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| PRODUCT REPORTcolored rectangledetail of persons hands with scissors, markers, working |
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**TABLE OF CONTENTS**colored contents page background

[1.0 To Our Sponsors](#_heading=h.z9v5x7dhvql5) **2**

[Introduction](#_heading=h.30j0zll) 2

[Project Overview](#_heading=h.1fob9te) 2

[Target Audience](#_heading=h.3znysh7) 2

[Product Video](#_heading=h.6t0596lxnr5n) 3

[Website URL](#_heading=h.7l5u9vv6ogxi) 3

[2.0 Features and components of Sit-to-Fit](#_heading=h.2et92p0) **4**

[Sedentary Life User Journey](#_heading=h.3dy6vkm) 4

[Features of Sit-to-Fit: Risk Meter Analysis](#_heading=h.186dmxsbw001) 4

[Recommendation Tool](#_heading=h.hp97llg8hog3) 4

[Alert Reminder](#_heading=h.3o5sg5jnfh8z) 5

[Informational component](#_heading=h.z6huwqrystdr) 5

[3. 0 Software and hardware requirements for Sit to Fit](#_heading=h.csj7golvv5jp) **6**

[4.0 Website Management: Requirements and Personnel](#_heading=h.gfdj39nyidcl) **7**

[5.0 Security and Privacy](#_heading=h.juvmvvi64kon) **8**

[6.0 testing](#_heading=h.4ysnhwbqh0r7) **9**

[7.0 ABOUT TEAM](#_heading=h.4i7ojhp) **10**

# 1.0 To Our Sponsors

## Introduction

The purpose of this report is to describe the project overview that elucidates the problem statement and target audience of the system. The report includes the functionalities of the system that will be included in the iterations along with artifacts such as epics, user stories, acceptance criteria and the feedback received for iteration one from mentors along with the high-level solution for this iteration 3.

## Project Overview

One-fifth of working-class adults in Melbourne, aged between 25 to 34 years are living a sedentary lifestyle and are not engaging in the required physical activities as recommended by the Victorian Health department. In 2020, 47.3% of adults residing in Melbourne engaged in the recommended amount of physical activity (30 minutes or more, 4 days a week) compared to neighboring municipalities such as Port Phillip (59.9 percent), Yarra (54.9 percent), and Stonnington (54.1 percent).

Moreover, engaging in outdoor activities can improve or prevent chronic diseases significantly as the Australian Burden of Disease Study (AIHW 2018) reported approximately 36% of people with life-threatening diseases like diabetes (type2) and cardiovascular diseases could have been avoided if all people in Australia were sufficiently active. In addition, an estimated 93% of working-class adults in Melbourne do not meet the recommended daily intake of fruit and vegetables while the consumption of soft drinks and takeaway food is relatively high when compared with the rest of Victoria.

How might we help the Melbourne sedentary working-class adults to have a healthy lifestyle in which they can balance their work while maintaining their physical health. To address this issue, users should be able to incorporate a healthy lifestyle of proper nutritional diet and physical activities in their daily working routine and also engage in outdoor activities around them.

## Target Audience

| **Sidebar** |
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## Product Video

[**https://youtu.be/kH\_2CYdtLnk**](https://youtu.be/kH_2CYdtLnk)

## Website URL

[**http://sittofit.tk/**](http://sittofit.tk/)

**User: tp31**

**Password: sittofit**

# 2.0 Features and components of Sit-to-Fit

## Sedentary Life User Journey

This introductory component allows the user to understand what is a sedentary lifestyle, allow themselves to evaluate if they fall under a sedentary lifestyle, and learn the long-term impacts of maintaining a sedentary lifestyle. This user journey is important especially for new users to gain an understanding of why a sedentary lifestyle is a problem and how they can be affected by it.

## Features of Sit-to-Fit: Risk Meter Analysis

| Description | Benefits for user | Business value |
| --- | --- | --- |
| The Risk Meter Analysis tool allows users to input their daily working hours, the hours they sit while working, and the time they spend doing physical activity and taking breaks from their work.  A risk factor will be given as a result.  Based on the risk level of the user, the user will then be prompted with recommendations to mitigate their sedentary lifestyle. | The user of the risk meter analysis can determine if they are at risk of a sedentary lifestyle or not by inputting their work-life daily routine. They will be given a risk level which will allow them to better understand what their risk level is and what they can do to mitigate their sedentary lifestyle and its long-term impacts. | The users of the Melbourne CBD will be more aware of the harmful impacts of a sedentary lifestyle and how much of a risk they are in.  It will be a good motivating factor for them to improve their sedentary lifestyle habits and participate in activities to mitigate the risks. |

## Recommendation Tool

| Description | Benefits for user | Business value |
| --- | --- | --- |
| This tool allows users to be provided with indoor and outdoor physical activities around Melbourne CBD based on their preferences.  Once preferences are selected, the system will generate and display four physical activity cards based on their preferences.  Users can like or dislike the cards and disliking cards will remove the card and the system will generate more cards to replace them.  The popular activities section will be the activity cards voted the most for that particular day by users of the Sit-To-Fit system. | The users of the recommendation tool will be able to view outdoor activities based around them in the Melbourne CBD which they can engage in to mitigate their sedentary behavior.  They will also be able to participate in indoor activities while working from home and get a wide range of lists for indoor and outdoor activities from the recommendation system. | Users in the Melbourne CBD will be able to discover the public spaces around them to engage in outdoor physical activities to improve their lifestyle and mitigate their sedentary behavior.  This will help the Melbourne CBD population to be able to meet the minimum physical activity requirements set by the Department of Health of the Australian Government. |

## 

## Alert Reminder

| Description | Benefits for user | Business value |
| --- | --- | --- |
| The alert reminder features allow the user to set periodic reminders for them to take time to keep hydrated during their work and remind them to take breaks to break their sedentary behavior and engage in activities. They can see the progress bar once they have activated their reminder alert and will be prompted with a notification on their browser screen once the alert time is up. | The alert reminder will help notify users to take important breaks while working so they can mitigate the effects of sedentary behavior and sitting for long periods. | The reminder will allow them to take a timely break in case they forget or get lost in their work. This will promote the users to have a healthier lifestyle and mitigate their risks for sedentary behavior. |

## Informational component

| Component | Description |
| --- | --- |
| Healthy Lifestyle | The healthy lifestyle component of Sit-to-Fit provides vital knowledge on how to maintain or have a balanced healthy lifestyle. The information pages can be divided into three main categories which are physical activities, dietary plans, and physical ergonomics. This is a key factor for users to break their sedentary lifestyle and incorporate a healthy lifestyle. |
| Physical Activity | The physical activities information page allows users to gain an understanding of various physical activities they can engage in. The users can choose to view outdoor or indoor activities and also they can learn the benefits of doing those particular physical activities. |
| Dietary Plans | The dietary plans information page allows users to gain an understanding of some of the most popular healthy diet plans in the world. The users can choose a diet plan according to their preferences and learn the benefits of following that particular diet plan according to their goals and dietary requirements |
| Physical Ergonomics | The physical ergonomics information page allows users to gain an understanding of good and bad posture while sitting in their office chairs. They can learn the positive and harmful effects of physical ergonomics as well as learn the importance of having a good posture while working. As a sedentary lifestyle involves long periods of sitting, maintaining a good posture is vital to mitigate the sedentary lifestyle's long-term effects. |

# 3. 0 Software and hardware requirements for Sit to Fit

| Software | Description |
| --- | --- |
| Website Domain | The domain name was created and is currently used by the Freenom website for free. Currently expires on 2023-08-21. The website domain will be required to be renewed or migrated to a new domain name once it is close to expiration on the current domain name of Sit-To-Fit. |
| API Hosting: Heroku | The API is hosted on Heroku Server on a free plan that supports one application on an instance. The API has one application for recommendation systems built over Python and Flask that has multiple routes to serve the data as required. It supports high scalability and a dashboard to maintain easily. |
| Shiny App Server | The API for Risk Meter Gauge is running on the ShinyApp server on a free plan. The application is built over R and RShiny. |
| Database - AWS Lightsail | The database is deployed with a Podman container to simplify the deployment process in a free AWS lightsail instance. A TCP port (3306) has to be exposed to the public to allow application services to access the database. A subdomain (db.sittofit.tk) for the database is set for targeting the server instance’s IP address. |
| Frontend Hosting - AWS Amplify | The frontend hosting and continuous deployment are achieved by AWS Amplify. AWS Amplify hosting supports git-based deployment with custom build settings, which allows it to build the frontend web application with Vite build tool. AWS Amplify also supports assigning subdomains to different hosting environments. |
| Open datasets | For our visualization and recommendation tool, we have used open data sets. Almost all of our open data sets used are from the Australian Government,Melbourne Council and are from credible sources. Please refer to the support and maintenance document for further detail about the open data sets used for Sit-to-Fit. |

# 4.0 Website Management: Requirements and Personnel

| Role | Description | Full-time / Part-time |
| --- | --- | --- |
| Data scientist | A dedicated data scientist will be required to handle the datasets for Sit-to-Fit and the update of these datasets for the recommendation tool. If additional datasets in the future are required then the data scientist will be able to handle this and update the recommendation tool with new datasets. The new datasets may require cleaning and data wrangling. The data scientist must collaborate with the front-end developer for the integration of the recommendation tool to make sure everything is up and running and error-free. Knowledge of R Shiny will be required to manage the Risk analysis meter tool. | Part-time - Only required when datasets need to be updated or new datasets need to be incorporated into the recommendation system. One day every month will be sufficient. |
| Database engineer | A dedicated database engineer will be required to handle the database of the Sit-to-Fit. They will be collaborating with the data scientist and front-end developer to make sure everything is integrated and the tools are working properly. They will be responsible for making sure the database is up and running and if there is maintenance going on with the database. This may cause a brief downtime of the recommendation tool if there is database maintenance occurring. | Part-time - 1-2 days a week or as required if a further expansion of tools is required. |
| Front-end developer | A dedicated front-end developer with knowledge of React, HTML, CSS, and Javascript will be required to make future UI/UX changes to the design of the Sit-To-Fit system. Changes to the tools such as the recommendation tool and alert reminder tool will be also done by the front-end developer in terms of UI/UX and must collaborate with the back-end developer which will be the data scientist. | Part-time - Only required if further UI/UX changes are required or upgrade of features or additional features implemented in the future. |
| Cyber security architect | A dedicated cybersecurity architect with the knowledge of building and designing systems that protect the critical data and infrastructure of the website system while ensuring the user's personal data is protected. They will be responsible for establishing security protocol, Pen testing, security incident handling, encryption technologies, and experience in agile development. | Part-time - One day every month required. |
| UI/UX Designer | A dedicated UI/UX is responsible for designing the UI/UX of the website and the features of the system. They will be responsible for conducting usability testing,obtaining feedback from users, being proficient in using Figma design tools, proficient knowledge of design principles and experience in agile development. | Part-time - Only required if further UI/UX changes are required or upgrade of features or additional features implemented in the future. |

# 5.0 Security and Privacy

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| Security / Privacy | Description |
| --- | --- |
| HTTPS | A secure socket layer certificate has been implemented on the Sit-To-Fit website. Implementing HTTPS will allow us to protect the confidentiality and integrity aspects of the data between the user’s device and our website. Our users can envision a more secure environment when using our website solution. |
| Data Confidentiality | Our website solution will not require any confidential personal identifiable information data from users of our website solution such as name, age, or address. The only information that will be stored in our database will be user inputs for our recommendation tool preferences with their browser ID. |
| Testing | Our website components and features have undergone rigorous usability testing and user acceptability testing after each iteration build. Test cases were created by the team and conducted by two other members of the team to make sure the website components and features are working as expected and are error-free. |

# 6.0 testing

For testing purposes, test cases were developed during the development, and testing was done after the development phase. Mainly, two types of testing were done which included manual and automated testing. For manual testing; thorough website testing was done in each iteration with the creation of test cases and two dedicated testers were appointed. Whereas part of the website was tested using automation tools at the end of iteration 3 to save time.

Different techniques were used for testing which includes unit and regression testing. While doing testing the test plans and scripts were recorded for future reference.

Refer to the testing.docx for the manual and automated testing logs and details.

# 7.0 ABOUT TEAMcolored rectangle

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