## Abstract

This project is Time Tracking App. It is a Single Page Application (SPA). The application is web based and persists its data to a local storage. The application is tailored for individuals with a challenge to time track their activities effectively or for individuals with a challenge of effectively accounting to their time and how they have spent it. The app enables user personalization by permitting them to stipulate bespoke time management inclinations and deadlines. This feature is also persisted in the browser local storage as user's preference data. Besides, the application offers the users with an interactive user interface that is simple to use and navigate. On-boarding is seamless for no user training is required for users to grasp the functionalities entailed in the system. This abstract encapsulates the core of the project, accentuating its innovative strategy toward fostering a harmonized lifestyle.


## Introduction

Time is key in every aspect of life. Good time-management is a skill that many people don't possess. The concern is not on the amount of time available to a person. It is how well a person can manage that time to an optimum productivity (Wolters et al., 2021). Time management app is an SPA that is support by most browser. The app is tailored for good time tracking and accountability. The site offers the functionality to manage both leisure and work times. This is all determined by user's preference that they set on the application. The user interface is minimal and easy to interact with. The user interaction is as well straight forward. This makes it easier for users to use the system without necessary having to be trained. The data is persisted in the application in real-time and can be retrieved at any given time. Data persistent can be done several ways. These include us of databases, local storage or files. For this application data is persisted in a local storage. Files are good for persisting small chunks of data. They are also fast in data retrieval (Memaripour et al., 2020). This make the application very fast in terms of performance. The sections below outline the methodology, the use cases, the sprints, the UML models, the app prototype and the challenges faced during development and implementation.

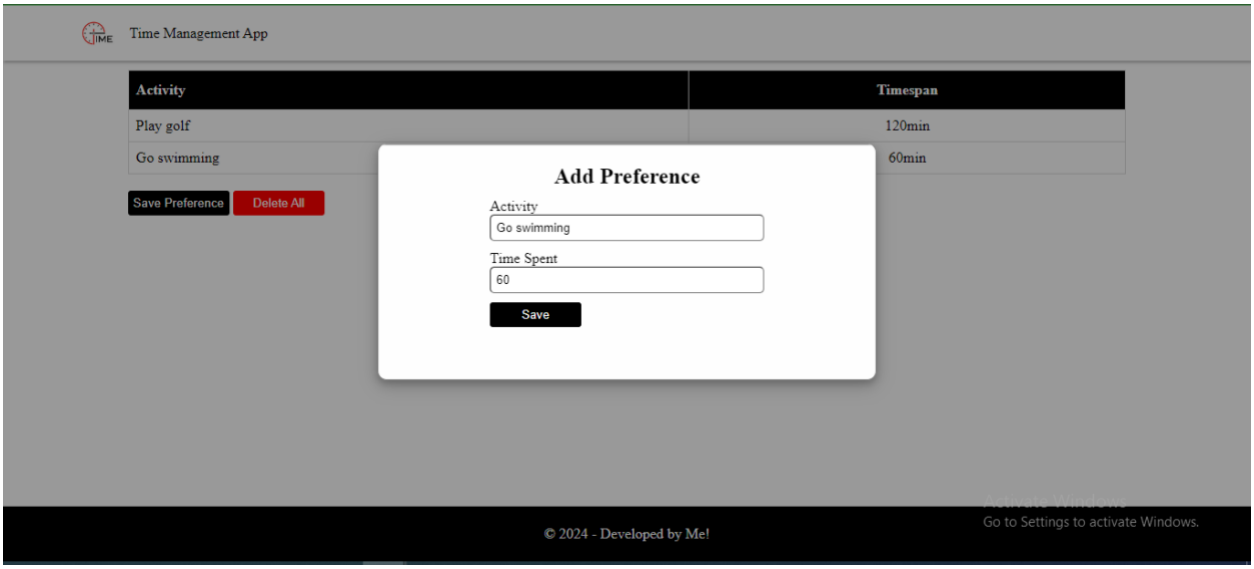
## Methodology

The application was developed using Software Development Lifecycle (SDLC). This methodology ensures an iterative process to ensure correct execution of processes from the project's inception to deployment. The processes entail requirement gathering, planning, user interface design, application prototyping, development, and testing deployment. SDLC ensures that rigorous testing and quality assurance procedures are implemented or executed at each stage. This results to a high quality software. Besides, it is easy to identify and attend to risks as soon as they have been identified. This mitigates on the project risks. The end goal is focused on the customer's satisfaction. The customers still have the chance to provide feedback while using the product. This allows for the application to be free from bugs. The app will also stay relevant to customers' requirements. SDLC also allows for smooth continuous deployment should there be a change in the app based on the users' feedback or updates from the development team on any new added features of fixed bugs.

## App Design and Functionality

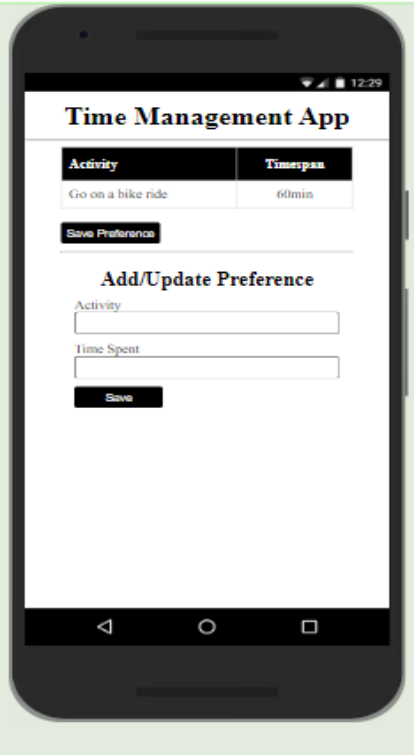
Below is the app design for the system.


Above is the landing page of the app. This page entails a list of all activities and their timespan as persisted within the browser.



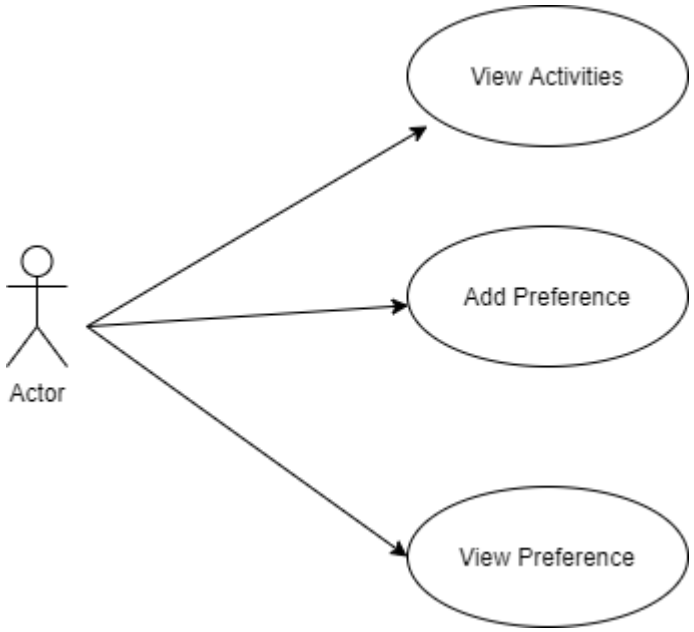

The above shows the functionality for adding new preference or activity into the app.

Below are the mobile versions for the application. The system is responsive for different screens. Thus, it allows for the same user experience across multiple screens and devices.

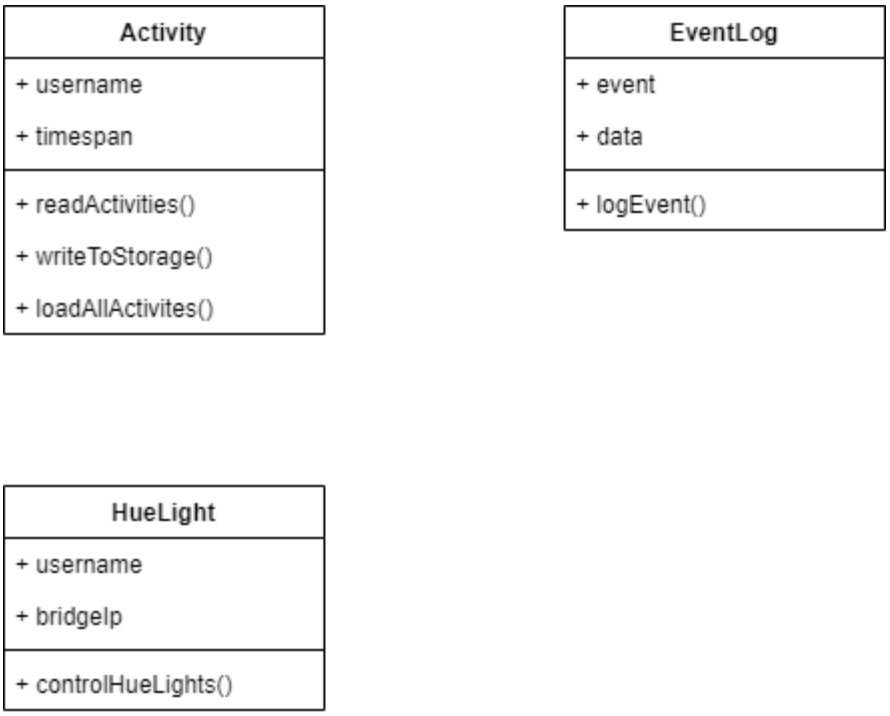



## Use case

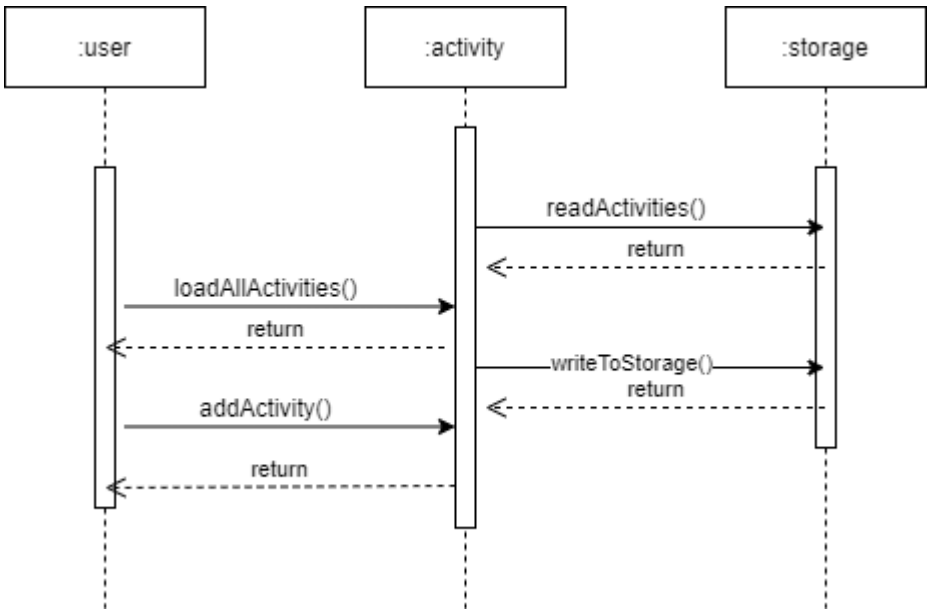
The user has the ability to view all the available activities as well as add new ones to the system




## UML Diagram




## Interaction Diagram



## Sprint

Below are the sprints from Nov, 2023 – Apr, 2024. Each month has two sprints. A sprints runs for two weeks.

| Activity | Nov 6th – 17th | Nov 20th – 1st | Dec 4th – 15th | Dec 18th – 29th | Jan 1st – 12th | Jan 15th – 26th | Jan 29th – Feb 9th | Feb 12th – 23rd | Feb 26th – Mar 8th | Mar 11th – 22nd | Mar 25th – Apr 5th | Apr 8th – 19th |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Literature survey | | | | | | | | | | | | |
| Identifying research gaps | | | | | | | | | | | | |
| Literature chapter drafting | | | | | | | | | | | | |
| System design document creation | | | | | | | | | | | | |
| System design UI/UX | | | | | | | | | | | | |
| System prototyping | | | | | | | | | | | | |
| System development | | | | | | | | | | | | |
| System testing | | | | | | | | | | | | |
| System bug fixing | | | | | | | | | | | | |
| System regression testing | | | | | | | | | | | | |
| System deployment | | | | | | | | | | | | |
| Presentation and demo | | | | | | | | | | | | |

## References


Memaripour, A., Izraelevitz, J., & Swanson, S. (2020, March). Pronto: Easy and fast persistence for volatile data structures. In *Proceedings of the Twenty-Fifth International Conference on Architectural Support for Programming Languages and Operating Systems* (pp. 789-806).

Wolters, C. A., & Brady, A. C. (2021). College students' time management: A self-regulated learning perspective. *Educational Psychology Review*, *33*(4), 1319-1351.


GitHub: https://github.com/mohammed-alsultan/COPM-1004.git