {% block content %}
99   <!-- Content goes here -->
```

Figure 5.1: Base.html

5.2 Home Page

```
GitHub > Foohealth > templates > home.html > div#carouselExampleIndicators.carousel.slide.carousel-fade > div.carousel-inner > div.carousel-item.carousel-he
1  {% extends "base.html" %} {% load static %} {% block content %}
2
3  <div id="carouselExampleIndicators" class="carousel slide carousel-fade" data-ride="carousel" data-interval="4000">
4      <ol class="carousel-indicators">
5          <li data-target="#carouselExampleIndicators" data-slide-to="0" class="active"></li>
6          <li data-target="#carouselExampleIndicators" data-slide-to="1"></li>
7          <li data-target="#carouselExampleIndicators" data-slide-to="2"></li>
8      </ol>
9      <div class="carousel-inner" role="listbox">
10         <div class="carousel-item carousel-height active">
11             
12             <div class="carousel-caption d-none d-lg-block rights">
13                 <!-- <p class="home-paragraph-0">Your feet mirror your health</p>
14                 <p>Just looking at your feet carefully can tell you a lot about your health</p> -->
15                 <a href="#footpain" class="KM"><button class="btn carouselbtn" type="submit">Know more</button></a>
16             </div>
17         </div>
18         <div class="carousel-item carousel-height">
19             
20             <div class="carousel-caption d-none d-lg-block lefts">
21                 <!-- <h1 class="home-paragraph-1">ARE YOUR FEET KILLING YOU?</h1>
22                 <p>Your heels need healing</p> -->
23                 <a href="#moe" class="KM"><button class="btn carouselbtn" type="submit">Know more</button></a>
24             </div>
25         </div>
26         <div class="carousel-item carousel-height">
27             
28             <div class="carousel-caption d-none d-lg-block up">
29                 <!-- <p class="home-paragraph-2">Happy feet make it happen...</p>
30                 <p>Staying on your feet, being active and injury free is key to a happy & healthy lifestyle!</p> -->
31                 <a href="#footpain" class="KM"><button class="btn carouselbtn" type="submit">Know more</button></a>
32             </div>
33         </div>
34     </div>
35     <a class="carousel-control-prev" href="#carouselExampleIndicators" role="button" data-slide="prev">
36         <i class="fa fa-angle-left fa-3x fa-fw" aria-hidden="true"></i>
37         <span class="sr-only">Previous</span>
38     </a>
39     <a class="carousel-control-next" href="#carouselExampleIndicators" role="button" data-slide="next">
40         <i class="fa fa-angle-right fa-3x fa-fw" aria-hidden="true"></i>
41         <span class="sr-only">Next</span>
42     </a>
43 </div>
44
45
46 <div class="col-lg-12 locate container pt-lg-5" id="footpain" style="scroll-margin-top: 100px;">
47     <p class="threed">Foot Pain Locator</p>
48     <p class="wow frame-1 fadeInRight">
```

Figure 5.2: Home.html

5.3 Know Your Foot Type Page

```
GitHub > Foohealth > templates > foottype.html > ...
98
99
100
101
102
103
104
105
106
107
108
109
110
111
112
113
114
115
116
117
118
119
120
121
122
123
124
125
126
127
128
129
130
131
132
133
134
135
136
137
138
139
140
141
142
143
144
145
146
</div> -->
<div class="row no-gutters px-md-2">
    <div class="col-md-12 pr-md-2">
        <p id="R-corners1"> Arch</p>
        <div class="row pt-1 pb-4">
            <div class="col-12 d-flex justify-content-center">
                
            </div>
        </div>
        <h6 class="arch-p text-justify pb-2">
            It is the middle part of the foot. Normally, it does not touch the ground, and is slightly curved.
        </h6>
        <h6 class="arch-p text-justify ">
            The most common arch types:
        </h6>
    </div>
<!-- <hr class="hline2"> -->
</div>

<div class="row no-gutters pt-3 px-md-2">
    <p id="rcorners1">Low Arch</p>
    <div class="row no-gutters">
        <div class="col-md-8 pr-md-2">
            <p class="paragraph text-justify ">About 20% of people have low arch. It's called as Flat Feet. Here the middle p
                also experience recurrent ankle twist episodes. This type of feet is very commonly seen in overweight people
            <p class=" para text-justify">Arch supports, heel cushions etc. help correct their foot position while walking, r
        </div>
        <div class="col-md-4">
            <div class="row pl-md-2 ">
                <div class="col-md-6 images1">
                    
                </div>
                <div class="col-md-6 images2">
                    
                </div>
            </div>
        </div>
    </div>
    <div class="row no-gutters pt-3 px-md-2">
        <p id="rcorners2">Medium Arch</p>
        <div class="row no-gutters">
            <div class="col-md-8 pr-md-2">
                
            </div>
        </div>
    </div>
</div>
```

Figure 5.3: foottype.html

5.4 Article List Page and Article Page

```

GitHub > Foohealth > templates > Article-list.html > ...
48     <!--.....Registration Start.....-->
49     <div class="row mx-lg-2">
50         <div class="col-12">
51             <h2 class="mbr-section-title mbr-fonts-style align-center display-5 hover-article-2">
52                 Foot Symptoms & Conditions</h2>
53                 <hr class="mt-3 hover-para">Get help with foot problems, including heel, foot and ankle pain relief.</hr>
54             </div>
55             <div class="col-12 box">
56                 <h3 class="mbr-section-title mbr-fonts-style align-center display-5 head">
57                     Foot Pain is not normal!</h3>
58                     <p class="head-para">Even though as many as 70% people experience foot discomfort, fatigue or pain sometime in their lives, it is important to seek medical attention if you are experiencing persistent or severe pain. If you are experiencing symptoms such as heel, foot or ankle pain, it is important to seek medical attention to rule out serious conditions such as heel spurs, plantar fasciitis, or tendonitis. If you are experiencing symptoms such as heel, foot or ankle pain, it is important to seek medical attention to rule out serious conditions such as heel spurs, plantar fasciitis, or tendonitis.</p>
59             </div>
60         </div>
61     </div>
62
63
64
65
66
67
68     <!--.....Registration end.....-->
69
70     <!--.....Hover Start.....-->
71
72     <div class="row list-hover" id="GFG">
73         <div class="col-lg-12">
74             <h3 class="list-item"><b>Article Lists</b></h3>
75             <ul class="list-item list-style list-style-type:none;">
76                 {% for post in post_list %}
77                     <li class="hoverWrapper">
78                         <div>
79                             <div class="row no-gutter">
80                                 <div class="col-lg-5">
81                                     <a class="list-name">{{ post.title }}</a>
82                                 </div>
83                                 <div class="hoverShow">
84                                     <div class="col-lg-6 hover-text">
85                                         <p>{{post.shortDescription | slice:"100"}...</p>
86                                         <a href="{{ url_for('post_detail', post_slug=post.slug) }}">Read More</a></p>
87                                     </div>
88                                     <div class="col-lg-6 float-lg-right images">
89                                         {% if post.thumbnail %}{% endif %}
90                                     </div>
91                                 </div>
92                             </div>
93                         </div>
94                     </li>
95                 {% endfor %}
96             </ul>

```

Figure 5.4: Article-list.html

```

GitHub > Foohealth > templates > Article.html > ...
46         <div class="col-md-12 col-lg-9 float-lg-left text-element">
47             <div class="note-content article-1">
48                 <div class="mbr-section-title mbr-fonts-style align-center display-5 article-2">
49                     <h3>{{ object.title }}</h3>
50                     <p class="mbr-section-title mbr-lighter align-center display-7">
51                         {{ object.content | safe }}
52                     </p>
53                 </div>
54             </div>
55
56             <!--.....Read Our Article.....-->
57
58             <div class="media-container-row article-3 no-gutters" style="margin-top: -50px;">
59                 <div class="py-2 d-lg-none pr-2">
60                     <hr class="line-2">
61                 </div>
62                 <div class="col-12 ">
63                     <p><b>Read our Articles</b></p>
64                 </div>
65             </div>
66
67             <div class="blog-posts mb-3">
68
69                 <div class="row px-md-2">
70                     {% for post in posts %}
71                         <div class="col-12 mb-3">
72                              <a href="#">rounded-corners read-article</a>
73                             <p class="pt-3">{{ post.title }}<br/><a href="{{ url_for('post_detail', post_slug=post.slug) }}>Read More</a></p>
74                             <!-- <div class="pt-4 d-lg-none ">
75
76                                 <hr class="line-1">
77                                 <div class="py-3 pr-lg-3 pr-xl-5">
78                                     <hr class="line-1">
79                                 </div>
80                             </div> ...
81                         </div>
82                     {% endfor %}
83                 </div>
84             </div>
85
86             </article>
87
88         </div>
89
90     </div>
91
92     </div>
93
94
95
96
97
98
99
99

```

Figure 5.5: Article.html

5.5 Blog List Page and Blog Page

```
GitHub > Foohealth > templates > Bloglist.html > ...
51      <div class="row row-cols-1 row-cols-sm-2 pt-lg-4">
52          {% for blog in blog_list %}
53              <div class="col mb-4 d-flex align-items-stretch">
54                  <div class="card blog-card">
55                      {% if blog.thumbnail %}
56                          
57                      {% endif %}
58                      <div class="card-body blog-card-body d-flex flex-column">
59                          <div class="row no-gutters pb-1 pt-1">
60                              <div class="col-2">
61                                  <div class="col-3 col-md-2 col-lg-3 centered">
62                                      
63                                  </div>
64                                  <div class="col-12 col-md-12 col-lg-12 pl-2 card-author my-auto">
65                                      <!-- changes -->
66                                      <p>{{ blog.author.name }}</p>
67                                  </div>
68                              </div>
69                          </div>
70                          <a href="{% url 'blog_detail' blog.slug %}">
71                              <div class="row detail no-gutters">
72                                  <div class="col-12 card-title-1"><u>{{ blog.title }}</u> </div>
73                                  <div class="col-12 card-title-2">{{ blog.shortdescription | slice:"105"}... <button class="blog-btn" type="button">Read more</button>
74                              </div>
75                          </a>
76                      </div>
77                  </div>
78              </div>
79          {% endfor %}
80      <div class="row queries mt-auto" id="appSummary">
81          <div class="line pt-4 col-12">
82              <hr class="blog-line">
83          </div>
84          <div class="mx-3 mx-md-4 mx-lg-4 mx-xl-4 style1">
85              <h6>Views</h6>
86          </div>
87          <div class="vl"></div>
88          <div class="mx-3 mx-md-4 mx-lg-4 mx-xl-4 style2">
89              <h6><a href="{% url 'blog_detail' blog.slug %}">Write comment</a></h6>
90          </div>
91      </div>
92      <div>
93          </div>
94      </div>
95  </div>
96  </div>
97  </div>
98  </div>
99  </div>
```

Figure 5.6: Bloglist.html

```
GitHub > Foohealth > templates > Blog.html > ...
1  [% extends "base.html" %] {# load static #} {# block content #}
2  <!-- .....Blog Start..... -->
3  <div class="container-fluid my-content">
4      <div class="row">
5          <div class="col-sm-12 col-md-8 col-lg-8 col-xl-7">
6              <div class="row b-author m-1 my-3 pt-1 pt-md-2 pt-lg-4">
7                  <div class="col-1">
8                      
9                  </div>
10                 <div class="col-12 col-lg-12">
11                     <div class="row pl-0-3 pl-1-1 pl-1-1 b-author-name">
12                         <div class="col-12 col-lg-12">
13                             <div class="row pl-0-3 pl-1-1 pl-1-1 pl-1-1 b-author-name">
14                                 <div class="col-12 col-lg-12">
15                                     <div class="b-heading"><a href="#">{{ object.author.name }} {{ object.author.description }} </a> &nbsp; : {{ object.created_on }} &nbsp;: 4 min read<br/>
16                                     </div>
17                                 </div>
18                             </div>
19                         </div>
20                     </div>
21                 </div>
22             </div>
23             <div class="blog-content">
24                 {{ object.content | safe }}
25             </div>
26             <br><br><br>
27             <hr class="line1">
28             <div class="row pt-3">
29                 <div class="social-media">
30                     <ul class="media">
31                         <li class="social"><a href="https://www.facebook.com/KanInnovations/"><i class="fa fa-facebook"></i></a></li>
32                         <li class="social"><a href="http://twitter.com/kaninnovations"><i class="fa fa-twitter"></i></a></li>
33                         <li class="social"><a href="https://www.instagram.com/kaninnovations/"><i class="fa fa-youtube-play"></i></a></li>
34                         <li class="social"><a href="https://pinterest.com/kaninnovations/"><i class="fa fa-pinterest"></i></a></li> ...
35                         <li class="social"><a href="https://tumblr.com/@kaninnovations"><i class="fa fa-tumblr"></i></a></li> ...
36                         <li class="social"><a href="https://www.instagram.com/kaninnovations/?igshid=w29sy17fb"><i class="fa fa-instagram"></i></a></li>
37                         <li class="social"><a href="https://www.linkedin.com/company/kan-innovations/"><i class="fa fa-linkedin"></i></a></li>
38                     </ul>
39                 </div>
40             </div>
41         </div>
42     </div>
43     </div>
44   </div>
45   </div>
```

Figure 5.7: Blog.html

5.6 Meet Our Expert Page

```
> templates > MeetOurExpert.html > ...

<!--.....MOE Header Start.....-->

<div class="row MOE-Title-1 ">
  <div class="col-12 ">
    <h1 class="MOE-Title">Meet Our Experts</h1>
  </div>
</div>

<div class="row Moe-h-row">
  <div class="col-12 ">
    
    <button onclick="myFunction()" class="btn">Click here to begin</button>
  </div>
</div>

<!--.....Moe Header end.....-->

<!--.....MOE-Cards Start.....-->

<div class="row row-cols-1 row-cols-md-2 pt-lg-4">

  <div class="col pt-lg-4 ">
    <div class="card my-4 moe-card align-items-center d-flex justify-content-center px-xl-2 ">
      <div class="row">
        <div class="col-sm-5 left-image ">
          <a href="https://www.foot.com/">
            
          </a>
        </div>
        <div class="col-sm-7 right-text ">
          <div class="card-body-right text ">
            <h4 class="moe-card-title-1">Dr. Neha Sawant (PT)</h4>
            <h4 class="moe-card-title-2">Research Associate, MPT (Neuro)</h4>
            <h4 class="moe-card-text">Specialised in Adult and pediatric physiotherapy. Focussed towards Stroke recovery</h4>
          </div>
        </div>
      </div>
    </div>
  </div>

  <div class="col pt-lg-4 ">
    <div class="card my-4 moe-card align-items-center d-flex justify-content-center px-xl-2 ">
      <div class="row ">
        <div class="col-sm-5 left-image">
          <a href="https://www.foot.com/">
            
          </a>
        </div>
      </div>
    </div>
  </div>
</div>
```

Figure 5.8: MeetOurExpert.html

5.7 Diabetes Base.html Page

```
othealth > templates > DiabetesBase.html > ...
<div class="gtco-loader"></div>

<div id="page">

    <div class="page-inner">

        <div id="head-top" style="position: absolute; width: 100%; top: 0; ">

            <nav class="gtco-nav sticky-banner" role="navigation">
                <div class="gtco-container">

                    <a class="navbar-left" href="{% url 'home' %}">
                        
                    </a>

                    <div class="row">
                        <div class="col-xs-12 text-right menu-1">
                            <ul>

                                <li><a href="{% url 'home' %}">Home</a></li>

                                <li class="{{ home_page }}><a href="{% url 'DiabetesHome' %}">Diabetic Center</a></li>

                                <li class="{{ DandF_page }}><a href="{% url 'DiabetesandFoot' %}">Diabetes & The Foot</a></li>
                                <li class="{{ Diet_page }}><a href="{% url 'DietforDiabetes' %}">Diet</a></li>
                                <li class="{{ Exercise_page }}><a href="{% url 'ExerciseforDiabetes' %}">Exercises</a></li>

                                <li class="{{ Footcare_page }}><a href="{% url 'FootcareDiabetes' %}">Foot Care</a></li>
                                <li class="{{ Footcareproducts_page }}><a href="{% url 'FootcareProducts' %}">Foot Care Products</a></li>
                                <li class="{{ Footwear_page }}><a href="{% url 'Footwear' %}">Footwear</a></li>

                            </ul>
                        </div>
                    </div>
                </div>
            </nav>
        </div>

        {% block content %}
            <!-- Content goes here -->
    
```

Figure 5.9: DiabetesBase.html

5.8 Diabetes Home Page

```
GitHub > Foohealth > templates > DiabetesHome.html > ...
1  [% extends "DiabetesBase.html" %] {%- load static %} {%- block content %}
2  <title>Diabetes Center</title>
3  <header id="gtco-header" class="gtco-cover gtco-cover-md" role="banner" style="background-image: url(/static/DiabetesCSSandJS/images/Home\ page.jpg); " data-stellar-background-ratio=1>
4      <div class="overlay"></div>
5      <div class="gtco-container">
6          <div class="row row-mt-15em">
7              <div class="col-md-12 mt-text text-center animate-box" data-animate-effect="fadeInUp">
8                  <h1><strong>What is Diabetes ?</strong></h1>
9                  <h2>Diabetes is a disease that occurs when your blood glucose, also called blood sugar, is too high. Blood glucose is your main source of energy and comes from the food you eat. When you eat, your body breaks down the food into glucose. It's then absorbed into your bloodstream and transported to your cells where it's used for energy. Your body's cells need glucose for energy, but they also need insulin to be able to use it. Insulin is a hormone that helps glucose get into your cells. If you have diabetes, your body either doesn't make enough insulin or can't use it well. Over time, having too much glucose in your blood can cause serious health problems, such as heart disease, blindness, and kidney damage.</h2>
10                 <div class="text-center">
11                     <form action="#yourContentId">
12                         <button class="Diabetes-btn" type="submit">Read More</button>
13                     </form>
14                 </div>
15             </div>
16         </div>
17     </div>
18 </header>
19
20
21
22
23 <div class="flex-section gtco-gray-bg" id="yourContentId">
24     <div class="col-1">
25         <div class="text">
26
27             <div class="row row-pb-sm">
28                 <div class="col-md-12">
29                     <h2 class="Db-H">A short guide to diabetes </h2>
30
31                     <p class="Db-P">Whether you are new to diabetes, old to it, have friends or family who got diagnosed or simply a curious reader; you have come to the right place!</p>
32
33                     <p class="Db-P" style="font-style: italic;">
34                         <B>Definition:<br>"A disease in which the body's ability to produce or respond to the hormone insulin is impaired, resulting in abnormal metabolism of carbohydrates and elevated levels of glucose in the blood"</B>
35                     </p>
36
37                 </div>
38             </div>
39
40         </div>
41     </div>
42     <div class="col-2 flex-img " style="background-image: url(/static/DiabetesCSSandJS/images/old-lady-is-testing-blood-sugar-level-using-blood-sugar-test-kid-set.jpg); "></div>
43 </div>
44
```

Figure 5.10: DiabetesHome.html

5.9 Settings.py

```
GitHub > Foohealth > fsdemo > settings.py
152     'OPTIONS': {
153         'context_processors': [
154             'django.template.context_processors.debug',
155             'django.template.context_processors.request',
156             'django.contrib.auth.context_processors.auth',
157             'django.contrib.messages.context_processors.messages',
158         ],
159     },
160 },
161 ]
162
163 WSGI_APPLICATION = 'fsdemo.wsgi.application'
164
165
166 # Database
167 # https://docs.djangoproject.com/en/3.0/ref/settings/#databases
168
169 DATABASES = {
170     'default': {
171         'ENGINE': 'django.db.backends.mysql',
172         'NAME': 'foohealth',
173         'USER': 'root',
174         'PASSWORD': '123456',
175         'HOST': 'localhost',    # Or an IP Address that your DB is hosted on
176         'PORT': '3306',
177     }
178 }
179
180
181 # Password validation
182 # https://docs.djangoproject.com/en/3.0/ref/settings/#auth-password validators
183
184 AUTH_PASSWORD_VALIDATORS = [
185     {
186         'NAME': 'django.contrib.auth.password_validation.UserAttributeSimilarityValidator',
187     },
188     {
189         'NAME': 'django.contrib.auth.password_validation.MinimumLengthValidator',
190     },
191     {
192         'NAME': 'django.contrib.auth.password_validation.CommonPasswordValidator',
193     },
194     {
195         'NAME': 'django.contrib.auth.password_validation.NumericPasswordValidator',
196     },
197 ]
198
199
```

Figure 5.11: Settings.py

Chapter 6

Testing

Test No.	Test	Expected Result	Actual Result
1	All the website pages cross browser testing	Proper image and videos rendering and also Bootstrap,CSS working	All the Expected results were shown
2	Database connectivity	All the required database connectivity should be up	All the databases were connected
3	Articles and blogs uploading from Django admin	All the articles or blogs that were uploaded by from Django admin should be visible in the site on their respected places	All the articles and blogs were visible which was uploaded as desired
4	3d foot model rendering	The use Three.js to render 3d foot model should be rendered properly for their use	The 3d foot model rendered properly
5	Meet our Experts Mailing system	When the user fills the form then that form data should be mailed to the physiotherapist connected with the company	Testing in process

Chapter 7

Result

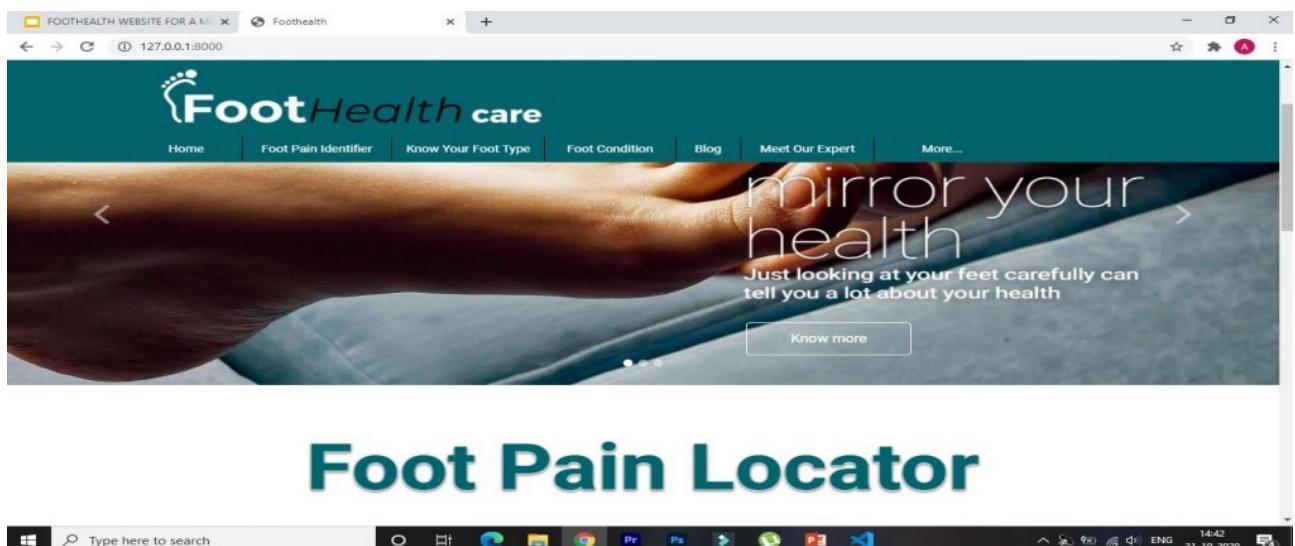


Figure 7.1: Home Page

It is the home page of our website where we can see different links that navigate through our website. And it also gives some idea what our website is all about.

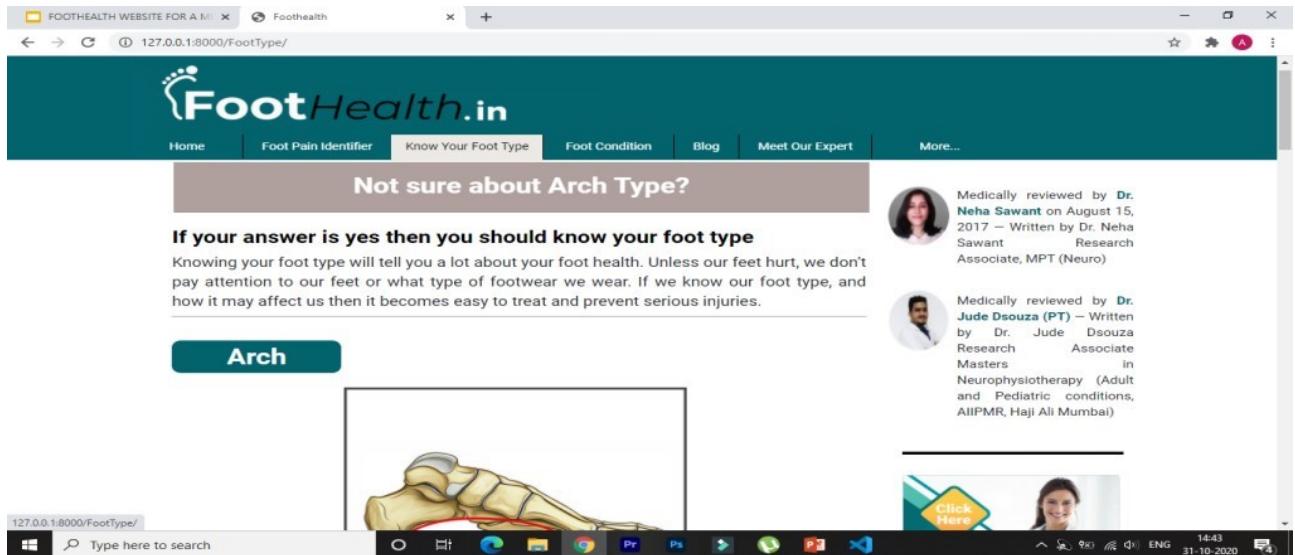


Figure 7.2: Know your foot type page

Know your foot type tells the user about the different common pain he/she experiences and with that a user can identify under which foot type he/she comes.

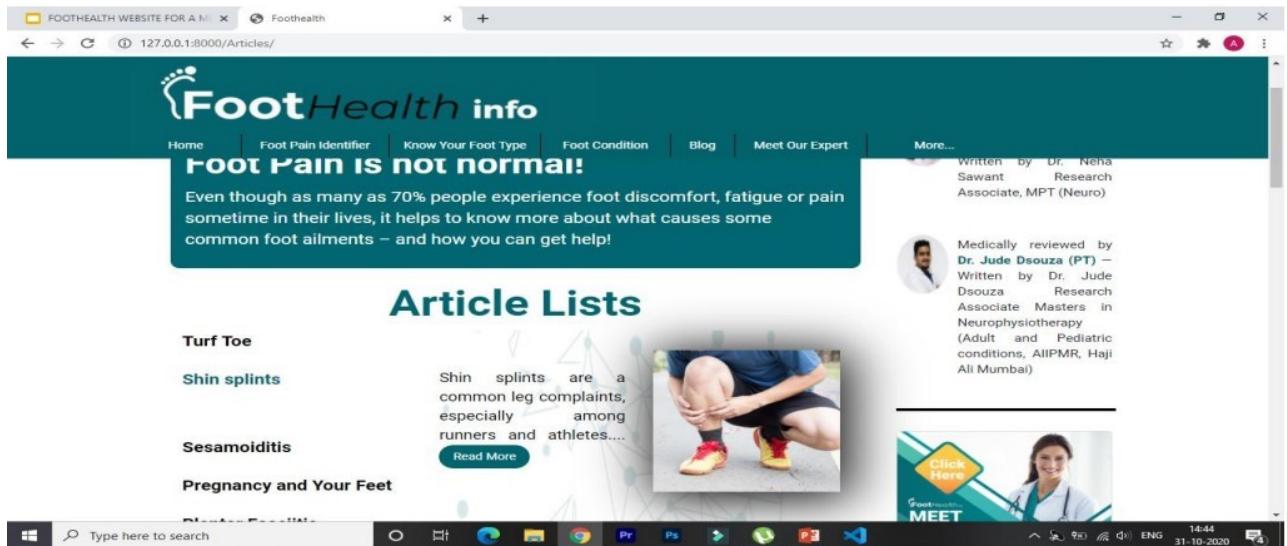


Figure 7.3: Foot Conditions page

Foot conditions page is one of the important page of our website,where this page consist of list of articles on various different foot pain written and verified by the profession Physiotherapist.If user wants to know about the any foot pain he/she suffering and he knows the name of that pain or for any knowledge purpose then this page provides the list of pain for which user is looking.

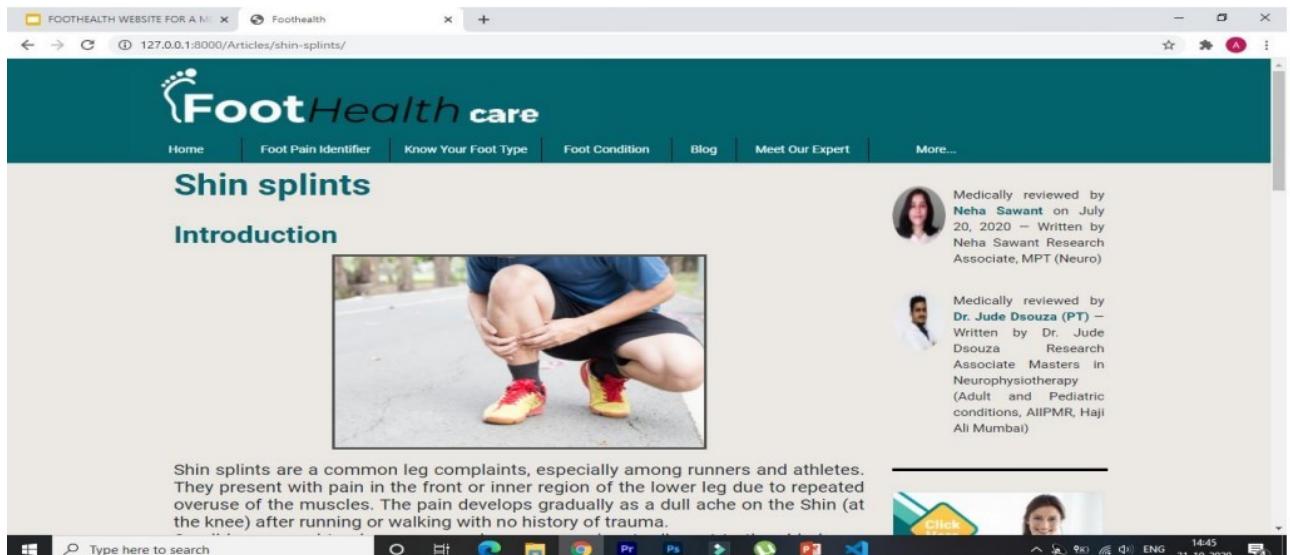


Figure 7.4: Detailed Article page

This page provides a detailed article based on the topics in the article list which is given by a physiotherapist so that users can trust the info and know about the pain without worrying about the fake information.

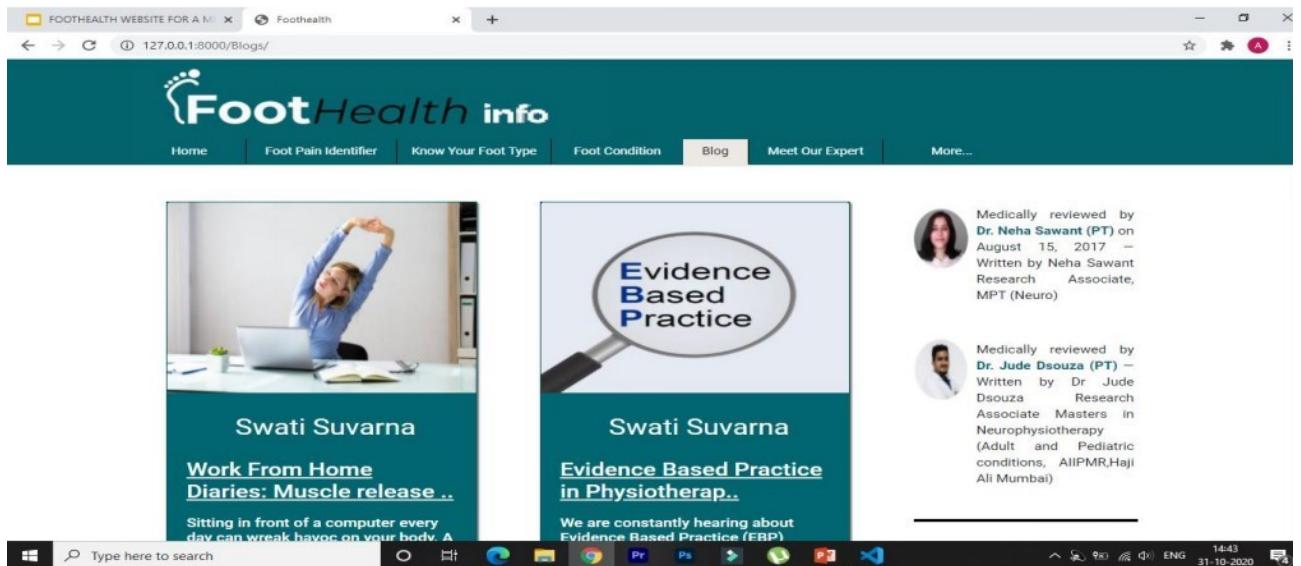


Figure 7.5: Blog List page

This page contains different blogs written by physiotherapists for improving their medical conditions and foot pain condition. It provides the list of blog topics about basic remedies for small medical problems.

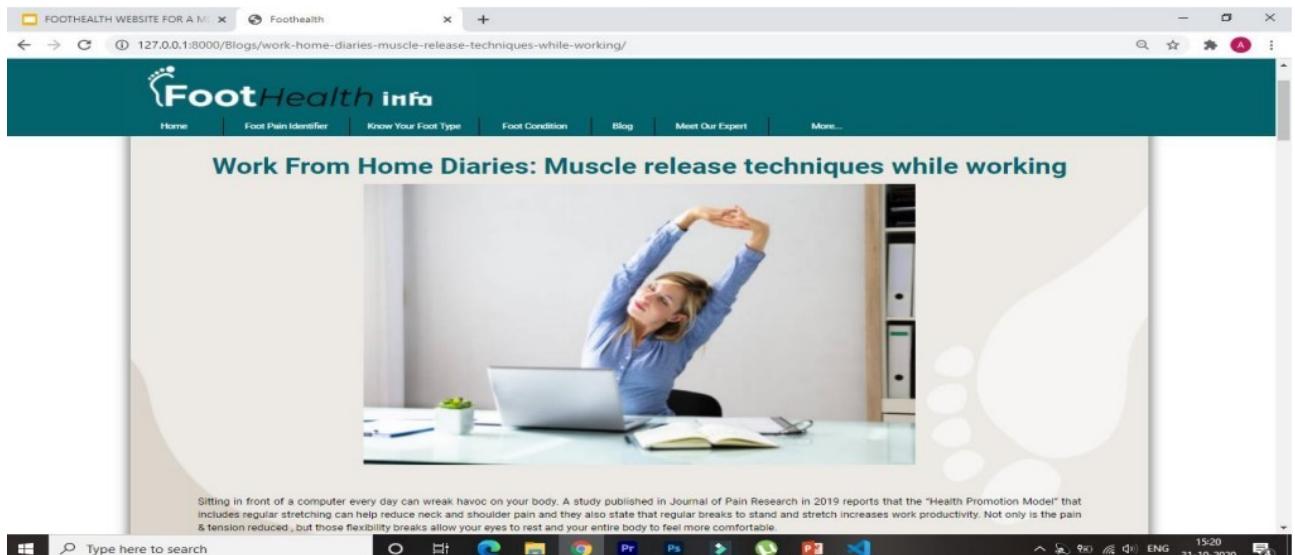


Figure 7.6: Detailed blog page

This page provides a detailed blog based on the topics in the list which is given by physiotherapists so that users can trust the info and know about the pain remedies or basic remedies without worrying about the fake information.

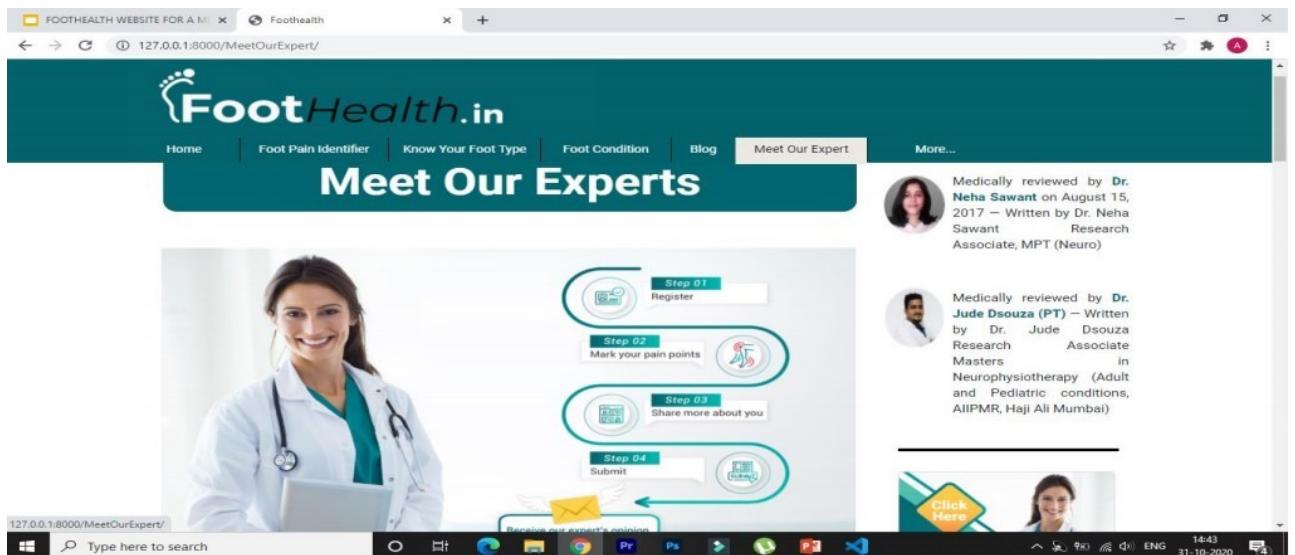


Figure 7.7: Meet our experts page

Meet our experts page is one of the crucial pages of our website where the user has to fill the form about some info of his/her and the foot pain and after the submission of our form the physiotherapist will contact the user and further problem solving can be done.

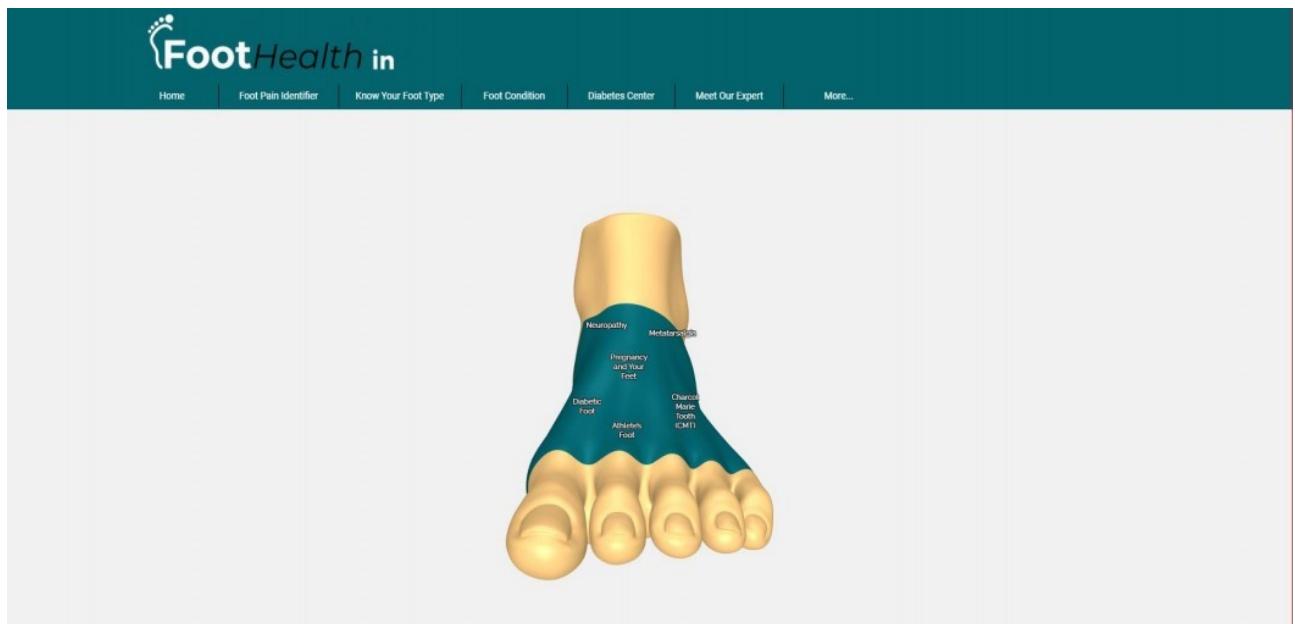


Figure 7.8: Foot pain locator page

Foot Pain Locator is also one of the important page of our website which contains the 3d model of foot where if user don't know what type of pain he/she has or what is the name of the pain,then user can mark the region where he/she has the pain on the 3d model then all the foot pain articles related to that region will come up which is also their in foot pain identifier page and then user will be redirected to the detailed article page.

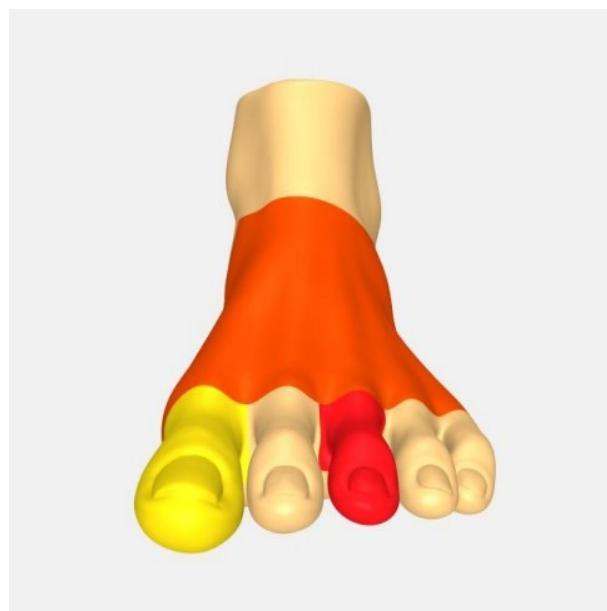


Figure 7.9: Foot Pain regions for form

This 3d model is located with the form of meet our expert where user will not only fill

the form but will also mark the regions where he/she has the pain where the red colour represents the severe pain, orange means major pain i.e. less than severe more than minor and yellow means minor pain. By this info provided by the user in the form our physiotherapist can get the proper information about the user's pain and can provide the proper solution to the user.

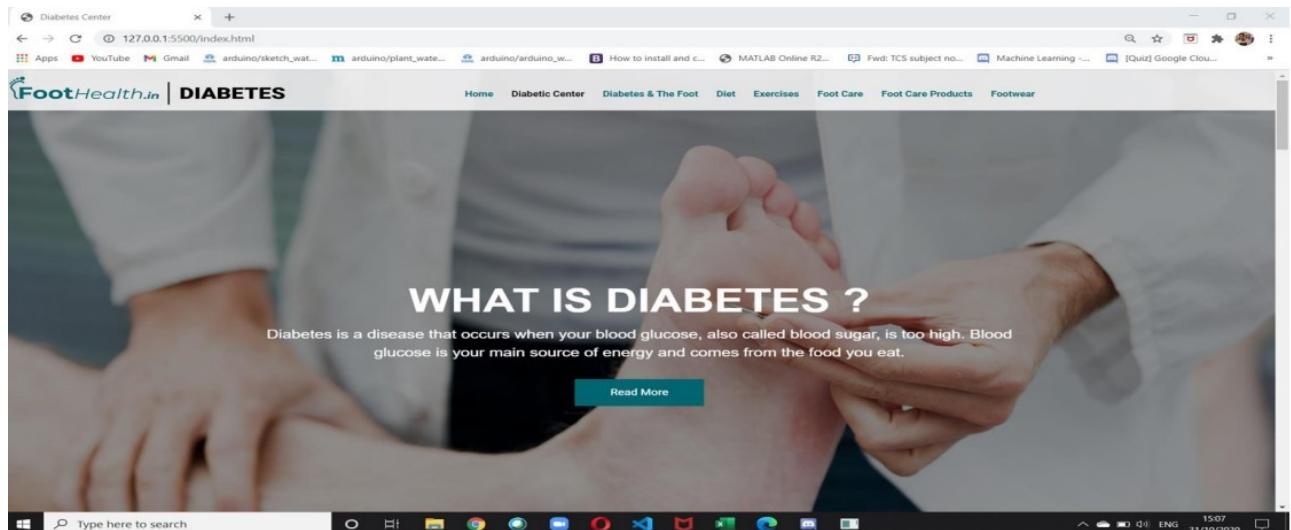


Figure 7.10: Diabetes Center Page

Diabetes Center Section is like mini-website within our main company Website. This Section consists of Diabetes center, Diabetes and the foot, Diet for diabetes, Exercise for diabetes, Tips on foot care for diabetes, Foot care products, Footwear selection tips. The explanation of every page is as follows:

1. Diabetes center:- This page gives details regarding diabetes such as What is Diabetes, its types, symptoms, How can one keep track of their diabetes, How to take care of your diabetes at home, What sort of complications can arise from diabetes, Diabetes Stats.
2. Diabetes and the foot:- This page gives details regarding impact of diabetes on feet such as Types of foot condition caused due to diabetes, What prevention we should take.
3. Diet for diabetes:- This page gives details regarding diet one should follow who is having diabetes and what type of food he/she should avoid.
4. Exercise for diabetes:- This page gives details regarding Exercises which the diabetic person should do everyday as exercises help to regulate blood sugar level in the body as well as to reduce the risk of developing grave complications like heart disease or diabetic foot.
5. Tips on foot care for diabetes:- This page will give home Tips regarding what care diabetic person should take about his/her foot.

6. Foot care products:- This page will provide information regarding the foot care products and will also take you to the respective page if customer needs to buy a particular product.
7. Footwear selection tips:- This page will provide information regarding the footwear selection and will also take you to the respective page if customer needs to buy a particular product.



Figure 7.11: CK Editor for Administrator

Articles,Blogs and author Information from the Database will be uploaded by site administrator using CK editor. hyperref

Chapter 8

Conclusions and Future Scope

With the above proposed technology stack and proposed architecture we can implement this website on the public domain of the company where different users or clients of the company can visit the website for the queries related to their foot health and the company can post the blogs and different articles related to the foot health as a site administrator. Users can get to know about the products of the company through the site. Users can also use self assessment form to get guidance from medical about foot problems related issues.

Bibliography

- [1] <https://www.healthline.com/health/meniscus-tears>
- [2] <https://www.drscholls.com/cc/symptoms-and-conditions/foot-pain-and-conditions/>
- [3] <https://developer.biomedical.com/>
- [4] <https://ckeditor.com/ckeditor-4/>
- [5] <https://threejs.org/>

Appendices

Steps For Installation of Required Softwares

Appendix-A: Install Python

Step 1: Download the Python Installer binaries

1. Open the official Python website in your web browser. Navigate to the Downloads tab for Windows.
2. Choose the latest Python 3 release.
3. Click on the link to download Windows x86 executable installer if you are using a 32-bit installer. In case your Windows installation is a 64-bit system, then download Windows x86-64 executable installer.

Step 2: Run the Executable Installer

1. Once the installer is downloaded, run the Python installer.
2. Check the Install launcher for all users check box. Further, you may check the Add Python 3.7 to path check box to include the interpreter in the execution path.
3. Select Customize installation.
4. Documentation
5. pip

6. tcl/tk and IDLE (to install tkinter and IDLE)
7. Python test suite (to install the standard library test suite of Python)
8. Install the global launcher for ‘.py‘ files. This makes it easier to start Python
9. Install for all users.
Click Next.
10. This takes you to Advanced Options available while installing Python. Here, select the Install for all users and Add Python to environment variables check boxes. Optionally, you can select the Associate files with Python, Create shortcuts for installed applications and other advanced options. Make note of the python installation directory displayed in this step. You would need it for the next step.
After selecting the Advanced options, click Install to start installation.
11. Once the installation is over, you will see a Python Setup Successful window.

Step 3: Add Python to environmental variables

The last (optional) step in the installation process is to add Python Path to the System Environment variables. This step is done to access Python through the command line. In case you have added Python to environment variables while setting the Advanced options during the installation procedure, you can avoid this step. Else, this step is done manually as follows.

In the Start menu, search for “advanced system settings”. Select “View advanced system settings”. In the “System Properties” window, click on the “Advanced” tab and then click on the “Environment Variables” button.

Locate the Python installation directory on your system. If you followed the steps exactly as above, python will be installed in below locations:

- C:Files (x86)37-32: for 32-bit installation
- C:Files37-32: for 64-bit installation

Step 4: Verify the Python Installation

You have now successfully installed Python 3.7.3 on Windows 10. You can verify if the Python installation is successful either through the command line or through the IDLE app that gets installed along with the installation.

Search for the command prompt and type “python”. You can see that Python 3.7.3 is successfully installed.

An alternate way to reach python is to search for “Python” in the start menu and clicking on IDLE (Python 3.7 64-bit). You can start coding in Python using the Integrated Development Environment(IDLE).

Appendix-B: Install Django

Step 1 - Open Powershell

You can search for Powershell in the Windows search box or you can open the Run dialog box by holding Windows logo key and R(Win+R) and type powershell and then click OK

Step 2 - Verify Python Installation

Type python -V on the prompt to verify that Python has been successfully installed

PS C: - python -V

Python 3.7.4

Step 3 - Upgrade Pip

Python now comes with pip by default. But most of the time, it comes with an old version. It is always a good practice to upgrade pip to the latest version

- python -m pip install --upgrade pip

Step 4 - Create a Project Directory

Let's create a project directory. We will name it DjangoProject since this tutorial is just a demo but in the real world, the project directory's name would be forum, blog, etc.

To create the directory:

- mkdir DjangoProject

Change into the DjangoProject directory:

- cd DjangoProject

Step 5 - Create Virtual Environment

A virtual environment(virtualenv) is an isolated Python environment where you can install packages and dependencies without affecting other Python projects.

To create a virtual environment, type python -m venv venv and wait for a few seconds:

- python -m venv venv

It will create a directory called venv in the project directory.

Next, we will activate the virtual environment.

Step 6 - Activate Virtual Environment

Run the following command to activate the virtualenv.

- venv:Scripts:activate

When virtualenv is activated, you will see a (venv) at the beginning of the prompt.

(venv) PS C:

Step 7 - Install Django

We are going to use pip to install Django. So run the following command to start the installation:

(venv): pip install django

The command will install the latest version of Django.

Step 8 - Start a New Project

We will use django-admin startproject to create our Django project structure called "test-site".

Run the following command:

```
(venv): django-admin startproject testsite
```

Navigate into the testsite directory by running the following command:

```
(venv): cd testsite
```

Step 9 - Run the Server

Let's now run the development server using the manage.py runserver:

```
(venv): python manage.py runserver
```

Visit <http://127.0.0.1:8000/> in your web browser.