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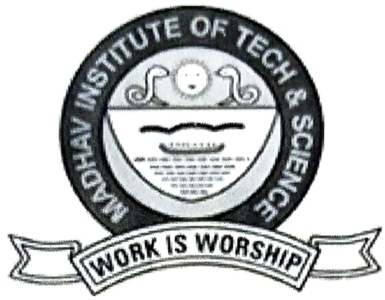

Project Report

on

Health Tracker

Submitted by:

Bharat Chauhan

0901CS191029

Ashish Patel

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Faculty Mentor:

Mr. Mir Shahnawaz Ahmad
Assistant Professor, Computer Science and Engineering

Submitted to:

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
MADHAV INSTITUTE OF TECHNOLOGY and SCIENCE
GWALIOR - 474005 (MP) est. 1957

MAY-JUNE 2022

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR
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Project Report on

Health Tracker

A project report submitted in partial fulfillment of the requirement for the degree of

BACHELOR OF TECHNOLOGY in

COMPUTER SCIENCE AND ENGINEERING

Submitted by:

Bharat Chauhan (0901CS191029)

Ashish Patel (0901CS191026)

Faculty Mentor:

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MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR
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CERTIFICATE

This is certified that **Bharat Chauhan** (0901CS191029) has submitted the project report titled **Health Tracker** under the mentorship of **Mr. Mir Shahnawaz Ahmad** in partial fulfillment of the requirement for the award of degree of Bachelor of Technology in Computer Science and Engineering from Madhav Institute of Technology and Science, Gwalior.

09/05/22

Mr. Mir Shahnawaz Ahmad

Faculty Mentor
Assistant Professor
Computer Science and Engineering

09/05/22

Dr. Manish Dixit

Professor and Head,
Computer Science and Engineering

Dr. Manish Dixit
Professor & HOD
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MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR

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CERTIFICATE

This is certified that **Ashish Patel** (0901CS191026) has submitted the project report titled **Health Tracker** under the mentorship of **Mr. Mir Shahnawaz Ahmad** in partial fulfillment of the requirement for the award of degree of Bachelor of Technology in Computer Science and Engineering from Madhav Institute of Technology and Science, Gwalior.

Mr. Mir Shahnawaz Ahmad

Faculty Mentor
Assistant Professor
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Dr. Manish Dixit

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MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR
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DECLARATION

I hereby declare that the work being presented in this project report, for the partial fulfillment of requirement for the award of the degree of Bachelor of Technology in Computer Science and Engineering at Madhav Institute of Technology & Science, Gwalior is an authenticated and original record of my work under the mentorship of **Mr. Mir Shahnawaz Ahmad**, **Assistant Professor**, **Computer Science and Engineering**.

I declare that I have not submitted the matter embodied in this report for the award of any degree or diploma anywhere else.

Bharat Chauhan
0901CS191029
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3rd Year
Computer Science and Engineering

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR
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I am sincerely thankful to my faculty mentors. I am grateful to the guidance of **Mr. Mir Shahnawaz Ahmad**, **Assistant Professor**, Computer Science and Engineering for their continued support and guidance throughout the project. I am also very thankful to the faculty and staff of the department.

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ABSTRACT

Now days, we used to see many articles about the increasing health issues at very young ages. People are very busy in this rapidly growing world. While chasing dreams, having burden of work, somehow unknowingly they neglect the most important aspect of life i.e. their Health. We often see some serious problems now a days in youth which were not as much often 10-15 years ago. Keeping this in mind, we have developed an application which will allow users to monitor their consistency along with streak, and they can track their progress via tabular & graphical representation. The Health Tracker is web based system which will use as a platform to monitor the progress of a user. While the main objective web- of this project is to computerize the activity of user and present the activity log to user in tabular as well as graphical form. The computerization is done so that all the logs & their activities will be stored in system which makes centralized and chance of data duplication & various anomalies get reduced.

Keywords: Tracker, Logs, Streak, Tabular, Graphical

सार

आजकल, हम बहुत कम उम्र में बढ़ती स्वास्थ्य समस्याओं के बारे में कई लेख देखते थे। इस तेजी से बढ़ती दुनिया में लोग बहुत व्यस्त हैं। सपनों का पीछा करते हुए, काम का बोझ होते हुए, अनजाने में वे जीवन के सबसे महत्वपूर्ण पहलू यानी अपने स्वास्थ्य की उपेक्षा करते हैं। हम आजकल युवावस्था में अक्सर कुछ गंभीर समस्याएं देखते हैं जो 10-15 साल पहले उतनी बार नहीं होती थीं।इसे ध्यान में रखते हुए, हमने एक ऐसा एप्लिकेशन विकसित किया है जो उपयोगकर्ताओं को स्ट्रीक के साथ-साथ उनकी निरंतरता की निगरानी करने की अनुमति देगा, और वे सारणीबद्ध और चित्रमय प्रतिनिधित्व के माध्यम से अपनी प्रगति को ट्रैक कर सकते हैं।हेल्थ ट्रैकर वेब आधारित प्रणाली है जो उपयोगकर्ता की प्रगति की निगरानी के लिए एक मंच के रूप में उपयोग करेगी। जबकि इस परियोजना का मुख्य उद्देश्य वेब- उपयोगकर्ता की गतिविधि को कम्प्यूटरीकृत करना और गतिविधि लॉग को सारणीबद्ध के साथ-साथ ग्राफिकल रूप में उपयोगकर्ता को प्रस्तुत करना है। कंप्यूटरीकरण किया जाता है ताकि सभी लॉग और उनकी गतिविधियों को सिस्टम में संग्रहीत किया जा सके जिससे केंद्रीकृत हो और डेटा दोहराव और विभिन्न विसंगतियों की संभावना कम हो।

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CHAPTER 1: INTRODUCTION

1.1 Project Overview:

The Health Tracker is web-based system which will use as a platform to monitor the progress of a user. While the main objective of this project is to computerize the activity of user & present the activity log to user in tabular as well as graphical form. The computerization is done so that all the logs & their activities will be stored in system which makes centralized and chance of data duplication & various anomalies get reduced.

1.2 Problems with existing system:

In present system, it is very rare to present data in visualized form, along with it most of the users face a very common problem that they are provided with some pre-declared logs & they can't change the logs / edit log / change input types, etc. according to their convenience.

1.3 Proposed system:

Health tracker will manage all the requirements which were not fulfilled (mentioned above). It will provide an interface where user can create a log of their type, assign it the type of input & will be provided with the feature of edit and delete that log in future. It also presents the data in visualized form to the user i.e. in graphical form.

It supports numerous features including followings:

Helps in setting achievable goals

To achieve the best results, you will have to set a realistic goal that can be achieved. You cannot shed weight if you lead a sedentary life and do not exercise. However, if you use a appropriate tracker, it will help you set and achieve realistic goals within the recommended time frame. It also makes sure that you do not get de-motivated and quit midway.

Monitoring your health

Indulge in self-care and track your fitness level. A fitness tracker lets you watch and analyze your daily push-ups and step counts, etc. Self-tracking allows you to stick to a healthier diet, exercise more and sleep better.

User friendly interface

Regular use of Health tracker boosts your daily workouts and makes them achievable. All trackers have built-in features of inserting update after every workout & even provide deletion, edit features. These features make it easy for users to check their progress instantly & can analyze it in graphical representation.

1.4 Technologies used in Health Tracker Project

We have developed this project using following technologies

1. HTML : Page layout has been designed with the help of HTML
2. CSS : All the designing part was result of implementation of CSS
3. FLASK : Database was created & handled with the help of flask_sqlalchemy
4. MATPLOT : Graphs has been plotted with the help of this library
5. DB Browser : Used for checking database entries
6. Python : All logics has been implemented in python only
7. Numpy : To store coordinates of the graphs that will be generated via our database

1.5 System Requirements

We can configure it in any of the following Operating Systems

1. Windows
2. Linux
3. Mac OS

For running this project we have to install (taking reference of windows)

1. Flask_sqlalchemy
2. Flask
3. Pytz
4. Numpy
5. Matplot

CHAPTER 2: INITIATING AND PLANNING

This Process helps in visualization of what is to be accomplished & finding prerequisites of developing a project. Plans are documented, the project deliverables and requirements are defined, and the project schedule is created.

It involves creating a set of plans to help guide our team through the implementation and closure phases of the project. The plans created during this phase will help in managing time, cost, quality, changes, risk and related issues.

2.1 Prerequisites

To design a good looking user interface we need to know basic level of HTML to design skeleton of web-pages & to style them and make them look beautiful, prior knowledge of CSS, bootstrap is needed.

Prior knowledge of python is needed to implement various logics, and libraries of python like: matplot, pytz, numpy is needed for designing Graphs from data, calculate duration b/w two entries, store coordinates of graph respectively. Flask & flask_sqlalchemy is prerequisite for designing databases and implement various operations on data.

1. HTML : Page layout has been designed with the help of HTML
2. CSS : All the designing part was result of implementation of CSS
3. DB Browser : Used for checking database entries
4. Python : All logics has been implemented in python only

2.2 Installation of dependencies

Keeping all the prerequisites in mind, we need to install some much needed libraries. Some of them are mentioned below:

1. Flask_sqlalchemy
2. Flask
3. Pytz
4. Numpy
5. Matplot

CHAPTER 3: EXECUTING

This process is also known as the i plementation phase, in which the plan desigr ed in the previous phase of the project activity cycle is put into action. The intent of the execution phase of the project activity cycle is to brin about the project's expected results. Normall , this is the longest phase of the project manag ment life cycle, where most resources are apr lied.

This is the step where our plan & visualization came into practical implementatic n. From here we started writing code by importi g the dependencies needed which we had installed in previous phase, started designing database tables, designed various classes that we need in future, code for the condition that validates user-id and password, routing methoc s for switching between pages, etc.

3.1 Import Dependencies

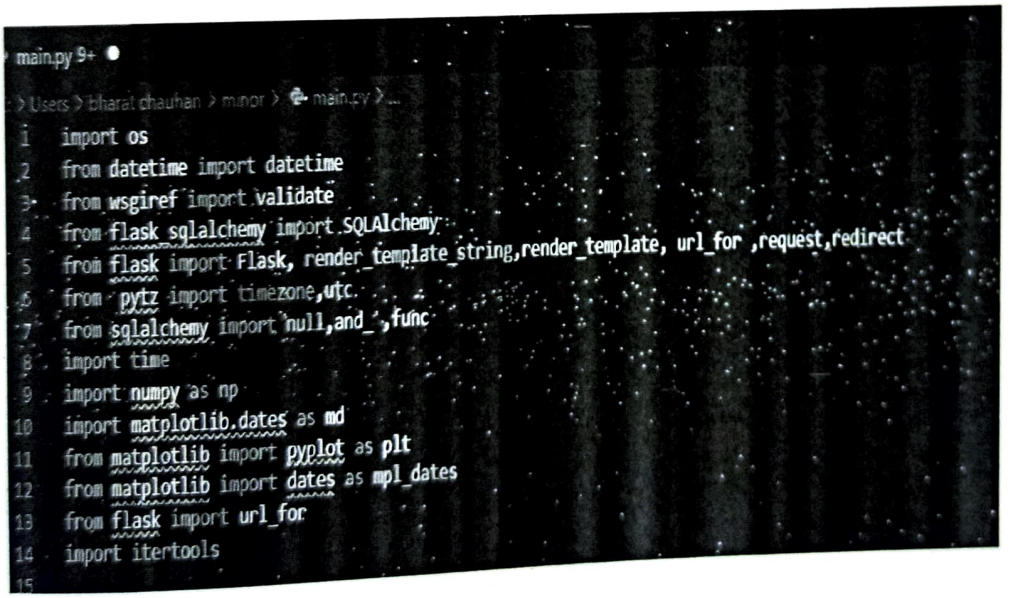

Fig. 3.1.1

3.2 Database Creation

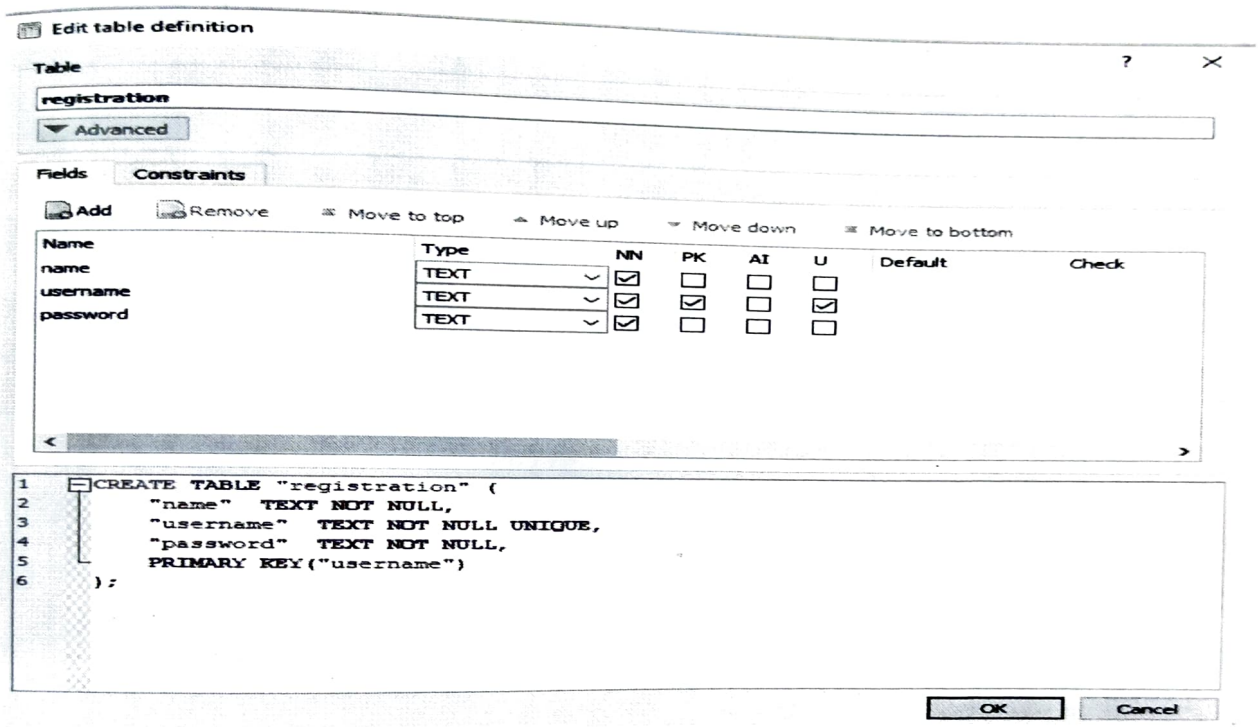

Fig.3.2.1

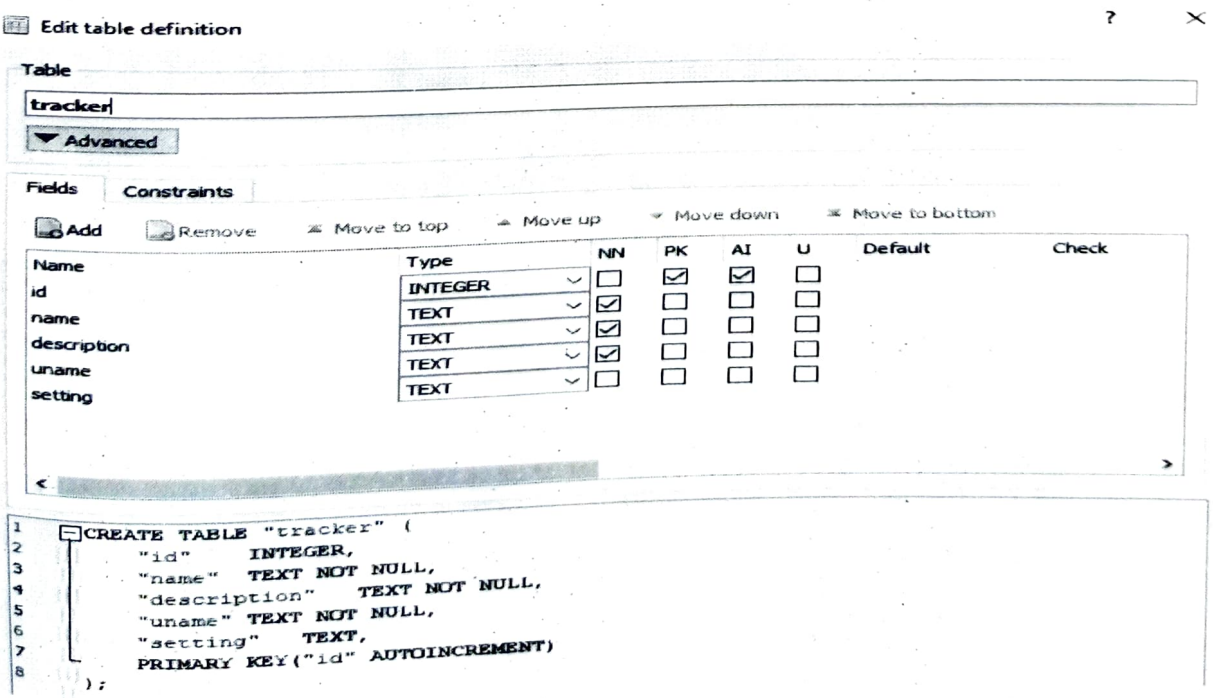

Fig. 3.2.2

CHAPTER 4: MONITOR AND CONTROL

This process involves comparing a tual performance with planned performance and taking corrective action to yield the desired outcome when significant differences exist.

Talking about our project, we haven't applied algorithm for making password & ser-id valid, so we wrote an Algo and implemente it to achieve desired functionality. All other errors that one can get will also be eliminated at th is step.

After successfully implementing the strategies to remove errors & making desire changes in the code, we are ready with our Health Tracker. Some screenshots of successful worl ing of project are as follows:

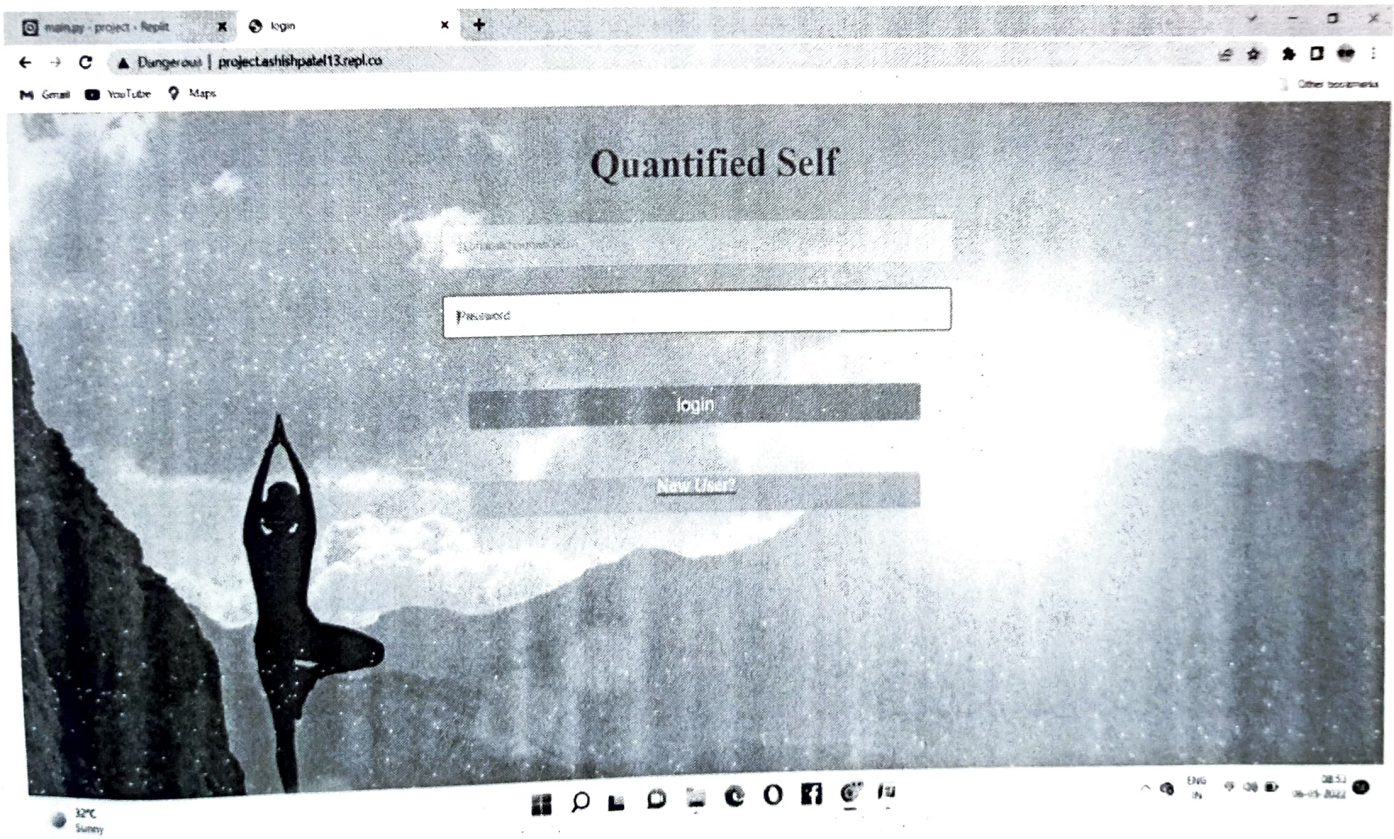

Fig. 4.1

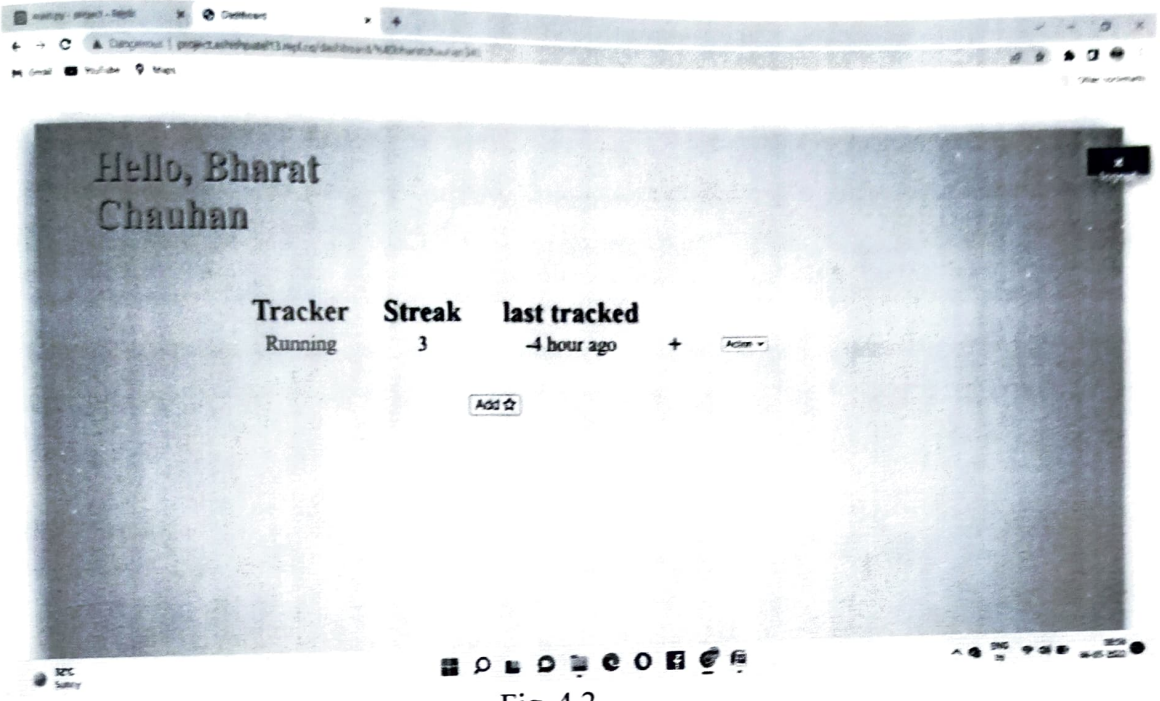
Hello, Bharat Chauhan
Tracker
Streak
last tracked
Running
3
-4 hour ago
Add ☆

Fig. 4.2

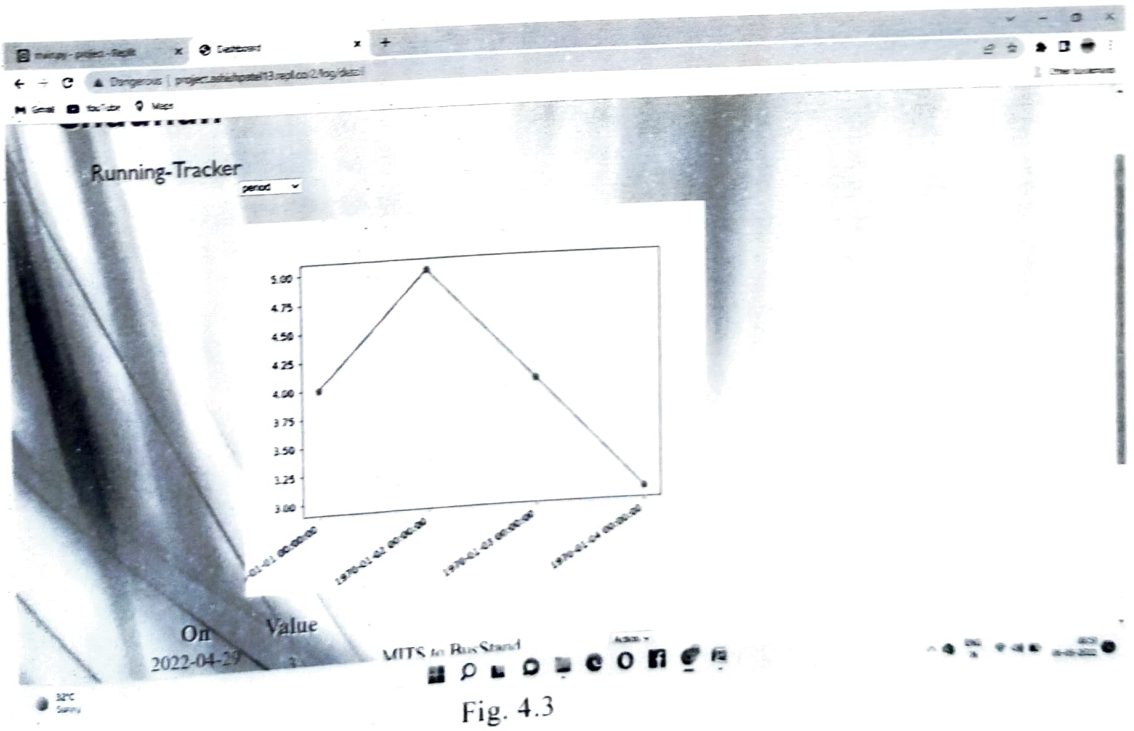
Running-Tracker
period
5.00
4.75
4.50
4.25
4.00
3.75
3.50
3.25
3.00
Value

Fig. 4.3

CHAPTER 5: CONCLUSION AND FUTURE SCOPE

To address the limitations of previous models, we envisioned a system that overcomes those limitations and provide user a functionality of designing logs of their choice with edition, deletion of logs. It also presents data in graphical form along with tabular structure.

Using this model, we further achieved a functionality of streak, which shows the current continuity of user day-wise along with the last activity log wise.

5.1 Conclusion

We achieved all the requirements that we were supposed to do. Our web application named Health Tracker is ready now supporting User Registration, log in, adding trackers of their choice, along with last activity and Continuity tracker i.e. streak. User can track their progress and analyze data in tabular as well as graphical format.

5.2 Future Scope

1. Implement various algorithms for improving users health in a given time period by allotting specific tasks to the user every day.
2. With the help of entered physical measures of user like: Weight, Height, etc. BMI can be predicted & the suitable diet chart for each user can also be derived.

References

1. https://flask.palletsprojects.com
2. https://matplotlib.org
3. https://docs.sqlalchemy