



OPSC7311 RESEARCH DOCUMENT

SARS Time-Tracking Application Analysis



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Introduction:

In today's dynamic world, the ability to manage time effectively is of paramount importance. The advent of remote working and project-oriented tasks has amplified the need for efficient time tracking tools, also known as timesheet apps. These applications enable individuals and teams to log the time spent on various tasks, providing valuable insights into productivity trends, and enhancing project management.

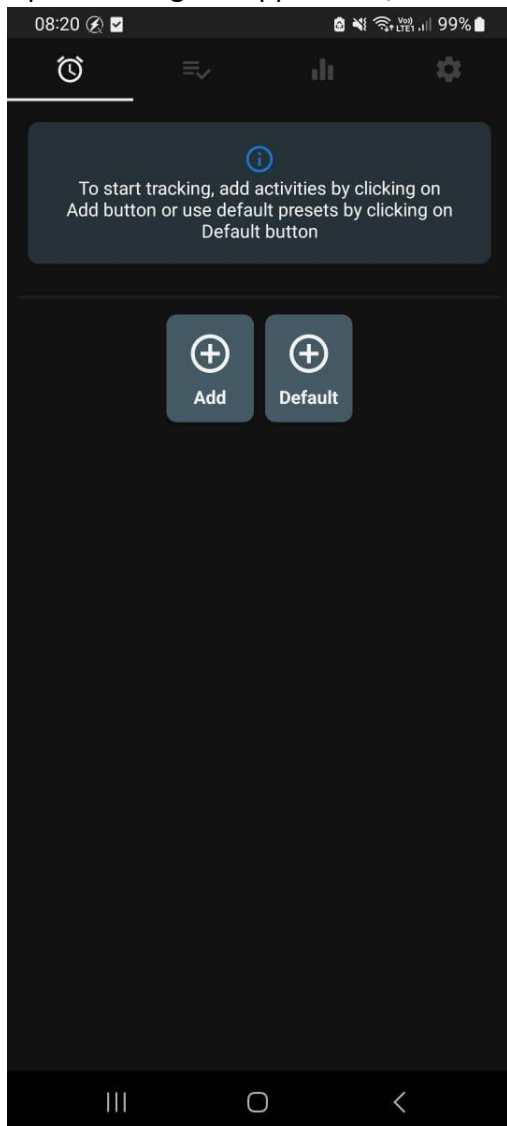
This document will investigate three such timesheet applications available for the Android operating system. Through an in-depth examination and analysis, we will explore the features, user-friendliness, and unique aspects of these applications. Our objective is to present a detailed comparison that could guide us to understand the requirements we need to make an efficient timesheet app.

The following sections of this document will provide an overview of each application, screenshots of the app with explanations of how the app runs, a list of its strengths and weaknesses along with highlighting each app's innovative features. By the end of this document, readers should have a comprehensive understanding of the advantages and disadvantages of each app and acknowledge the features and downfalls of each app that we can use to better our planning and design for our own time tracking app.

Time-Tracking App: *Simple Time Tracker*

Overview:

Upon starting the application, the user is presented with the following UI:



The UI has a bar at the top of the screen with multiple icons each symbolizing a page with set functionality. The user navigates through these pages by sliding across the screen in the direction of the page they would like to use.

The activity tracking page:

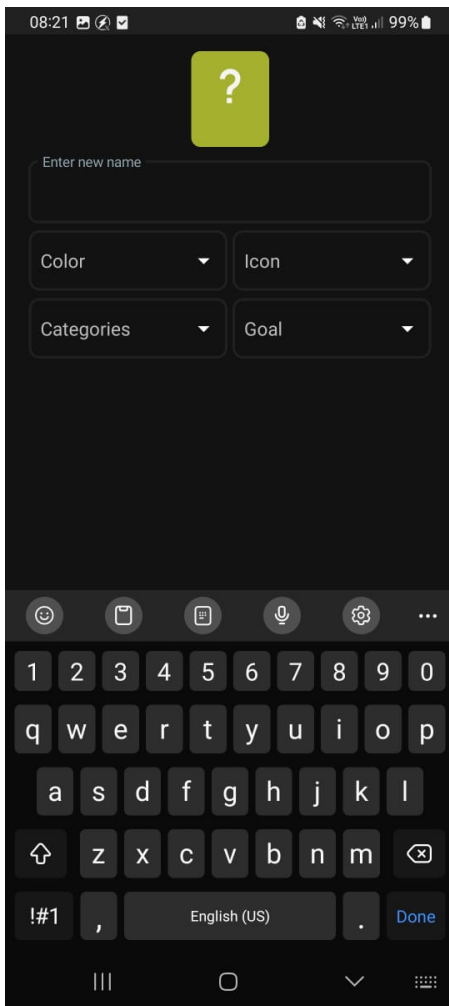
This is the default starting page where the user can create activities to track, start tracking an existing activity, add a default activity, or repeat the previously tracked activity.

(See previous image)

This page provides the user with multiple subpages related to the activities.

Activity creation subpage:

The first subpage is the activity creation page which the user is directed to after clicking the add button.



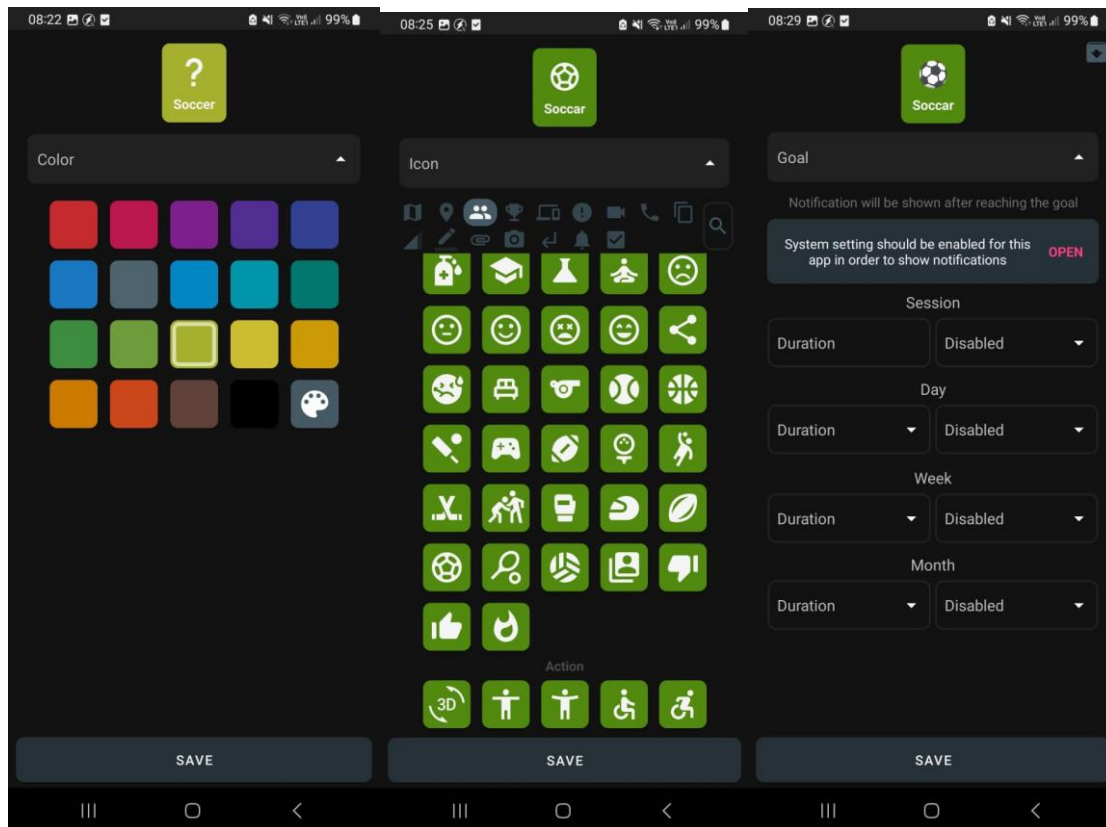
This page provides the user with an overview of the options for creating and customizing an activity.

The main attributes that an activity consists of are:

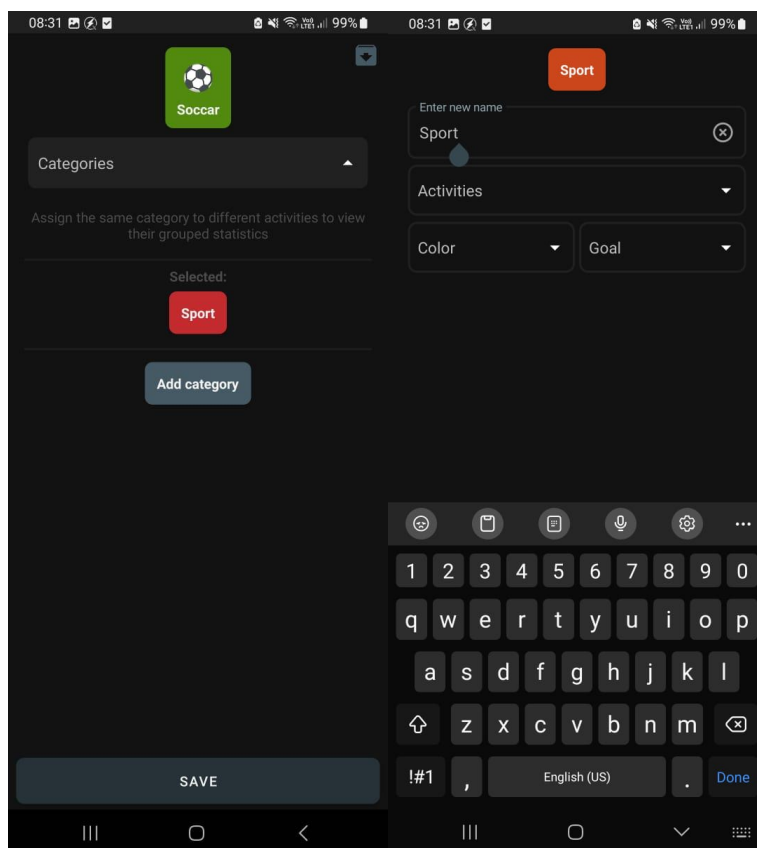
- Name
- Colour
- Icon
- Categories
- Goal

The name is created via a text box and has full customizability. The other four attributes are each selected via menus with varying degrees of customization.

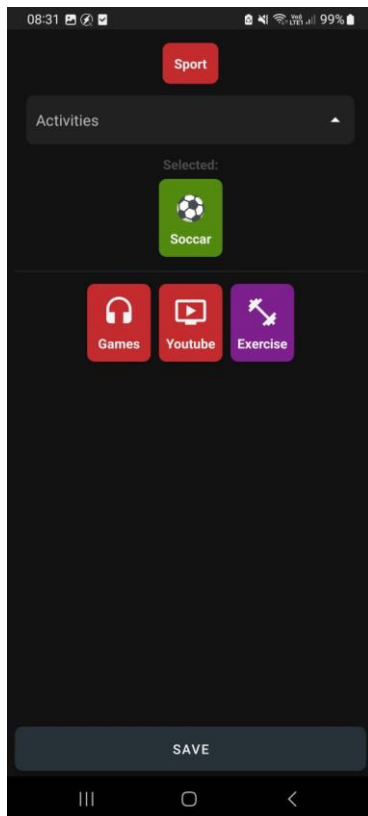
Basic Sub Menu's:



The category sub menu not only includes categories to choose from, but also a new page and menu for the creation of a category.

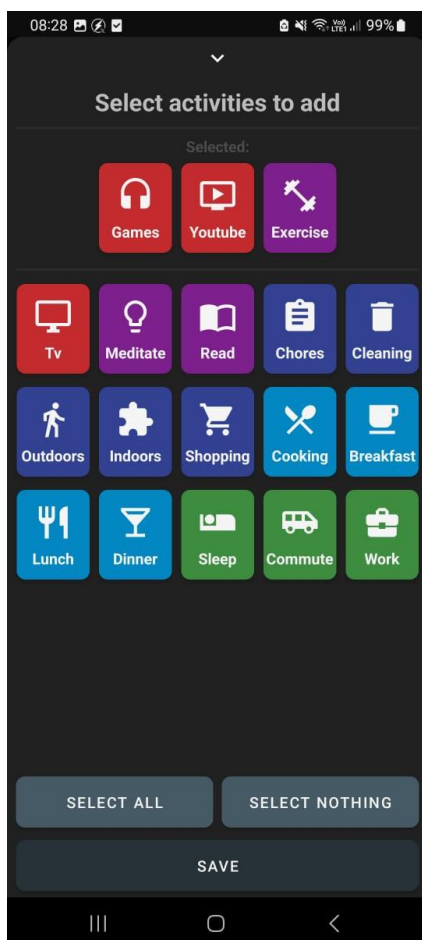


Category creation reuses the sub menus for goal, and color. There is one new sub menu for selecting activities to associate with.



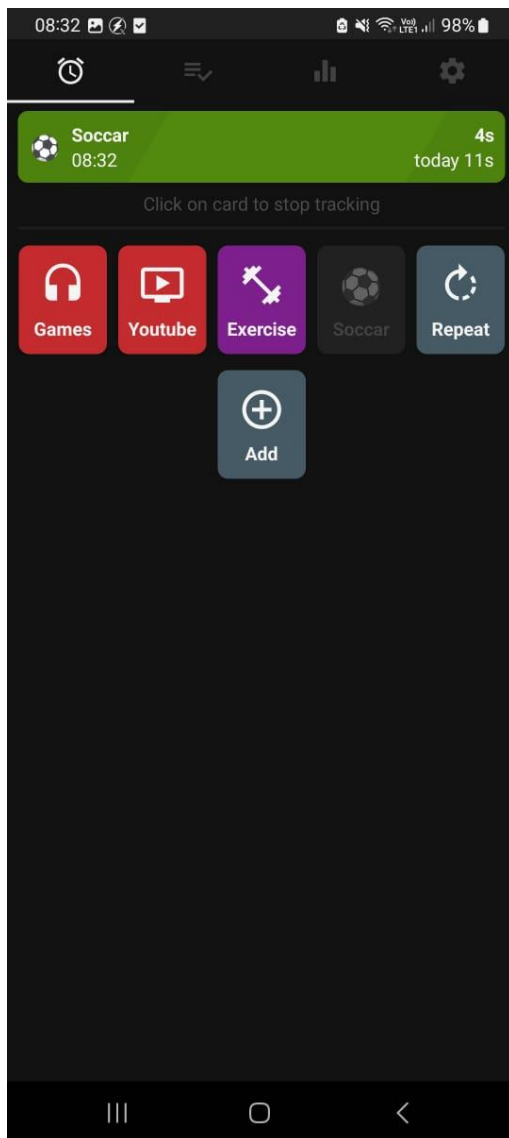
Add default:

Opens a menu to add general pre-created activities.



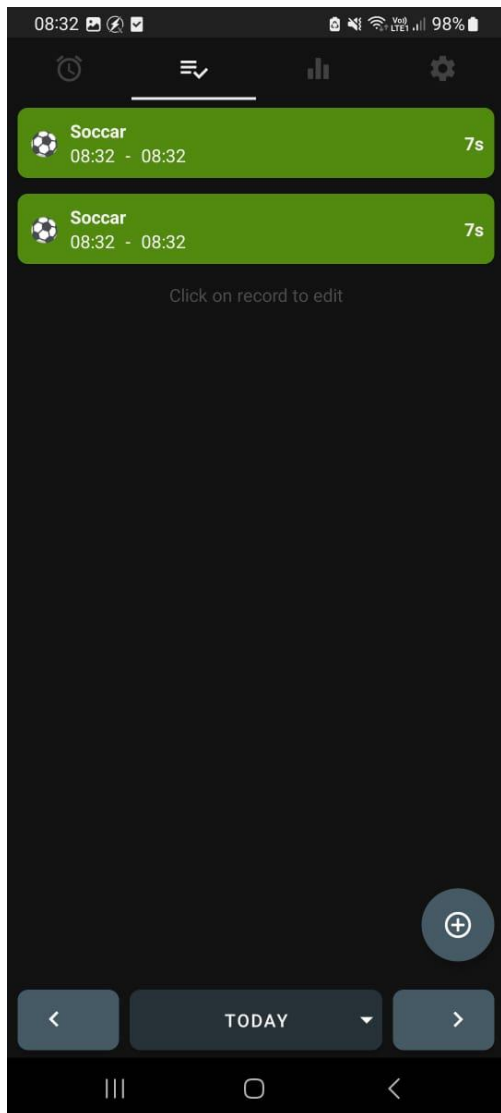
Time tracking functionality:

By clicking an activity from the main page, the time of the activity will be tracked until the activity icon is clicked again. If the activity was already tracked earlier in the day, a total time will also be visible.



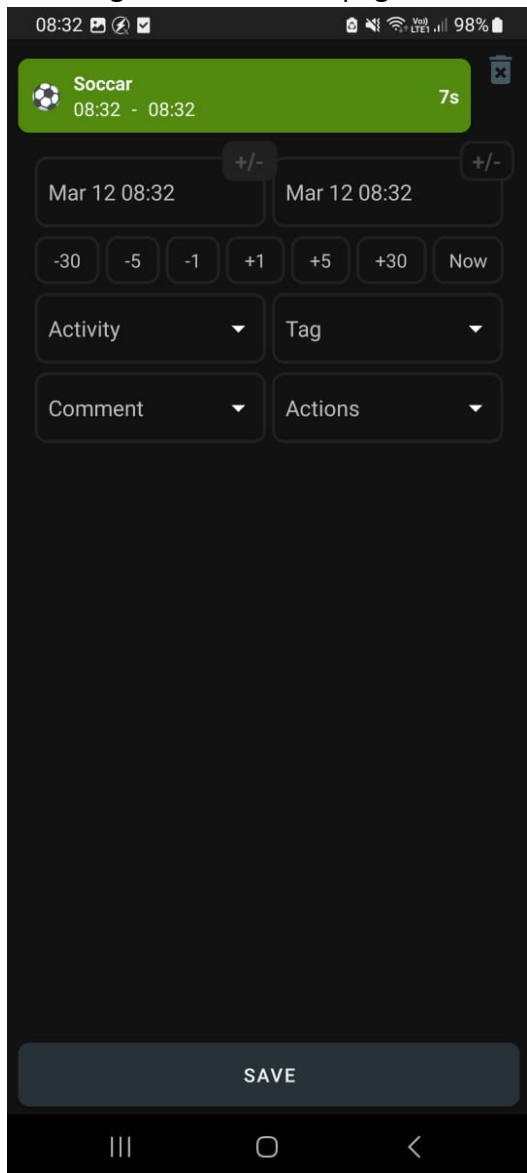
The Record page:

This page shows all recorded activities of a set day. Day can be set from the bottom of the screen with a date picker or selecting the next/previous day using the arrow icons. New records can be created from scratch using the small plus icon.



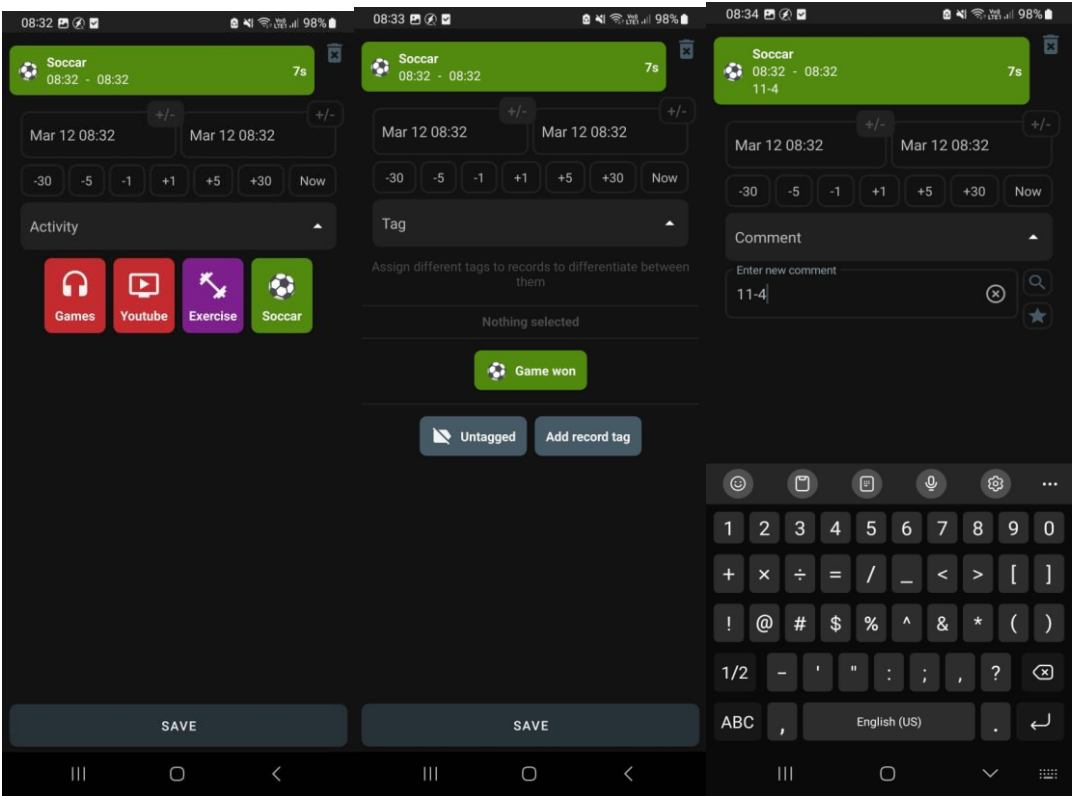
Record edit function:

Selecting a record on this page directs the user to a new page on which records can be edited.

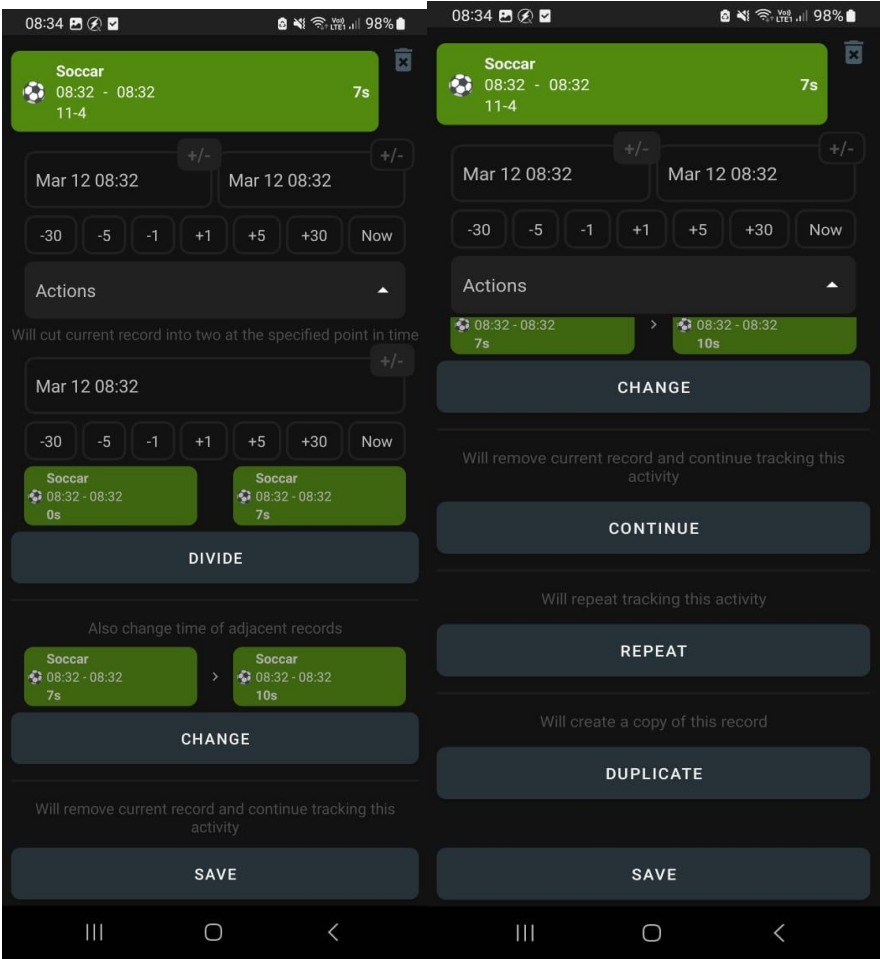


The screenshot shows a mobile application interface for editing a record. At the top, a green header bar contains a soccer ball icon, the text "Soccar", the time "08:32 - 08:32", and a "7s" indicator. Below the header, there are two date pickers, both set to "Mar 12 08:32", each with a "+/-" button. Underneath the date pickers is a row of buttons: "-30", "-5", "-1", "+1", "+5", "+30", and "Now". Below these buttons are two dropdown menus labeled "Activity" and "Tag". At the bottom of the form are two more dropdown menus labeled "Comment" and "Actions". A large "SAVE" button is positioned at the bottom of the screen. The status bar at the very top shows the time "08:32", signal strength, and battery level "98%".

This page gives the user the option to change the recorded activity as well as its start and end time, add/create a tag, make a comment, and provides a menu of quick actions.

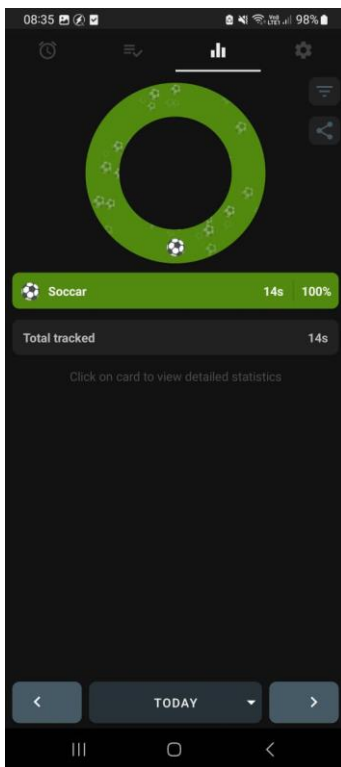


Quick actions:

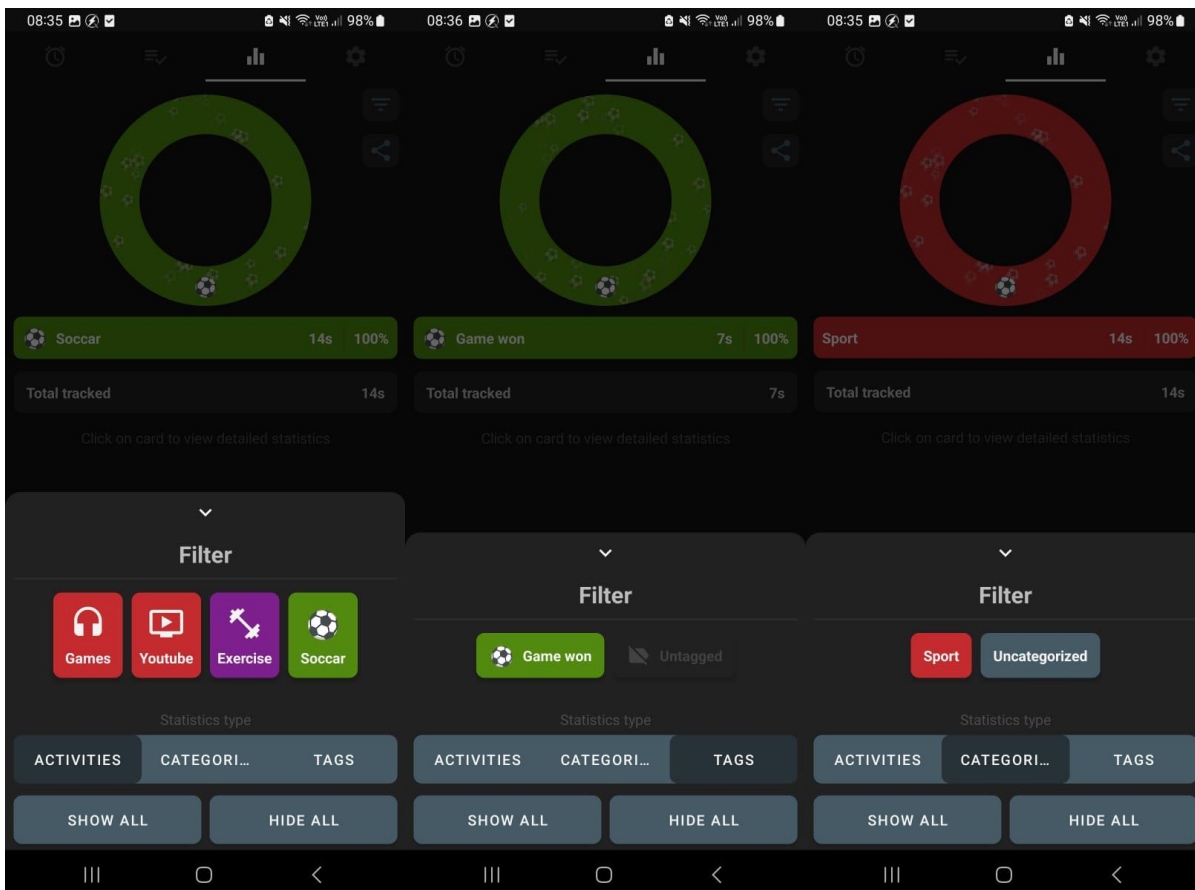


The Stats Page:

This page provides the user with the ability to view the stats of their recorded activities on a specific date via a pie chart. It also allows the user to filter the statistics to show more specific data.



Stats can be filtered to specific activities, categories, or tags.



Strengths and weaknesses of the app

Strengths:

- Great customization options, compared to other time tracking applications this one has quite in-depth customization to make a more personalized user experience.
- Excellent statistics and analysis. The app's use of categories and tags allows for more configurations when checking stats.
- Simple yet effective UI.
- Easy to navigate pages.

Weaknesses:

- Lacks gamification, most it shows is the ability to add goals. Does not provide enough motivation for the user to actively track their activities.
- Category and tag creation menus are hidden in other customization settings with no way of getting there by other means.
- App is not connected to any kind of database and thus all user data is stored locally. If the user uses the app on another device, they will not have all their data.

Innovative features of the app

As far as a simple time tracking application goes, the application does not reach further beyond what is expected from it regarding its main functionality and does not try to create innovative ideas or push boundaries (Tran, 2023). The application does however go beyond and innovate with its heavy personalization settings. The customization goes far beyond a simple time tracking application and allows for the user to really personalize their experience with the app.

Time-Tracking App: *TimeCamp*

Introduction:

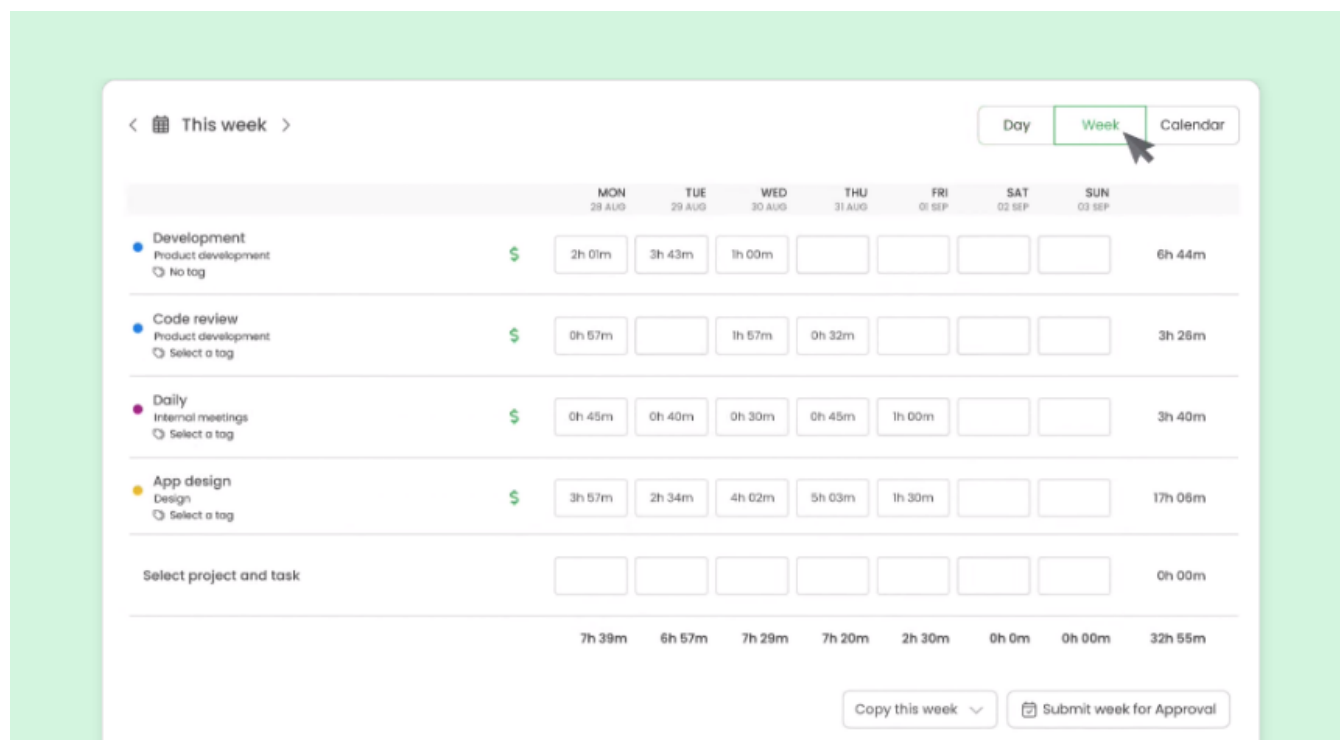
TimeCamp is a web-based time tracking software that has been synonymous with productive time use since its launch in 2010. Founded by Kamil Rudnicki, TimeCamp is designed to track the activity of computer users, making it a valuable tool for freelancers and teams alike. The software focuses on enhancing productivity, project management, and work effectiveness by providing automated time tracking solutions.

Overview of TimeCamp:

TimeCamp is a comprehensive time tracking app that offers a range of features to enhance productivity and project management. It provides automatic time tracking, project and task tracking, advanced reporting, team performance monitoring, productivity tracking, billable hours analysis, and invoicing capabilities. The app is suitable for small, medium, and large businesses, offering desktop, mobile, and web applications for seamless time management.

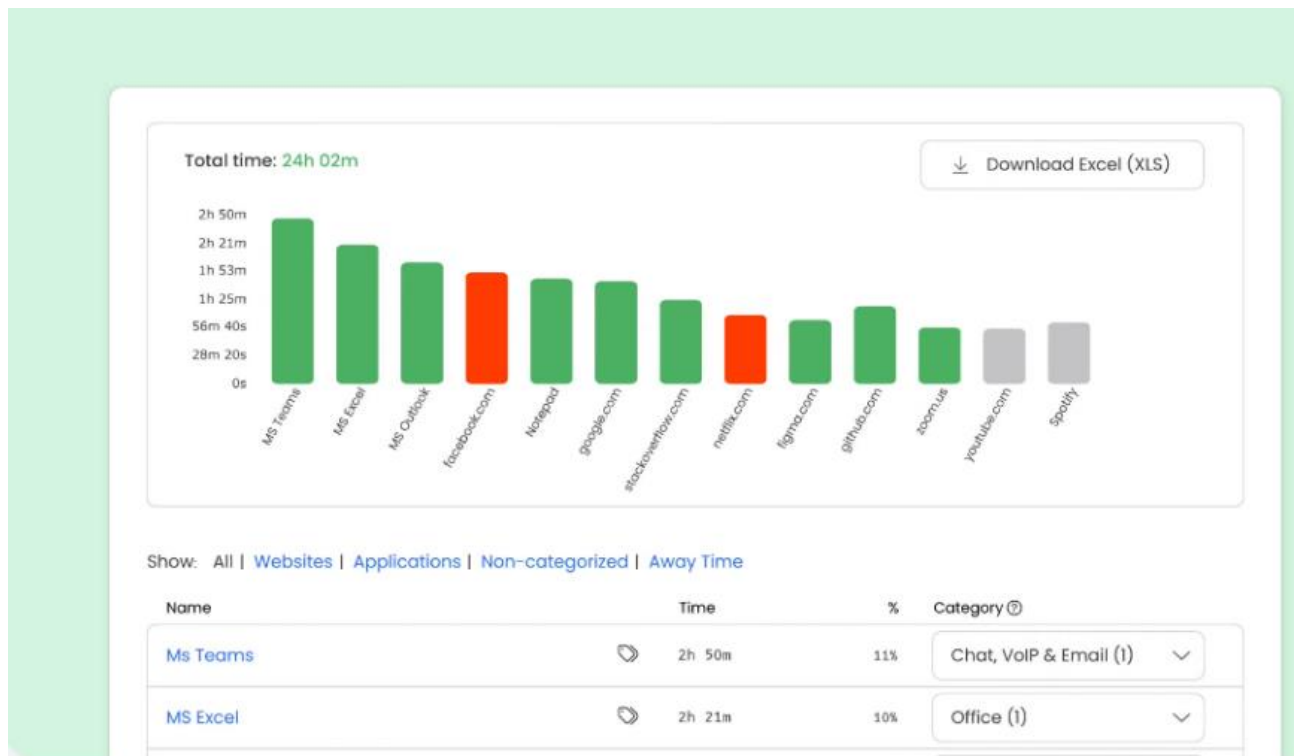
Time Tracking Reports:

- Generate detailed reports to measure project profitability, track budgets, and analyze resource utilization.
- Access comprehensive insights into project progress and performance to make informed decisions for better project management.



Productivity Tracking:

- Track the usage of specific apps by your team members without micromanagement.
- Stay informed about team productivity levels and identify areas for improvement to optimize project efficiency.



Attendance Tracking:

Replace traditional attendance reporting methods with TimeCamp's modern solution. Effortlessly monitor team attendance without the need for manual punch cards, ensuring accurate records of work hours.

<input type="checkbox"/> Date	Total in projects	Total between first and last time entry	Turn On	Turn Off	Day type	Overtime	Status
<input type="checkbox"/> Sep 4, Mon	6h 03m	6h 03m	7:40	13:43	Working day	- 26m	Approved
<input type="checkbox"/> Sep 5, Tue	8h 02m	8h 02m	7:40	15:43	Working day	- 01m	Approved
<input type="checkbox"/> Sep 6, Wed	8h 11m	8h 11m	8:10	16:21	Working day	- 15m	Approved
<input type="checkbox"/> Sep 7, Thu	7h 55m	7h 55m	8:10	16:05	Working day	- 02m	Approved

Strengths:

1. Automatic time tracking for accurate monitoring.
2. Project profitability analysis for better decision-making.
3. Integration with various tools like ClickUp, GitLab, and iCal.
4. Custom billing rates for efficient invoicing.
5. Attendance tracking and timesheet approvals for streamlined operations.

Weaknesses:

1. Limited customization options for reports.
2. Some users may find the interface overwhelming initially.
3. Pricing plans may not be suitable for very small businesses or freelancers.

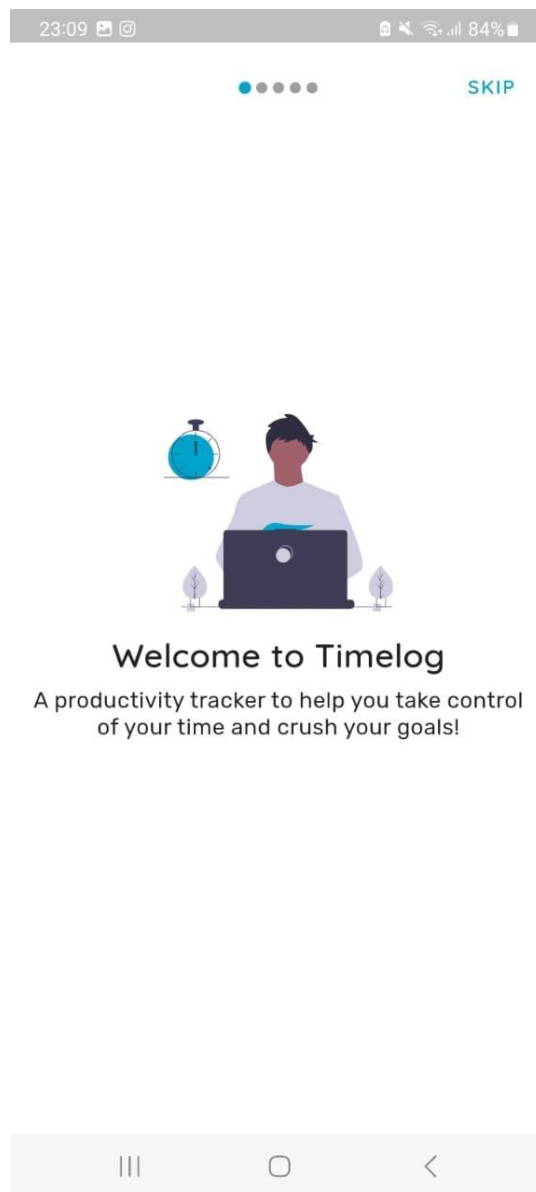
Innovative Features:

1. Automatic Time Tracking: TimeCamp automatically scans app usage to categorize activities.
2. Productivity Tracking: Allows tracking of app usage by team members without micromanagement.
3. Custom Billing Rates: Enables assigning specific billing rates to projects or users for accurate invoicing.
4. Timesheet Approvals: Simplifies the process of reviewing and approving timesheets.
5. Attendance Tracking: Offers a modern solution for attendance reporting without traditional punch cards.

TimeCamp stands out as a versatile time tracking tool with a strong focus on automation, productivity enhancement, and project management efficiency. Its innovative features cater to the needs of diverse businesses looking to optimize their time utilization and streamline their operations effectively.

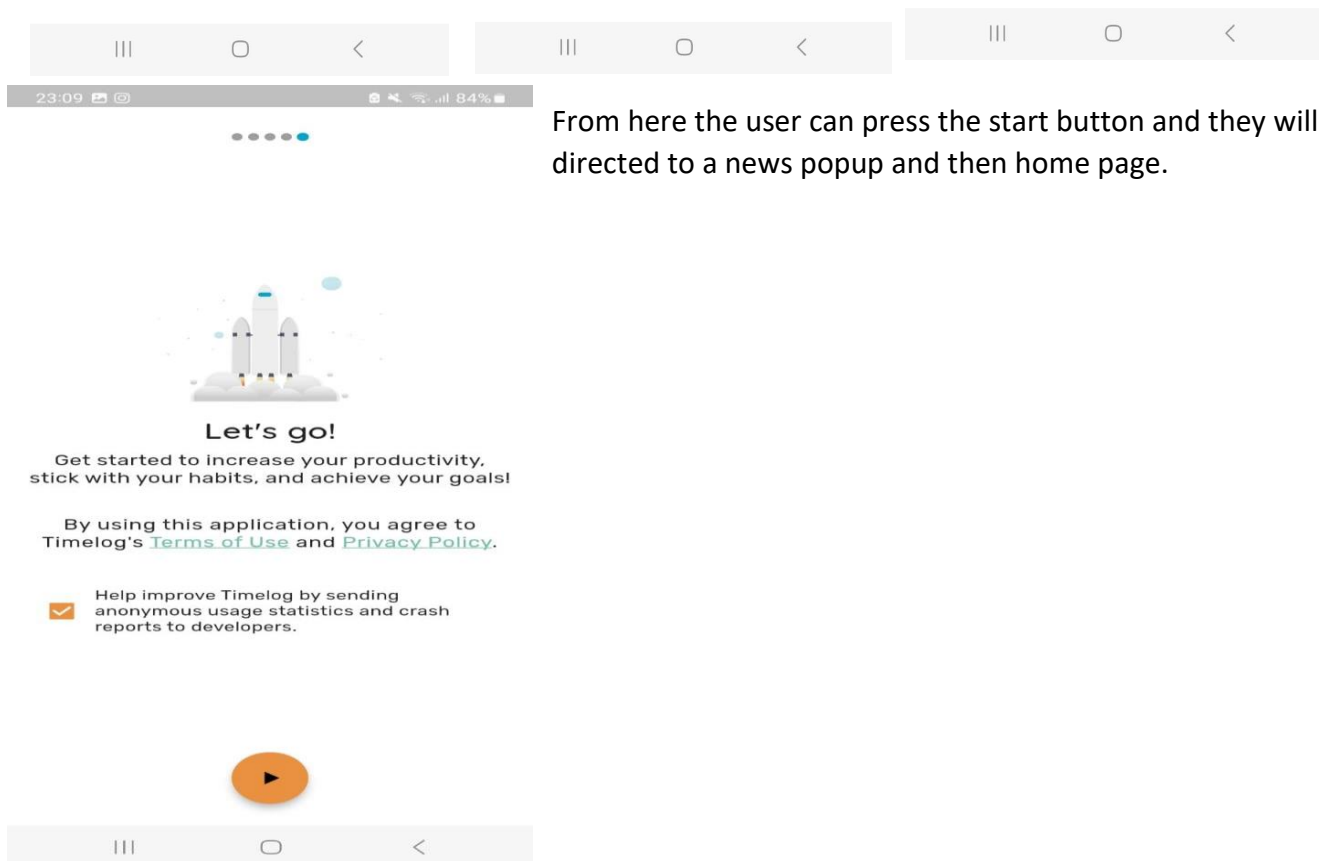
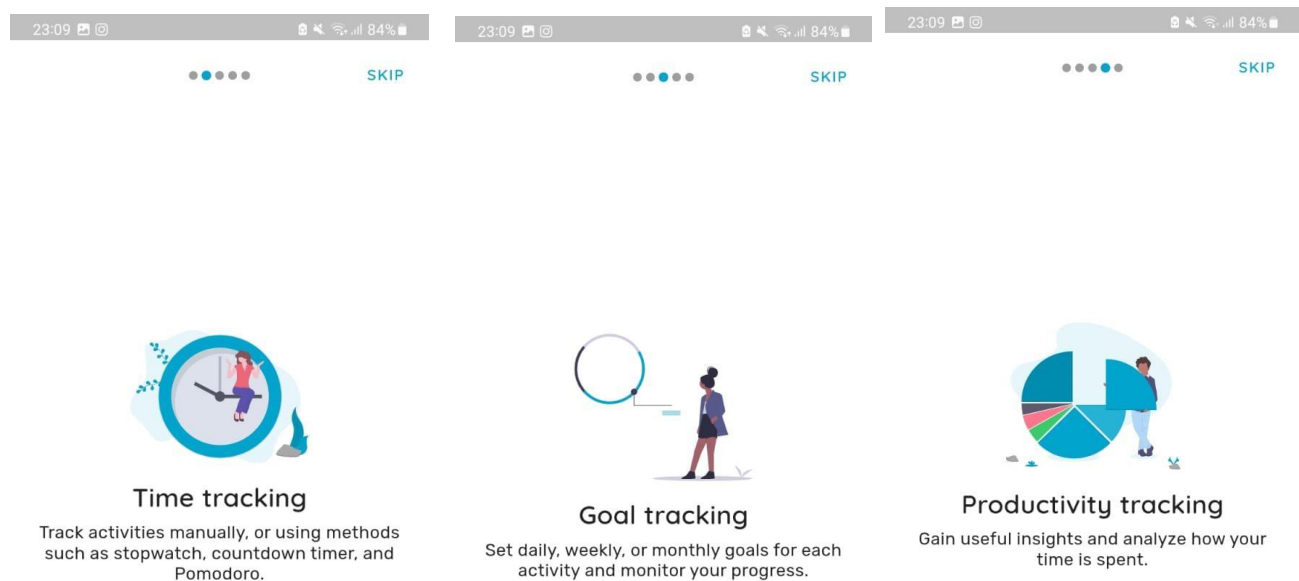
Time-Tracking App: *Timelog*

The app can be installed from the Google Play store onto the user's device. Once it is installed the user can open the app and they are met with this first page.

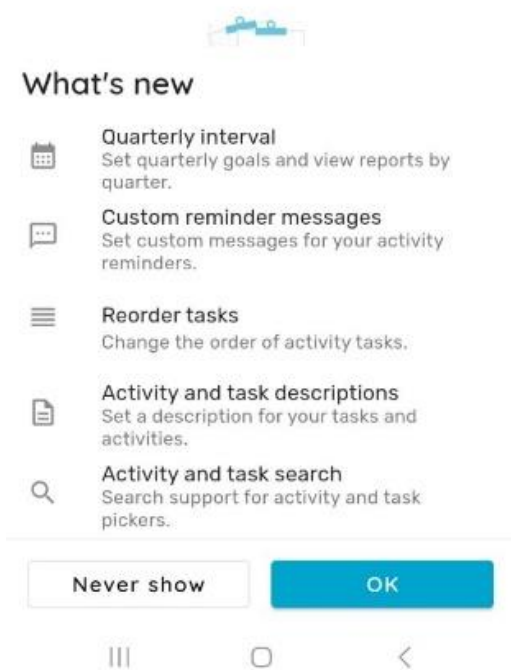


The user can choose to either read the introduction to program or they can click on a button called “skip” to go straight to the app. This is great for users who already know how to use the app or have used it before.

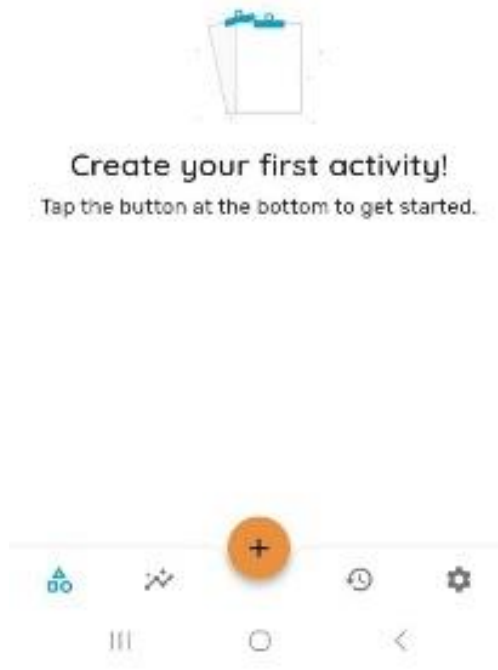
The following screenshots are the rest of the introduction and instructions.



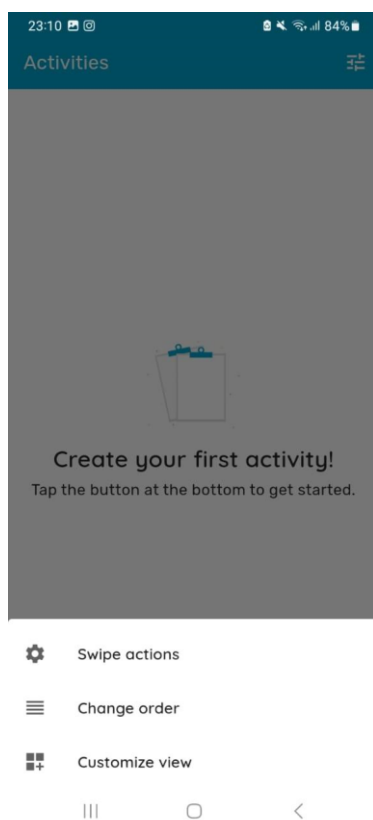
From here the user can press the start button and they will be directed to a news popup and then home page.



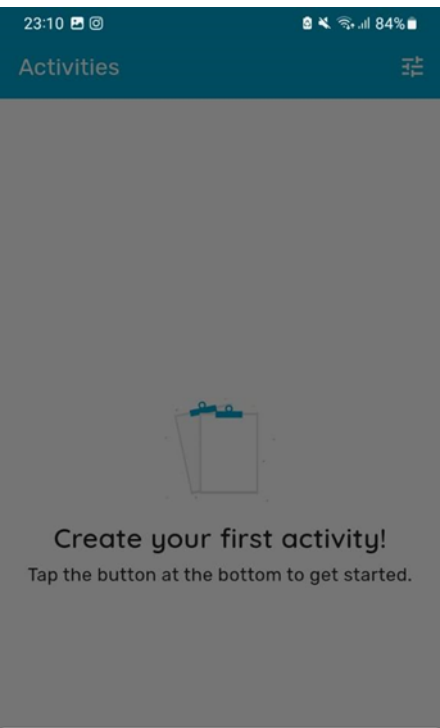
News Popup



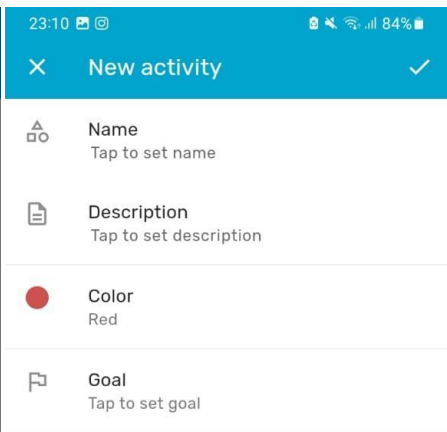
Home Page



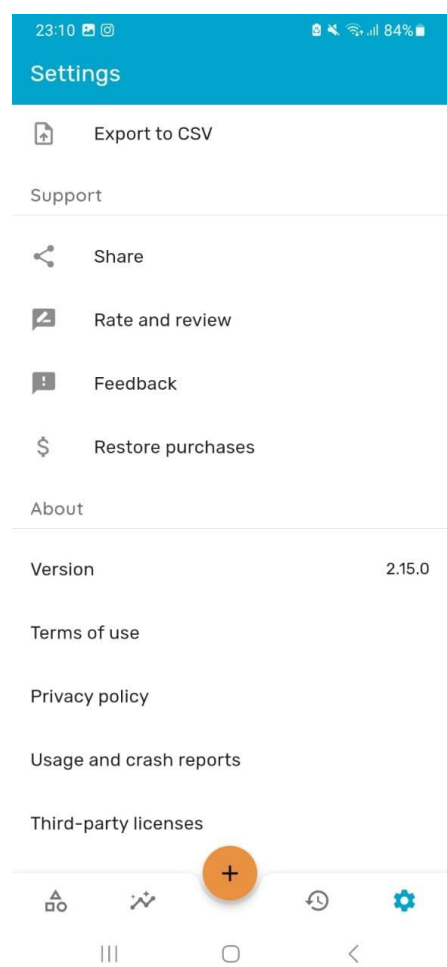
By pressing the orange button, the user can create their first task/project.



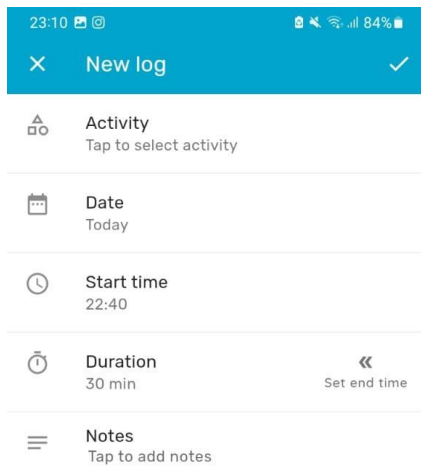
Plus has been clicked



New Activity Button Selected

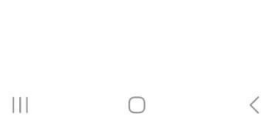


Settings UI

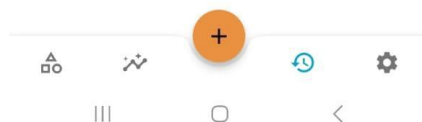


Create your first log!

Tap the button at the bottom to start a timer or log time manually.

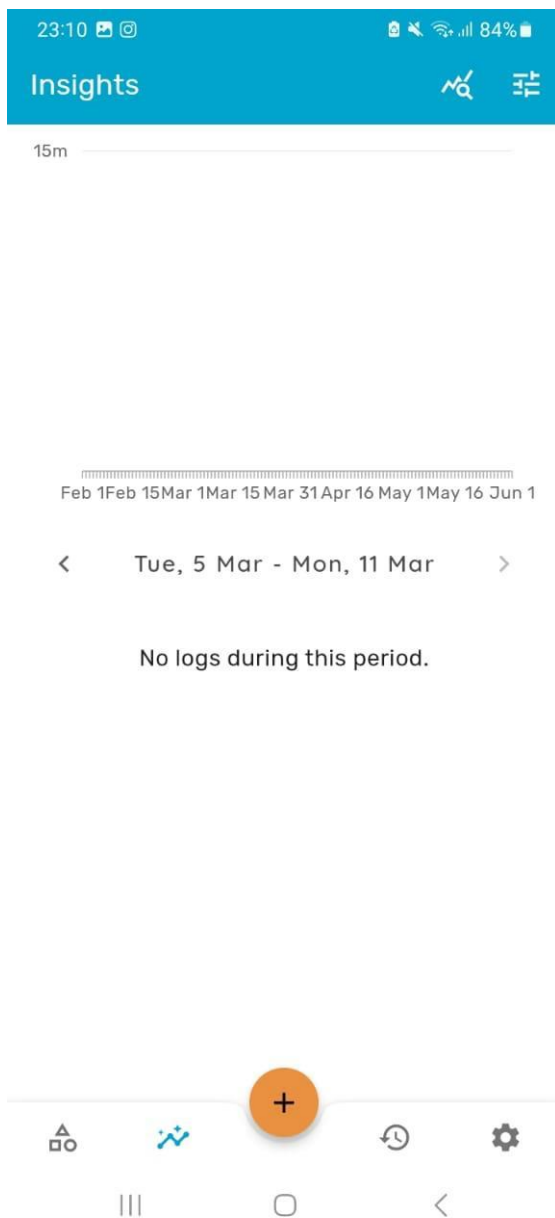


New Log UI

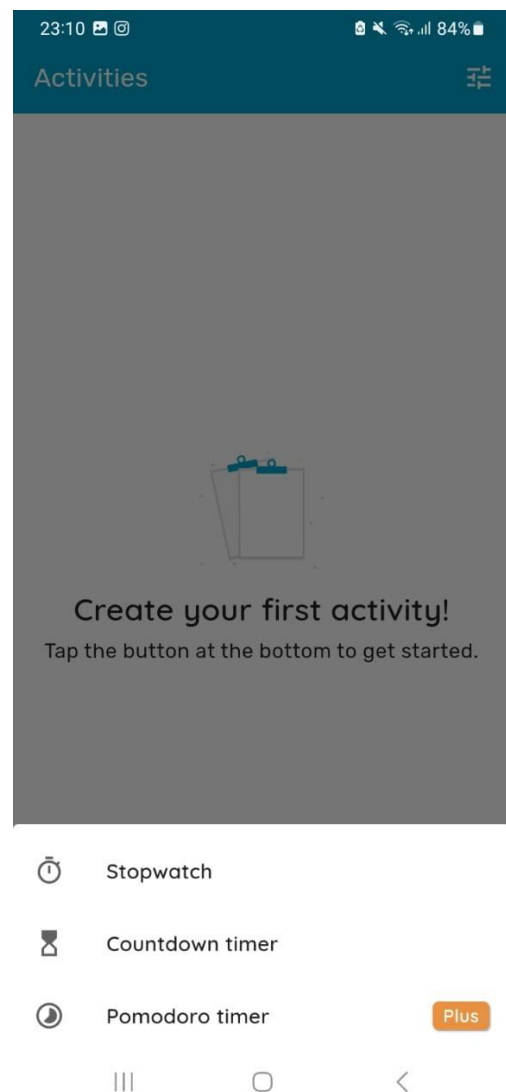


View Logs UI

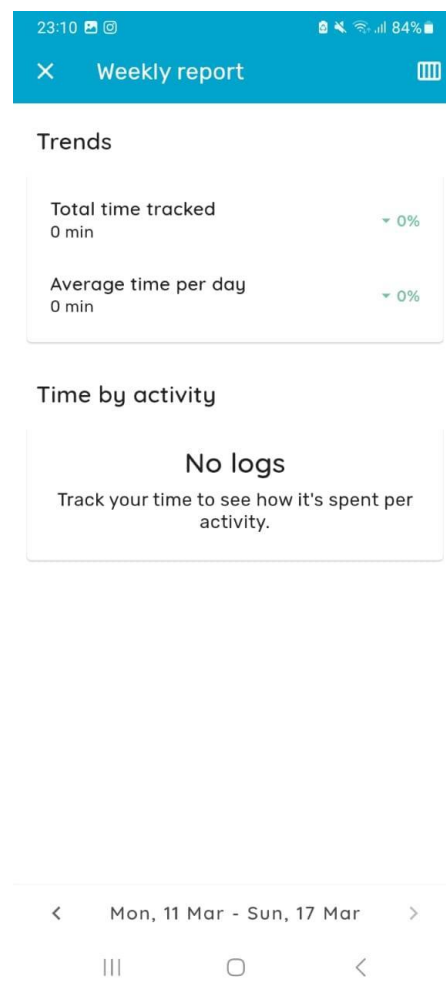
Button to left of orange + sign shows insights UI page.



The app also comes with different timers.



The app also comes with a calendar which is always helpful. By doing these you can just use this app for all your Time-management needs instead of having to use it in conjunction with your Google Calander or another app like that. There is also a weekly report that is calculated based on user input of hours work. It gives constructive feedback on the week to make the user feel a sense of accomplishment and a way for them to see if they need to improve their work ethic.



Strengths and weaknesses of the app

Strengths

- Simple and efficient UI design
- Weekly report is extremely helpful.
- It does what it was intended to do.
- Meets customer needs and expectations.
- Popup when downloaded comes with instructions on how to use app.




Weaknesses

- The use of grey and small text makes it hard to see and can be overwhelming for some.
- For some features you must go through a few buttons and subcategories to find things which can become time consuming and frustrating.
- The app is not very user friendly.
- It will take the user a while to get the hang of how the app works. They might just give up and download another app.

Innovative Features:

Some of the innovative features of the app are the weekly report, the diverse ways you can use the logs feature as well as the built in Calander and timer features are especially useful and productive add-ons.

Infographic

Features	 TiimeCamp	 TimeLog	 SimpleTimeTracker
Automatic Tracking	✔ Offers automatic tracking	✘ Lacks automatic tracking	✔ Provides automatic tracking
Project Management	✔ Includes project management features	✔ Offers project management capabilities	✘ Limited project management tools
User Interface	✔ User-friendly interface	✔ User-friendly interface	✔ Simple and intuitive interface
Pricing	✔ Affordable pricing plans	✘ Pricing details not specified	✘ Pricing details not specified
Desktop App	✔ Provides desktop app for Windows, MacOS, and Linux	✘ Lacks desktop app support	✘ No desktop app mentioned
Time Clock Kiosk	✘ Does not mention time clock kiosk feature	✘ Does not mention time clock kiosk feature	✔ Offers time clock kiosk functionality
Reviews & Ratings	★ Highly rated on various platforms like G2Crowd, Capterra, etc	★ Rating and reviews not specified	★ Rating and reviews not specified

List of Best Features

Calendar UI:

All time tracking applications require UI to select specific days to manage time for. The best and simplest form of doing so is by use of a calendar. TimeLog, Simple time tracker and TimeCamp each makes excellent use of a calendar to show the user every day on which activities were recorded.

Goals System:

The user needs motivation to track their time and as such a proper goals system needs to be enforced. TimeLog and Simple time tracker make use of a goal system allowing the user to set goals for specific time ranges per activity. Simple time tracker goes a step further and allows the user to set a goal for the number of times an activity is performed in a time range.

Tags:

Simple time tracker makes use of tags. Allowing the user to create a tag and set every recorded activity with a tag. Tags can further enhance the statistics analysis and report by providing further search parameters. For instance, if we track an activity that falls under a sport category, we can add a tag to every recorded instance of that activity such as a “lost” or “won” tag. The user can then in the statistics analysis view specifically their time spent losing sports games.

Statistics analysis:

Half the point of a time tracking application is for the user to be able to review their data on tracked activities. All reviewed apps have excellent stat reports on the tracked activities. We can take inspiration and create a combination of elements from each reviewed application to create the best possible stat report page.

Weekly Reports:

Although a statistics analysis page is planned, the user experience can be further enhanced by use of weekly reports. Just like the TimeLog app a weekly report system can be used to display statistical points of interest to the user, such as areas in which the most time was spent, favorite activity, etc.

Record Edit/system:

Just like in TimeLog and Simple Time Tracker, it's best to allow the user to have the option to intricately edit and manage all instances of recorded activities. This allows for the user to morph their existing records and even add new ones without even having to have started tracking time in the first place.

Team tracking/project management:

Other than personal time tracking we could include a project/team management system, such as the one available in TimeCamp. Just like TimeCamp a system can be included in which a project group can be created consisting of the trackable activities that contribute towards completion. This goes hand in hand with the Team management where user profiles can be created and compiled into teams. Each team can be set to work on a project group.

User profiles:

This feature would go hand in hand with team/project management features. For team organization each user would need to be able to create a profile for themselves that can be grouped into a team. This feature is also present in the TimeCamp app.

Conclusion

Timesheet apps have become an indispensable tool in the domain of time management for both individuals and teams. Our exploration of three such applications available on the Android platform has unveiled a spectrum of features and functionalities that cater to a wide array of needs.

Each application possesses its unique strengths, be an intuitive user interface, comprehensive reporting capabilities, or seamless integration with other productivity tools. However, determining the superior app is not a one-size-fits-all answer, as it depends on the specific requirements and preferences.

To conclude, our analysis provides a robust foundation for understanding these apps run and its most important necessary features thus allowing us to identify the gap in the market that we can include in our own development.

References

Tran, T., 2023. *An Insider Guide to Driving True Innovation in Software Development*. [Online]

Available at: <https://www.orientsoftware.com/blog/innovation-in-software-development/#:~:text=A%20fair%20understanding%20of%20current,door%20to%20creative%20software%20development.>

[Accessed 13 03 2024].