



## Enhanced Design Thinking Approach Based Health and Work Life Monitoring System

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**Abstract:** Because of Covid-19 pandemic work from home culture is trending all the world. Due to that employee's wakeup lately, skipping their daily workout, foods, sleeping hours. Overcome this we come up with an idea health and work life monitoring web-application. This will help the employee as well as student to track their daily walks, run kilometer, sleeping hours, calories parallely their project, daily task, team chat, mental health exercise. Health and work life monitoring has an in-built point system that will give points to every activity you have performed. This points will used as an incentive to keep workers healthy. At the end of every month, the person with the highest point can be rewarded for his/her efforts.

**IndexTerms**–Covid-19, Employee's, worker.

### I. INTRODUCTION

Due to Covid-19 IT employees are working even in midnight. I'm enquired one my cousin, "What are the difficulties you are facing now days because of Work from Home?", he said, "While working virtually I need to answer the client calls even in midnight. There is no working and personal hours. Because of this I do not have time to focus myself". After gathering the issues from IT workers me and my team come up with an idea that we will create an application or website to monitor their health as well as work.

Health and work life monitoring focus on health, fitness, mental health and team bonding. This project builds using django, python, HTML, CSS and little bit of JavaScript. Once you login users can create teams and users those team, add projects and add task to those projects, add files to all the team members to see. Users can chat with each other through a real time interactive chat window programmed using django channels and web sockets.

Currently, the AI applications in our daily life are blooming, and there is also a growing trend in "Work from Home" which can help in improving to reduce office culture. In work from home, we face many difficulties like health issues, mental stress, work life imbalance, etc. To solve these problems, we have to develop such system which is combination of the internet, such as a telecommunication, broadcast, Fitbit where artificial intelligence (AI) is base technology. In our project we have implemented to monitor the exercises and daily work completed by the employee at home without the guidance or monitoring by other person using our Health and work life monitoring system. Using Fitbit account, we would be monitoring the daily walk, run. Health and work life monitoring system is a collaborative platform designed for workplace communication that simultaneously promotes a healthy and fruitful lifestyle for all the employees. Not only does it allow you to share tasks and files with your teammates and communicate with them through an interactive chat window, Health and work life monitoring system also enables you to track your personal and team fitness levels and engage in fun, rewarding fitness and trivia challenges, making "work from home" a more enjoyable & productive experience!

### II. DOMAIN OVERVIEW

Artificial Intelligence is a way of making a computer, a computer controlled robot, or a software think intelligently, in the similar manner the intelligent humans think. AI is accomplished by studying how human brain thinks and how humans learn, decide, and work while trying to solve a problem, and then using the outcomes of this study as a basis of developing intelligent software and systems. Artificial intelligence is a science and technology based on disciplines such as Computer Science, Biology, Psychology, Linguistics, Mathematics, and Engineering. A major thrust of AI is in the development of computer functions associated with human intelligence, such as reasoning, learning, and problem solving. Image recognition without Artificial Intelligence (AI) seems paradoxical. Efficacious AI image recognition software not only decodes images, but it also has a predictive ability. Software and applications that are trained for interpreting images are smart enough to identify places, people, handwriting, objects, and actions in the images or videos. The essence of artificial intelligence is to employ an abundance of data to make informed decisions. Image recognition is a vital element of artificial intelligence that is getting prevalent with every passing day.

### III. EXISTING SYSTEM

There is no Existing system for both work and health management of employee, but individual system available for work life and health. The system used for health monitoring is the fixed monitoring system, which can be detected only when the patient is in hospital or in bed. Recently accessible systems are huge in size and available only in the hospitals in Intensive Care Unit. Nowadays, zig bee can be used to transmit the patient information to their loved ones or to their concerned doctors. The existing work life monitoring system in the organization still uses the ordinary classical methods which are merely based on pen-paper to record the data of their employees. Large quantities of registers are to be maintained for this purpose which results in downright waste of time in generating reports or searching for employee's records and loss of data if any file is lost. It is also an arduous task for organizations as it is an expensive process. However, somewhere new technologies such as web-based systems, IoT based systems are used but they also are costly and difficult to implement at some places.

### IV. PROPOSED SYSTEM

This project proposes an AI based Health and Work Life monitoring system that integrates with web application. The system meant to give more easiness to the users that they can add and retrieve information so quickly. There are two type of user they are administrator, Task Manager and employee. The administrator is the master user; he/she gets the greatest number of priorities than the other users. The different functions involve the case of an administrator are updating approval. The Task manager can view and approve the various project forms. The employee can view the details of the project, daily task, team mates daily health updates and compete with their team mates. The aim of the proposed system is to develop a system with improved facilities. The proposed system can overcome all the limitation of the existing system, such as project and health information is maintained in the database, it gives more security to data, ensures data accuracy, reduces paper work and save time, it makes information flow efficient and paves way for easy report generation, reduce the space. proposed system is cost effective.

### V. TECHNOLOGIES USED

#### HTML

HTML stands for Hypertext Markup Language. It is used to design web pages using a markup language. HTML is the combination of Hypertext and Markup language. Hypertext defines the link between the web pages. A markup language is used to define the text document within tag which defines the structure of web pages. This language is used to annotate (make notes for the computer) text so that a machine can understand it and manipulate text accordingly. Most markup languages (e.g., HTML) are human-readable. The language uses tags to define what manipulation has to be done on the text.

#### CSS

Cascading Style Sheets (CSS) 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.

#### JAVASCRIPT

JavaScript is a dynamic computer programming language. It is lightweight and most commonly used as a part of web pages, whose implementations allow client-side script to interact with the user and make 8 dynamic pages. It is an interpreted programming language with object oriented capabilities.

#### PYTHON

Python is a high-level, interpreted, interactive and object-oriented scripting language. Python is designed to be highly readable. It uses English keywords frequently where as other languages use punctuation, and it has fewer syntactical constructions than other languages.

#### DJANGO

Django is a web development framework that assists in building and maintaining quality web applications. Django helps eliminate repetitive tasks making the development process an easy and time saving experience. Django is a high-level Python web framework that encourages rapid development and clean, pragmatic design. Django makes it easier to build better web apps quickly and with less code.

### VI. RESULT AND DISCUSSION

**Connect your Fitbit Account:** Health Care and Work Life Monitoring System allows you to authorize your Fitbit account with your profile, and displays relevant health and fitness data to you and your teammates!

**Upload your daily Nike Run:** Health Care and Work Life Monitoring System offers a daily 2km running challenge where you can upload a screenshot of your run today using the Nike Run Club App, and our program rewards you with points after proofreading the upload using Python's AI and Image Recognition!

**Trivia of the Day:** Health Care and Work Life Monitoring System assigns you a daily trivia question that rewards you with points when answered correctly!

**Check On Your Peers:** Health Care and Work Life Monitoring System allows you to view your team members' daily steps and sleep hours from their Fitbit accounts.

**Wellness Reminders:** Health Care and Work Life Monitoring System displays you a carousel of facts, suggestions and reminders to keep you fit physically and mentally.

**Chat Feature:** Health Care and Work Life Monitoring System allows you to communicate with your colleagues in a real-time interactive chat window with the help of Django Channels & Sockets!

**Add Project & Tasks:** Health Care and Work Life Monitoring System allows you to add current and upcoming projects along with daily and unfinished tasks for everyone to see.

**Upload Files:** Health Care and Work Life Monitoring System allows you add files to the dashboard for everyone to see.



Fig 1

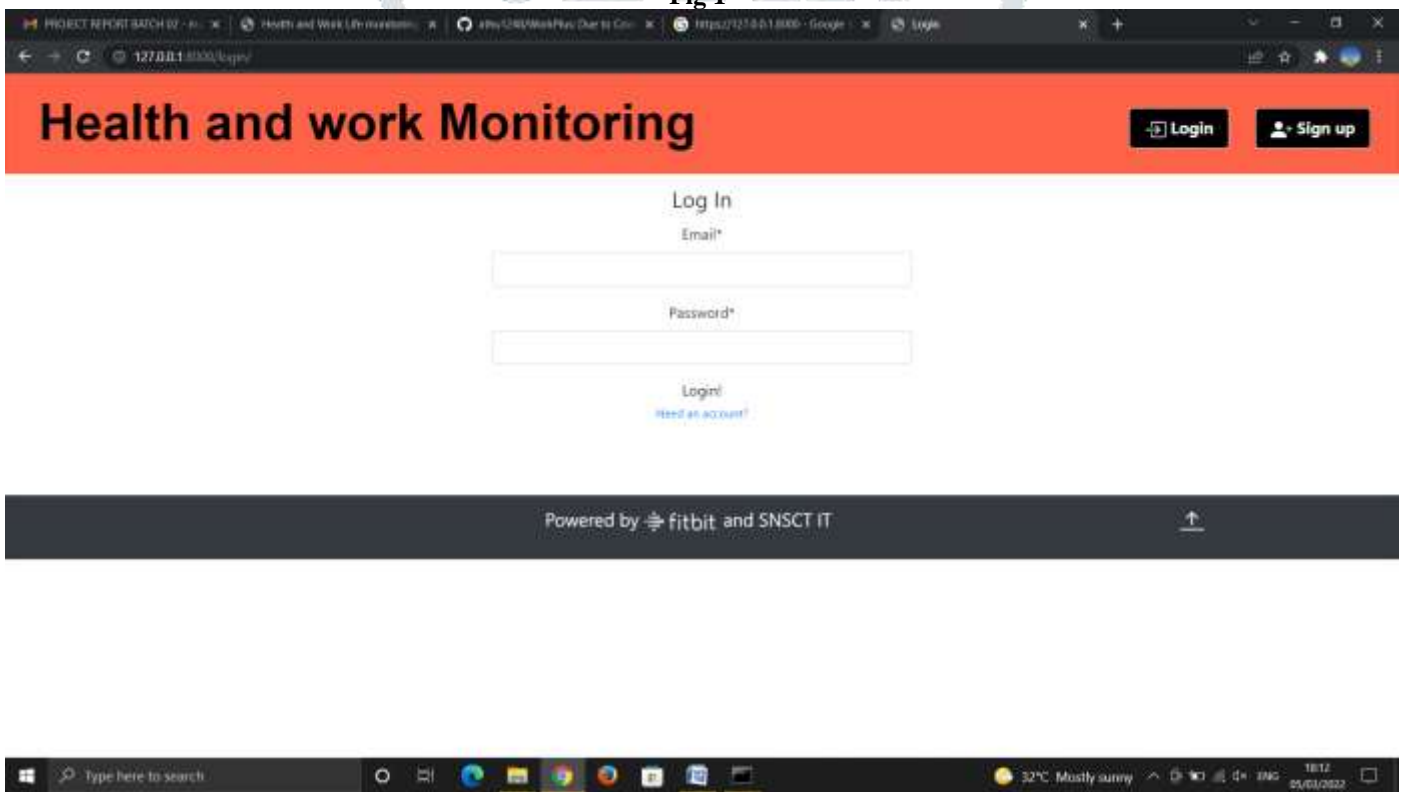


Fig 2

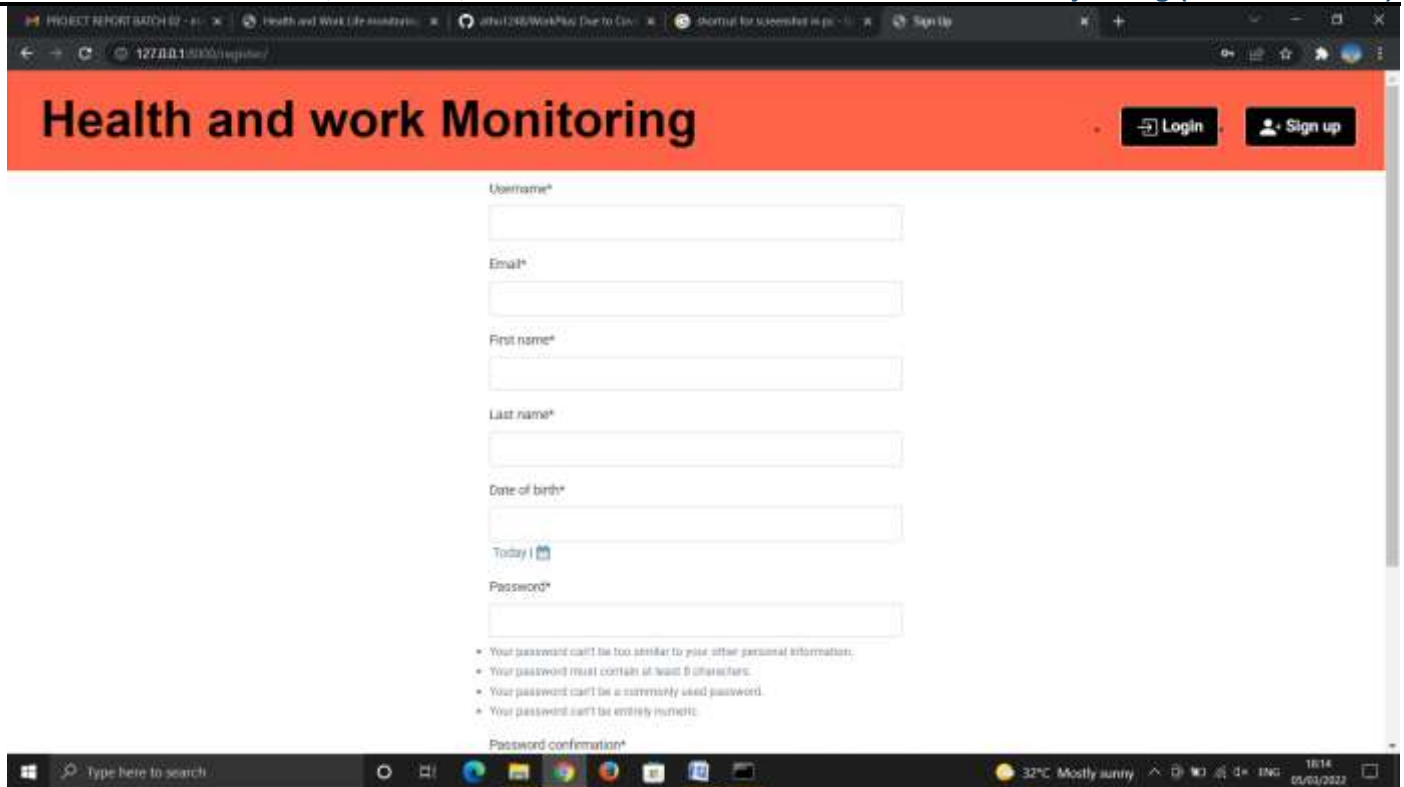


Fig 3

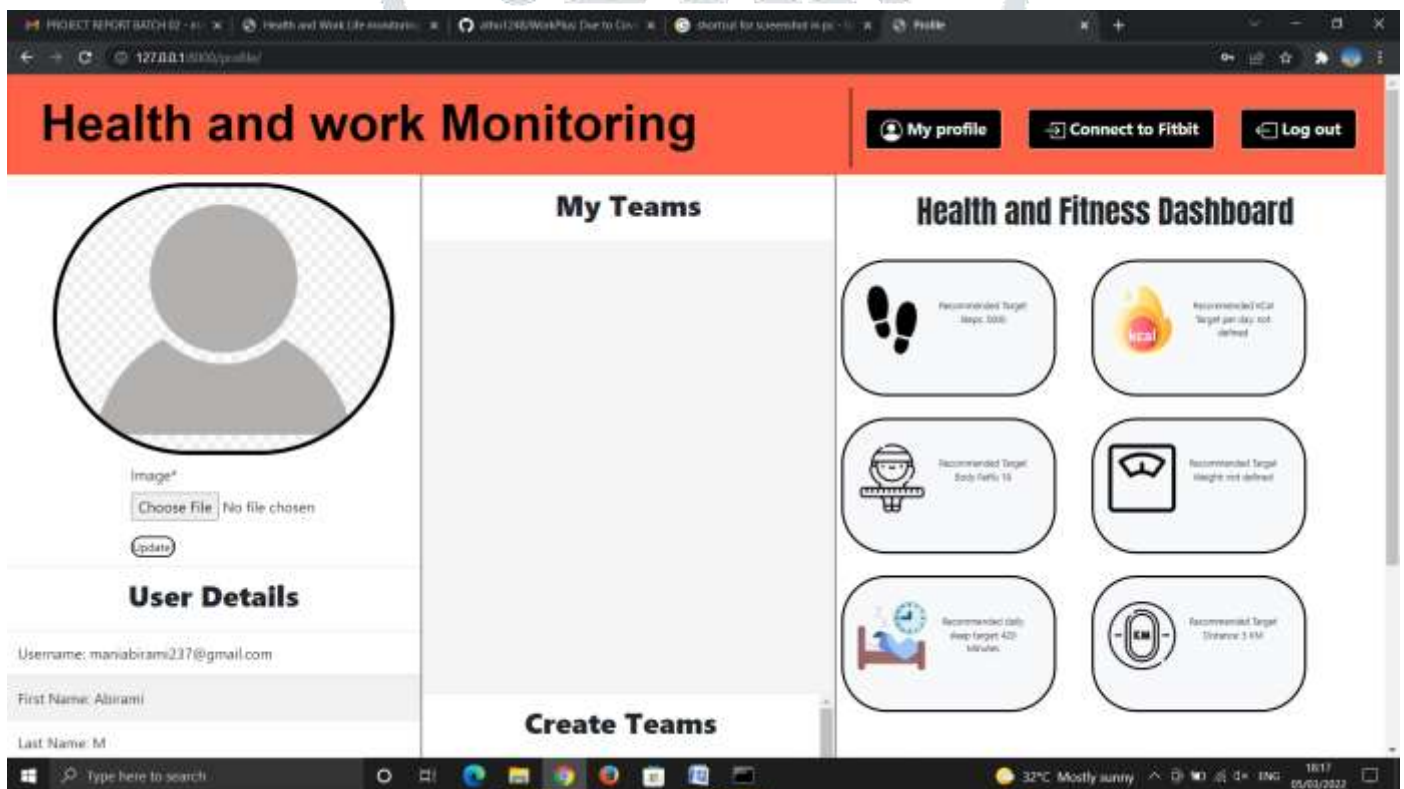


Fig 4

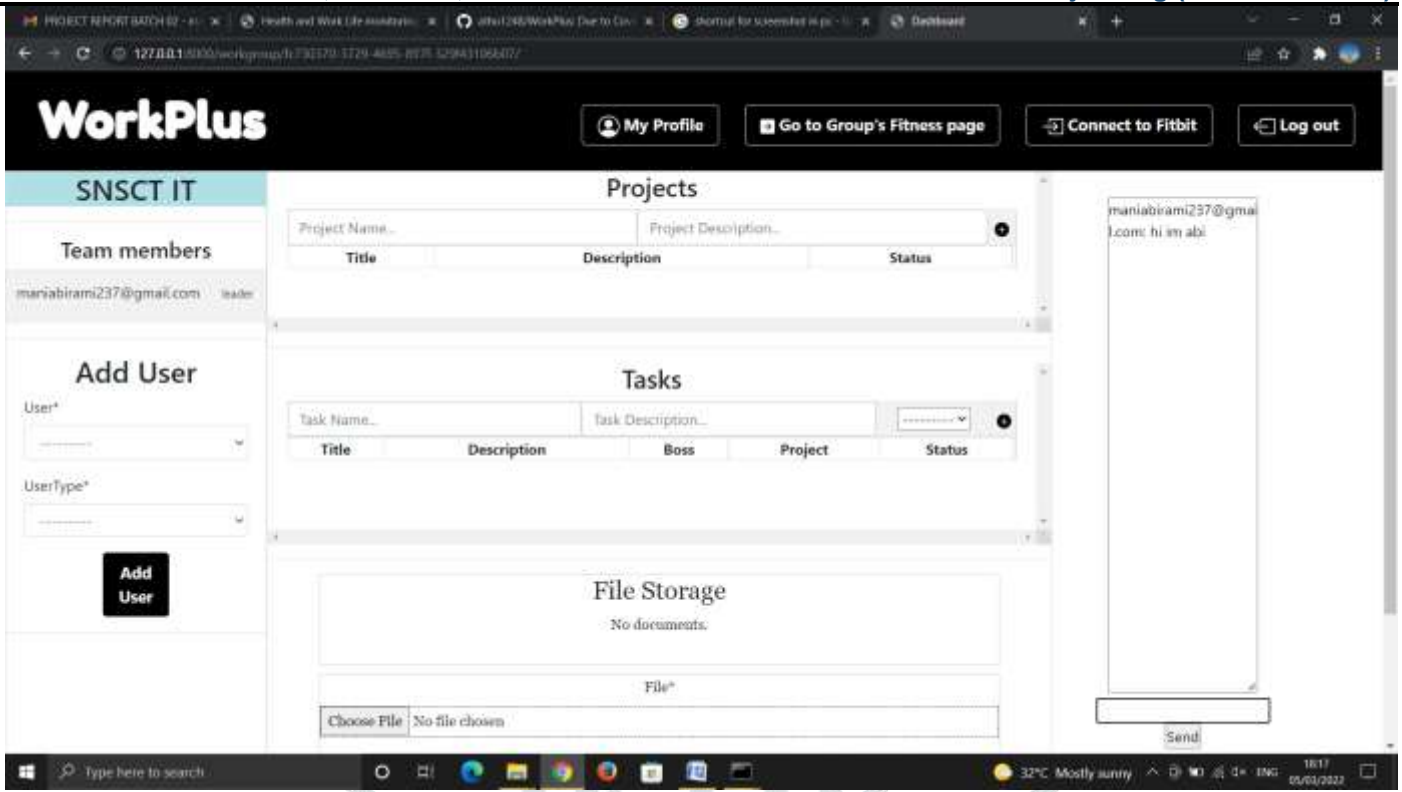


Fig 5

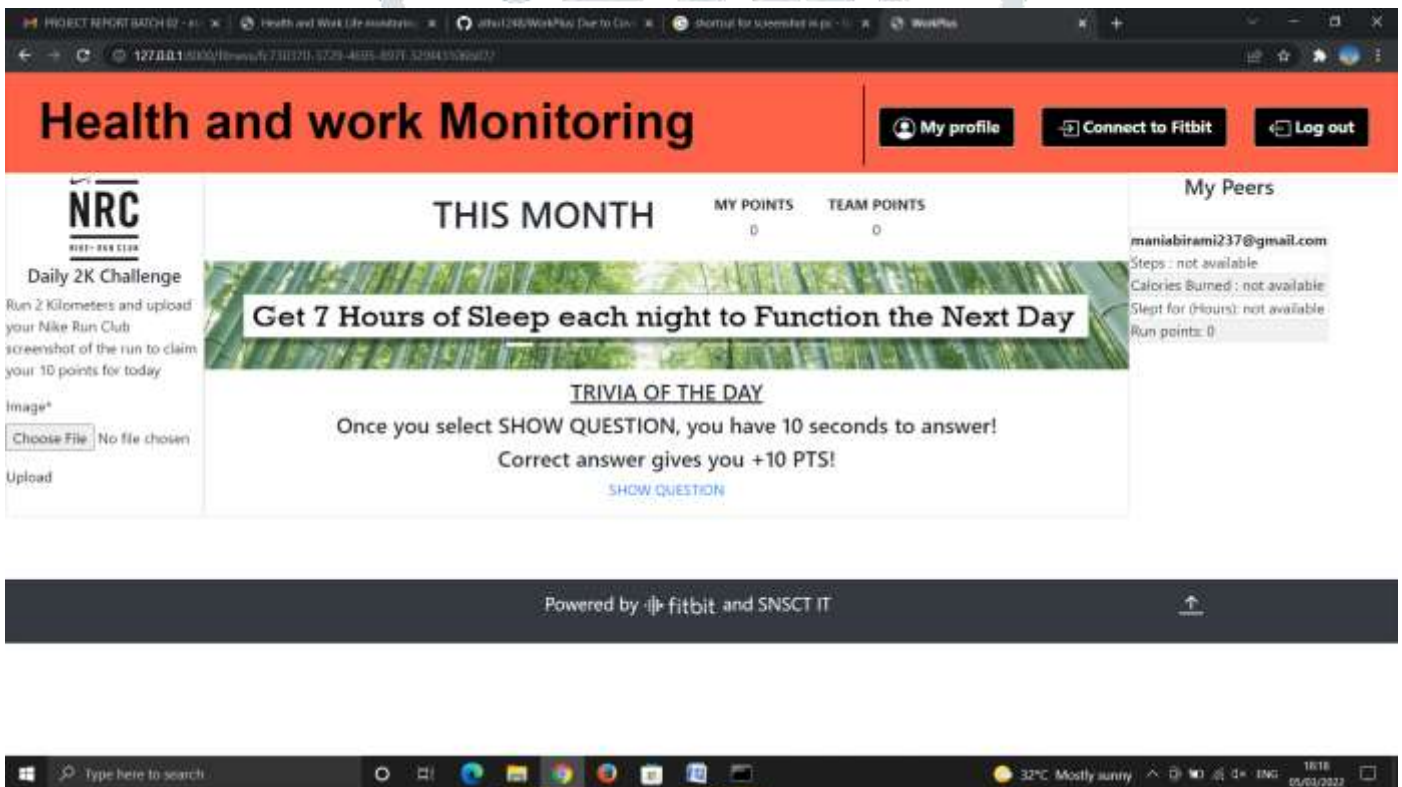


Fig 6

### VII. CONCLUSION

The introduction, problem definition of the project has been completed successfully to employee web-based health and work life monitoring system by maintaining the team member details related to their project assigned and daily workout done in efficient manner. There will be no need of putting up notice or emailing every task about the project assigned. The team member can keep updated themselves through this software. Because of this software employee can do daily workout and maintain their health.

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