A PROJECT REPORT
ON

Wellness and fitness portal

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**Bachelors of Technology
semester IV**

Subject: Software Engineering

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<u>CERTIFICATE</u>

This is to certify that the practical / term work carried out in the subject of

Software Engineering and recorded in this journal is the

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1. Abstract and Introduction

Abstract

"Wellness and Fitness portal" is an online health improving platform.

Here the user inputs his details such as his height and weight and can get his calculated body mass index (BMI). From which the users can get to know their body type and can help them to improve their lifestyle where the portal will provide you with a list of exercises in the domain of health and fitness which is a major issue right now during the time of pandemic where the globe has slowed down its pace down.

These portals will provide a list of exercises that help all the users to follow a particular routine and improve their physic.

Brief Introduction

In today's engaged world physical health is being a matter of concern.

Where people are so much busy in their routine which don't allow them to take care of their own bodies which the most important asset to live a great life. As we are observing people around us have started getting diseases at a very young age. So, to help these kind people we got an idea to develop these portals which would be beneficial also the pandemic is a major reason to create these software as most of the people are mentally physically financially drained off and all the places where mass gathering is carried out are shut.

Tools/Technologies Used

Technologies:

- Django
- Python
- SQLite
- Bootstrap
- JavaScript
- CSS
- HTML

Tools:

- Git
- Visual Studio Code

Platform

- Local development server

2. Software Requirement Specifications

Manage User:

sign-up:

I/p: new to the portal? please create your account here

O/p: account created now you can login.

log-in:

I/p: Enter your username and password

O/p: Confirmation message ("you are logged in successfully")

Gender:

I/p: select Male or Female

O/p: your response has been recorded

Membership duration:

I/p: For how many moths do you want to join?O/p: Your response

has been recorded.

Fitness Goal

Description: Knowing your goal helps us tailor your experience

I/p: select suitable fitness goal for you from menu like(build muscle, stay healthy, get fit, lose weight)

O/p: Thank you your response has been recorded

How active are you in your daily life?

Description: This helps us design your workouts accordingto your daily lifestyle

I/p: Select your activity status from menu like (not at all,slightly active, active, very active, athlete, etc.)

O/p: Thank you your response has been recorded

Diet Plans:

Description: These systems will ask you to enter your preference Which kind of diet is more feasible for you to followwhich you can continue to make it a routin

supplement information

Description: These need your response that are you interested in taking supplements or not

I/p: would you like to add supplements to your diet? (1.yes2.no)

O/p: your response has been recorded.

Diet Recommendation

I/p: Select the diet plan (options are: 1. pure veg 2. eggetarian 3. vegan 4.non- veg 5. keto-diet (veg only)5. keto-diet(non-veg)

O/p: Display entire plan details displaying the timing ofmeal and supplement (if chosen) for the entire day.

Workouts:

BMI

Description: Calculate BMI of your body from weight and height.

I/p: Enter your height and weight

O/p: Display BMI of your body and shows In whichcategory you belong to.

Guided Workouts

Description: Here you will be provided with some specialworkouts according to the body type which will be calculated from the BMI chart according to your personalBMI. And the plan the workout routine from what you select.

I/p: Select any guided project you want(cutting program,bulking program, fat loss program, muscle gain program, getting lean program, HIIT program, etc.)

O/p: Display the complete information about guidedworkouts that you have selected.

Workout routine:

Description: it will ask you to enter the timing which would be comfortable for you to workout throughout theday.

I/p: select your workout time .

O/p: display the entire workout plan including the type ofdiet plan selected by the member.

Preference:

Description: here you can enter your preference for place foryour workouts working at home/gym and it will give you suggestion for workout.

I/p: Enter your preference (working at home or gym)

O/p: Display information about it.
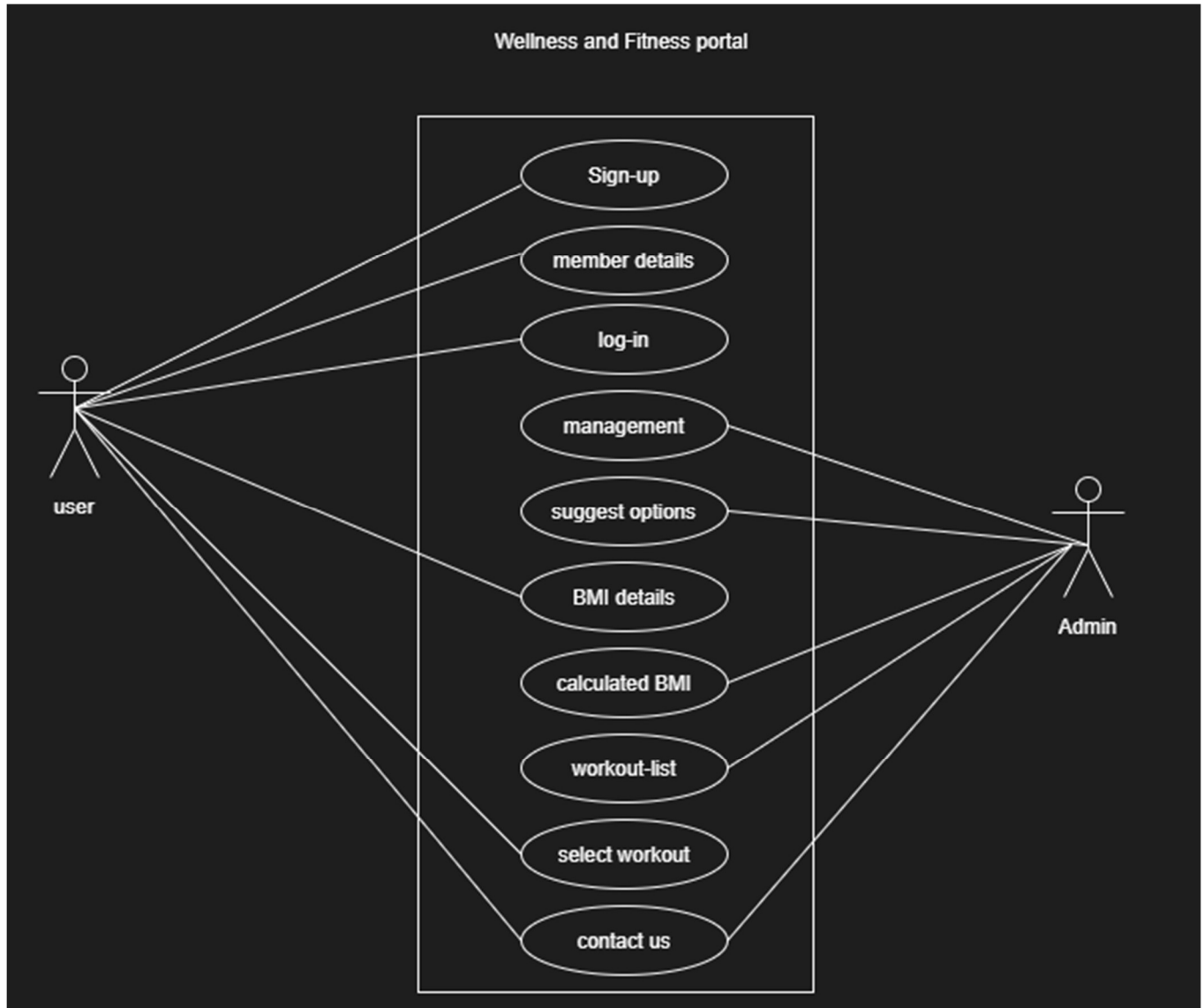
Other Nonfunctional Requirements

1. Contact-us

Whenever a user Register itself in the contact us form regarding any query,its details will be stored in the database and the manager of the system can latter reach to the user who registered a query once after solving the problem

2. Database

System requires to access user Sign-up details, Workout list, log-in log-outs and contact us query.
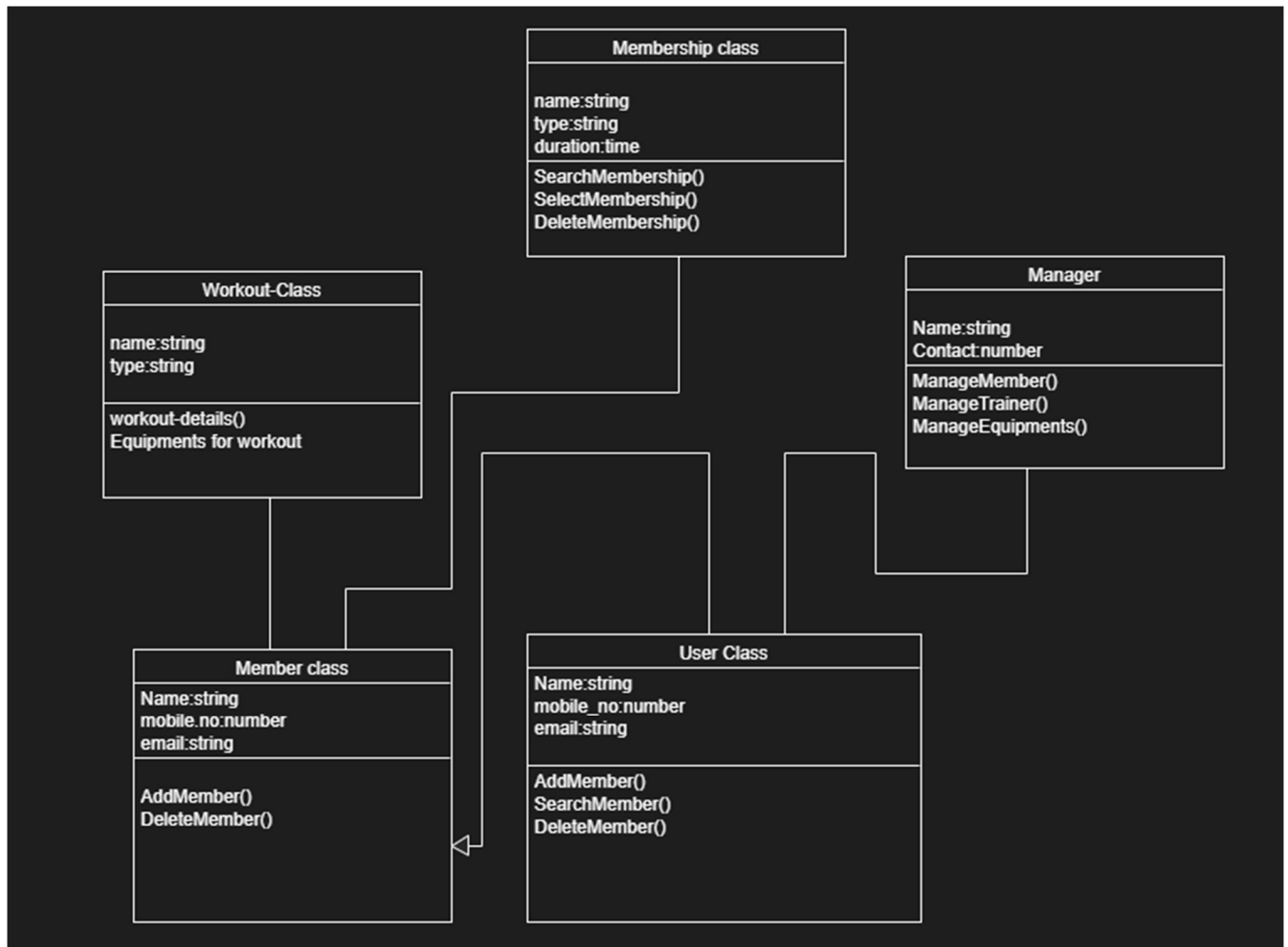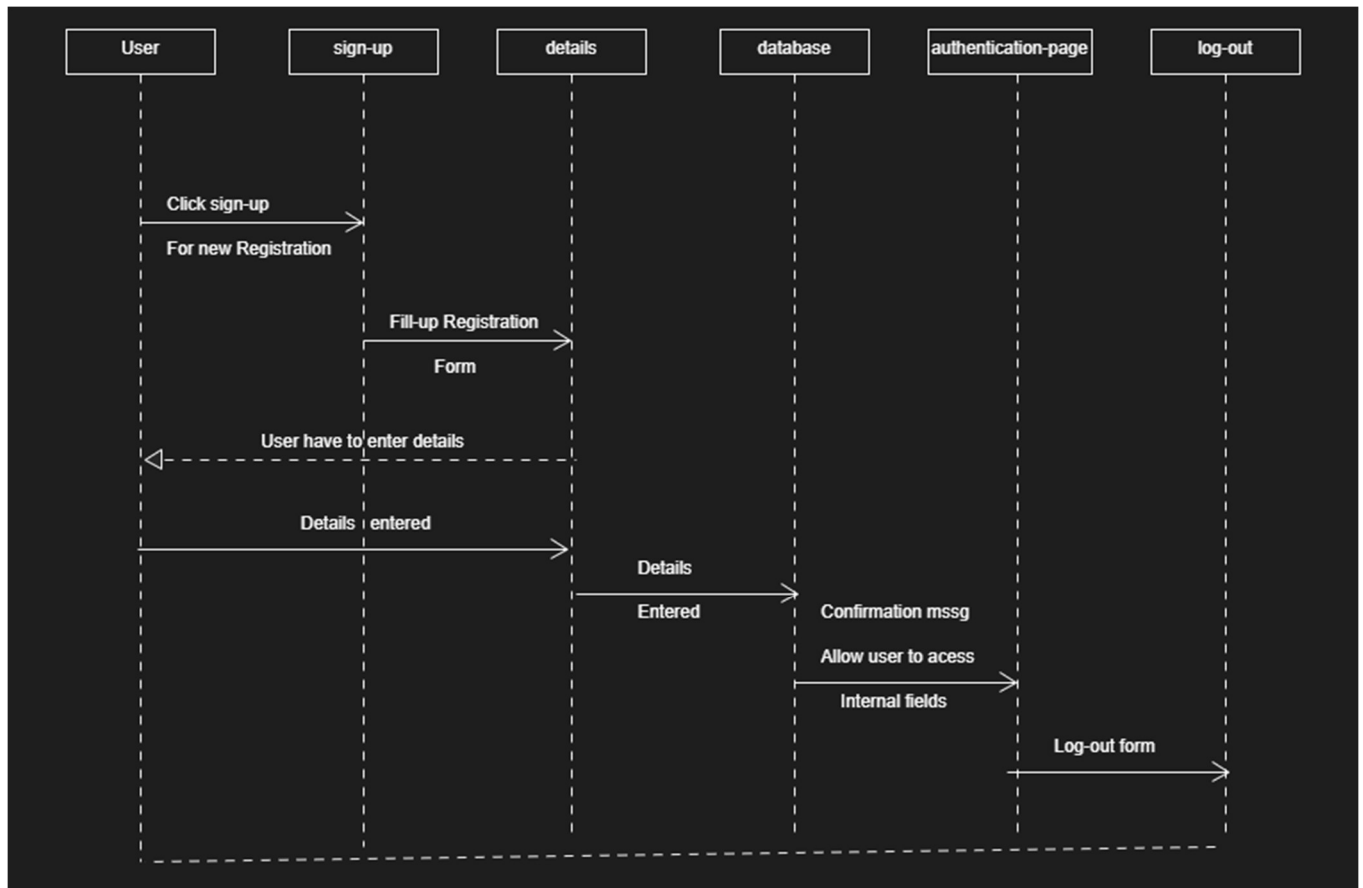
3. Design Documents

Use Case Diagram

Wellness and Fitness portal

- Sign-up
- member details
- log-in
- management
- suggest options
- BMI details
- calculated BMI
- workout-list
- select workout
- contact us

user

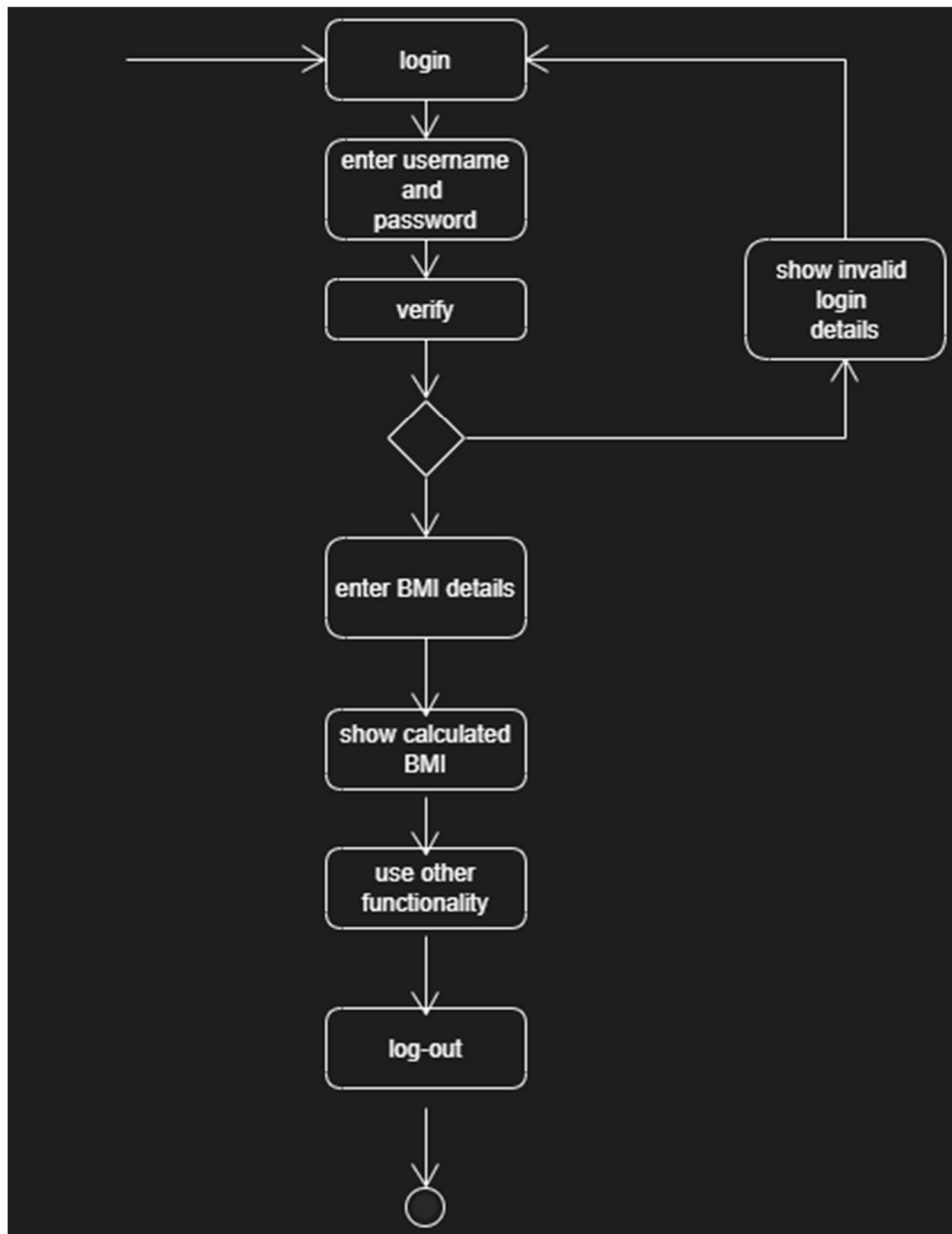Admin

Use case diagram of user
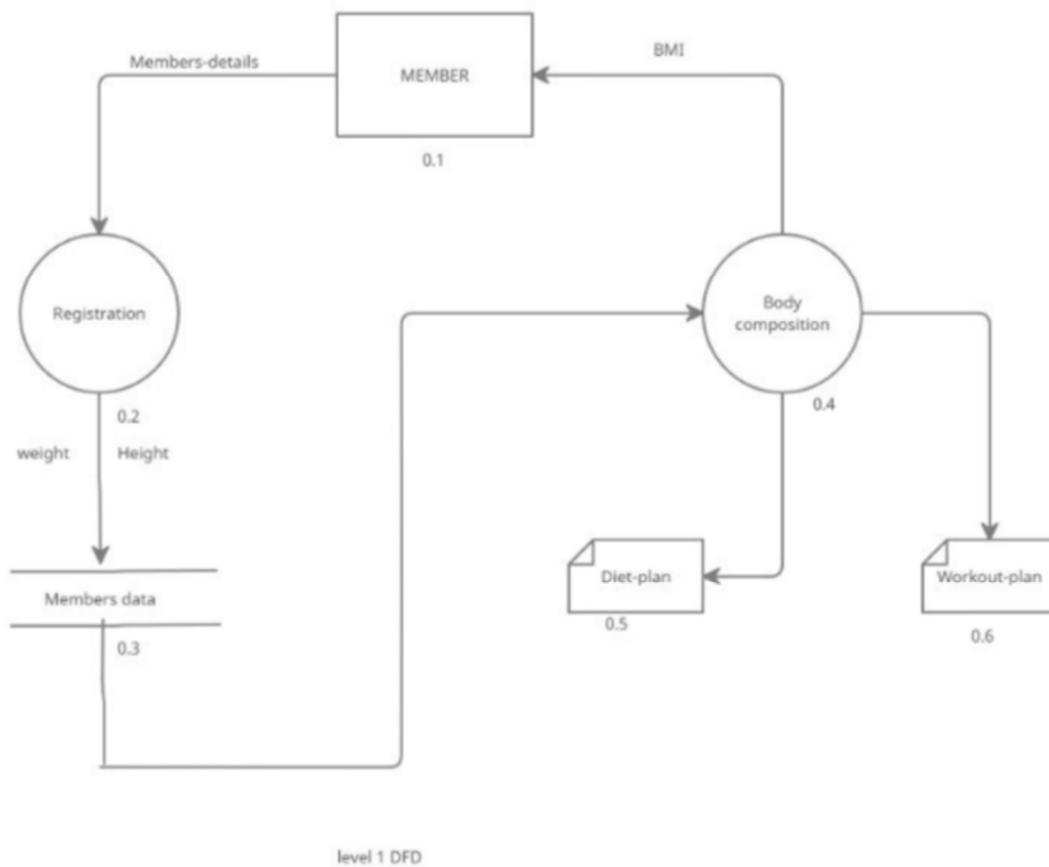
Class Diagram

Class Diagram

Sequence Diagram

Sequence diagram

Activity Diagram

Activity diagram

DFD Diagram

LOG-IN

Member

WELLNESS AND FITNESS PORTAL

INFORMATION

1.context diagram

Members-details

MEMBER

BMI

0.1

Registration

Body composition

0.2

0.4

weight   Height

Members data

0.3

Diet-plan

0.5

Workout-plan

0.6

level 1 DFD
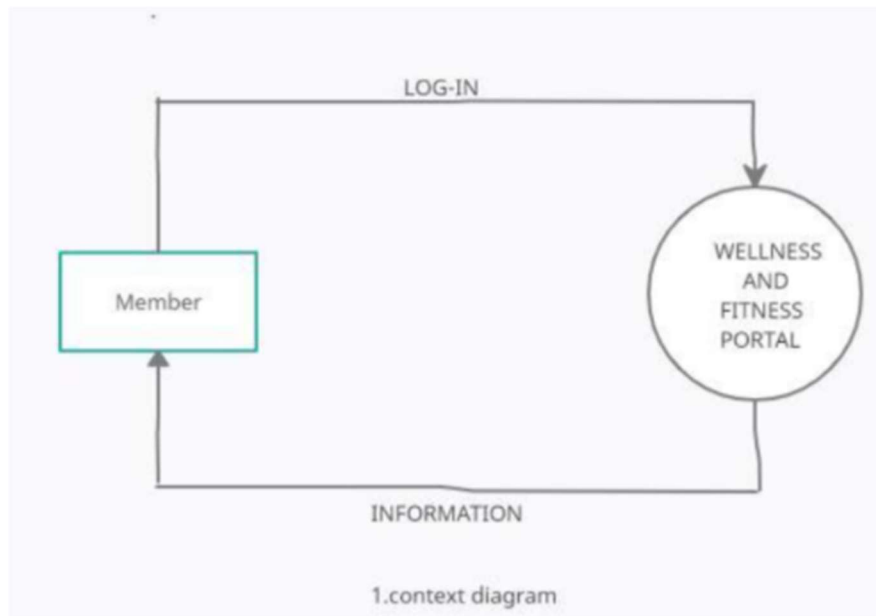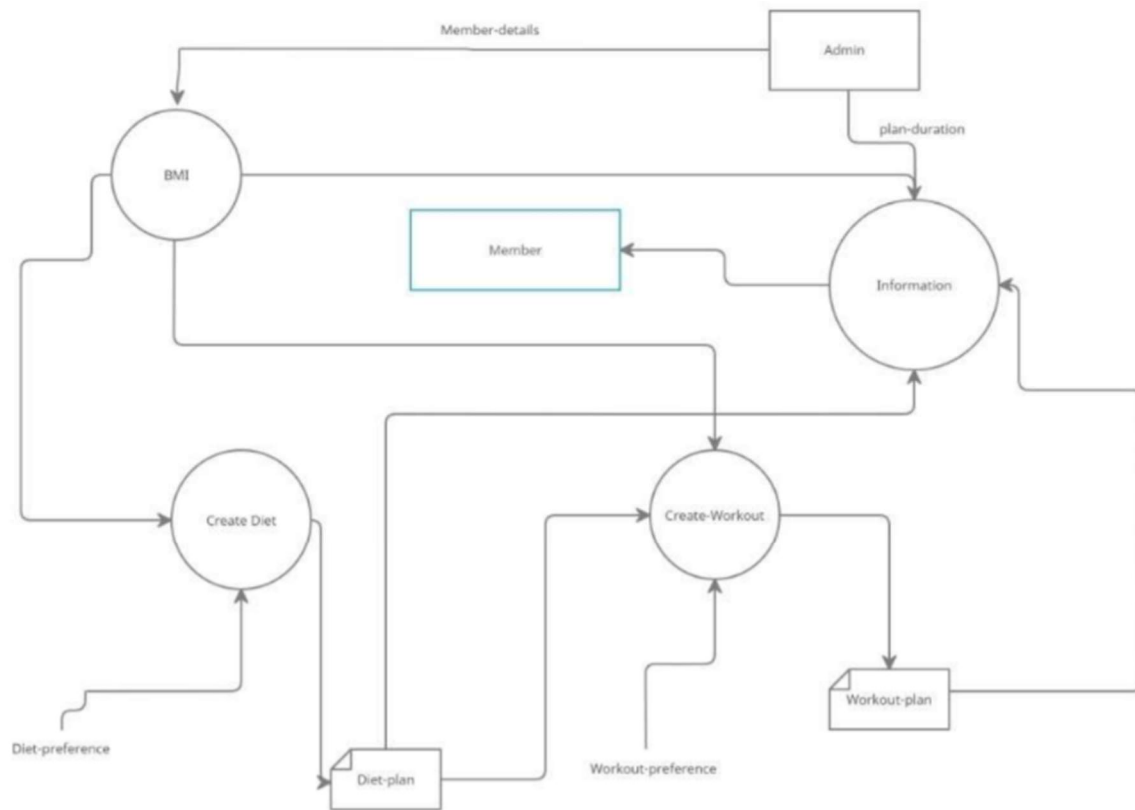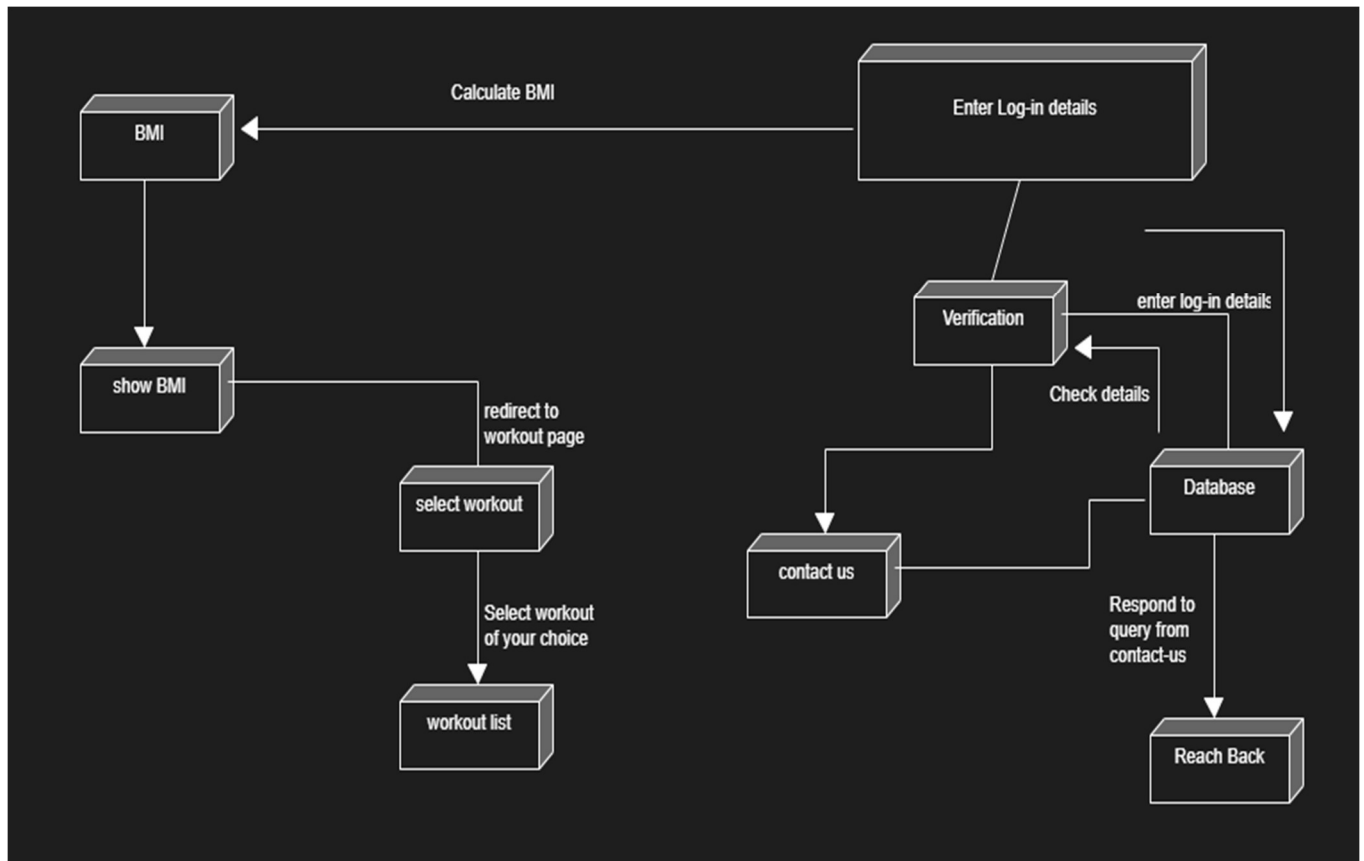
DFD diagram

Structure Chart

4. Implementation Details

The system consists of 3 basic modules namely

1. Sign Up Module
2. Login Module
3. Contact Us Module

Each module consists of several methods to implement the required functionality. Implementation is done using Django. Database used in these modules is SQLite.

Sign Up Module

This module is the base for authentication and authorization to ensure the security aspect of the user. Here you can create an account for the website and use it.

Login Module

This module is also for the base for authentication and authorization to ensure the security aspect of the user. Here you can access the website by entering your unique username and password you don't require to register again if you have already signed up.

Contact Us Module

This module handles various queries regarding fitness issues of user. User will need to submit their query with name, phone no. and email. User can come here whenever they have a question and want to speak to our individual and we will try our best with a purpose of providing them with information they need.

```python
def handlelogin(request):
    if request.method=="POST":
        # Get the post parameters
        loginusername=request.POST['loginusername']
        loginpass=request.POST['loginpass']

        user=authenticate(username=loginusername,password=loginpass)

        if user is not None:
            login(request,user)
            messages.success(request,loginusername+', You are successfully logged in')
            return redirect('home')
        else:
            messages.error(request,"Invalid credentials, please try again ")
            return redirect('home')
    else:
        return HttpResponse('404 - Not Found')


def handlelogout(request):
    logout(request)
    messages.success(request,'You are successfully logged Out')
    return redirect('home')
```

```python
def handlesignup(request):
    if request.method=="POST":
        # Get the post parameters
        username=request.POST['username']
        fname=request.POST['fname']
        lname=request.POST['lname']
        email=request.POST['email']
        pass1=request.POST['pass1']
        pass2=request.POST.get('pass2')

        # Check for errorneous inputs

        if len(username)>10 or len(username)<3:
            messages.error(request,"User must be under 3-10 characters")
            return redirect('home')

        if not username.isalnum():
            messages.error(request,"Username must be within alphanumeric characters")
            return redirect('home')

        if len(pass1)<8:
            messages.error(request,"Please create Strong password with alphanumeric character and min 8 characters")
            return redirect('home')

        if pass1 != pass2:
            messages.error(request,"confirm your password again")
            return redirect('home')

        # Create the user
        myuser=User.objects.create_user(username,email,pass1)
        myuser.first_name=fname
        myuser.last_name=lname
        # myuser.passc=pass2
        myuser.save()
        messages.success(request,'Your Fitness Account has been successfully created')
        return redirect('home')
    else:
        return HttpResponse('404 - Not Found')
```

```python
def contact(request):
    # return HttpResponse('This is contact page')
    # messages.error(request,'Welcome to contact')
    if request.method=='POST':
        name=request.POST['name']
        email=request.POST['email']
        phone=request.POST['phone']
        content=request.POST['content']

        print(name,email,phone,content)

        if len(name)<2 or len(email)<7 or len(phone)<10 or len(content)<2:
            messages.error(request,"please fill up the form correctly")
        else:
            contact=Contact(name=name,email=email,phone=phone,content=content)
            contact.save()
            messages.success(request,"Your message has been received successfully, we'll try to reach you soon")
    return render(request,'home/contact.html')
```

5. Testing

Manual testing was performed in order to find and fix the bugs in development process.

Testing Method: Manual Testing

Sr. No.	Test Scenario	Expected Result	Actual Result	Status
1	Login with incorrect credentials	Invalid Credentials, please try again	Invalid Credentials, please try again	Success
2	Login with correct credentials	You are Successfully logged in	You are Successfully logged in	Success
3	Confirmation of password in Register	Confirm your password again	Confirm your password again	Success
4	Registering with existing username	Please select unique username	Please select unique username	Success
5	Registering with valid Credentials	Your fitness account has been created	Your fitness account has been created	Success

Testing Method: Unit Testing (For BMI)

```
24
25        def test_bmi(self):
26            self.assertEqual(ABde.BMI(180,72),22.22)
27            self.assertEqual(ABde.BMI(160,55),21.48)
28            self.assertEqual(ABde.BMI(178,70),22.09)
```

PROBLEMS 5   OUTPUT   DEBUG CONSOLE   TERMINAL

```
Windows PowerShell
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Try the new cross-platform PowerShell https://aka.ms/pscore6

PS C:\Users\HP\Desktop\UnitTesting> python -m unittest Testing_Func.py
.....
----------------------------------------------------------------------
Ran 5 tests in 0.002s

OK
PS C:\Users\HP\Desktop\UnitTesting>
```

6. Conclusion

The functionalities are implemented in system after understanding all the system modules according to the requirements. Functionalities that are successfully implemented in the system are:

- User registration
- Login
- User authentication
- Logout
- Calculate BMI
- Get BMI
- Get workout
- Workout list
- Contact us page

After the implementation and coding of system, comprehensive testing was performed on the system to determine the errors and possible flaws in the system.

7. Limitations and Future Enhancements

We are able to implement the functionality model of the "Wellness and Fitness Portal". We aim to make this product to be used in online platform. Currently, the project supports functionality like log-in,log-out,calculate BMI and get Workout.

The project can be extended by adding features like get diet get a personal trainer that can keep a track of your daily routine. The project supports online mode which can also be modified to offline particular gym software.

We can add a fields of trainer,employee,equipment guidance etc. Further extensions involve providing some photo and video guidance of the exercise,Adding some vfx effects along with a timer where the user can perform the exercise simultaneously with the animation.Trying to share motivational quotes and diet suggestion with recipe with some kind of notification or email.

8. Bibliography

Following links and websites were referred during the development of this project:

- stackoverflow.com
- docs.djangoproject.com
- github.com
- w3schools.com
- bootstrap .com

Project Git Repository link:

https://github.com/Bhavin-Chavda/Het-Bhavin