

MDNSPH007 & PTRJOS016

Introduction

The app's layout is of a generic simple game app designed with children as the target audience. The colours used in the app are gender-neutral colours inviting to all children and providing them with a free and open digital environment to learn how to tell time. The game's home screen contains an analogue clock that gives the accurate time and four options: Single Player, Multiplayer, Teacher-Student, and Settings. Single Player mode allows the user to choose a difficulty and play digital/analogue time telling games of various levels of the same difficulty. Multiplayer mode enables the user to play and compete in real-time with other users, allowing them to choose who to invite to a game and select the relevant difficulty and level. The Teacher-Student mode provides the user with specific games where the teacher/parent of the child can use it with the child as an exercise. Finally, the Settings option allows the user to alter the theme or language and modify the sounds settings or profile. Overall, the app is designed for android phones and tablets as users will most likely prefer to use portable devices.

We decided on this approach for our app because now most children, our target audience, are exposed to a digital device and are finding digital games to be more entertaining than traditional ones. They spend a lot of their time in apps such as YouTube or TikTok instead of in other more productive and constructive applications. So, we have tried to build a captivating prototype that will stimulate in children the desire to learn how to tell the time in digital or analogue clocks.

We have assumed that we completed our vision for the prototype and everything that the reader will engage in before getting to the prototype is in fact there in our final prototype. Secondly, most of our users will be children or their parents/teachers, and thirdly, the user is already logged in.

Feature 1 – Voice assistance

Feature Rationale

We decided to include this feature because it provides the user with the opportunity to hear the question being made and have the time read for them so as to allow users who understand better by hearing to further their knowledge. This also serves as a replacement for the teacher-student mode, where a single who wishes to have assistance can have it with the voice feedback. The voice assistance will have a range of voices available, from which the user can choose from in the profile settings. This provides them with a more personal experience of the game enriching the overall feel and usage of the same.

Personally, I (Jose) have used similar features in other games because I find it easier to understand things when there's a human touch to it, even if it's just a virtual voice. It provides me with a different point of view and helps me realise somethings that I perhaps missed when I read and therefore allows me to make more informed choices.

Design Prototype

1. Loading page

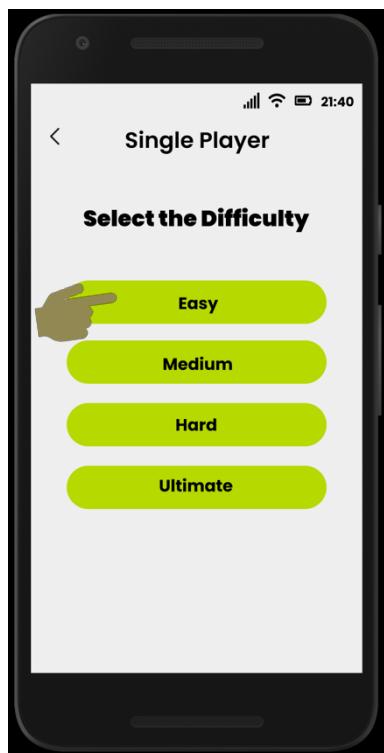


The gold hand shows where the user has tapped, and the arrow shows a transition after a tap except from the first to the second page.

2. Home page



3. Difficulty selection page



4. Easy level 1 page



5. Voice assistance on page



Design Rationale

On the home page, the users can tap and select which mode they want to play in. After the tapping into the mode and subsequent difficulty, the user is in the page where they play the actual game. Once there, at the bottom left corner, there is an icon that symbolises a person speaking, which is a map to what the button can do. Once the button is tapped, it changes colour from black to green to show responsiveness and feedback to the user action. While the button is green, it means that voice assistance is active and playing. After the game finishes reading the question and what is on the screen (e.g. the time on the clock) the button will turn back to black to show that voice assistance is now inactive.

Feature 2 – Dark Mode

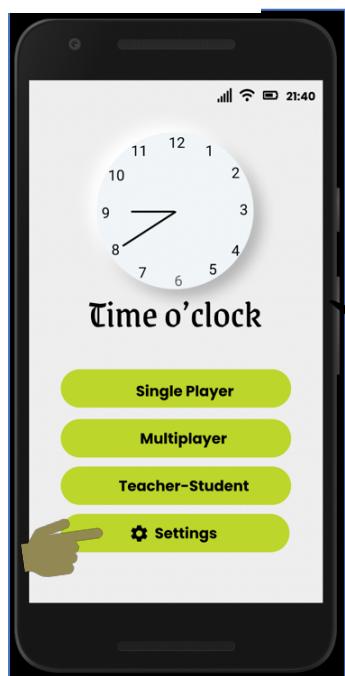
Feature Rationale

We chose this feature because it improves the user experience of our users at night, not limiting their usage of the app based on what time of the day it is or the amount of light that is available. This feature upon activated will implement a dark theme to the interface. It will do so by converting most if not all of the spaces that are of a light colour into different shades of dark grey and the ones which are of a dark colour into light colours to be able to have a contrast. This feature helps a lot in a setting where it is purposefully dark, because it prevents the user's eyes from being shocked by the light of these colours and therefore creating a feeling of discomfort to the user. It will provide a more natural feeling to the app as the app is able to automatically switch to dark mode when the screen's light has been reduced. Ultimately, this is to make the user more comfortable in using the app. It also gives the user an option of how they want to use the app. The users can also download more customised dark themes that suits their style, allowing them to make the app more theirs.

Personally, I (Jose) have all of my apps that allow dark mode in dark mode because I don't like a lot of light, I prefer to work at night rather than during the day and I believe that there are more people that have the same preference as me. So, we thought it would be essential to have this feature in our prototype.

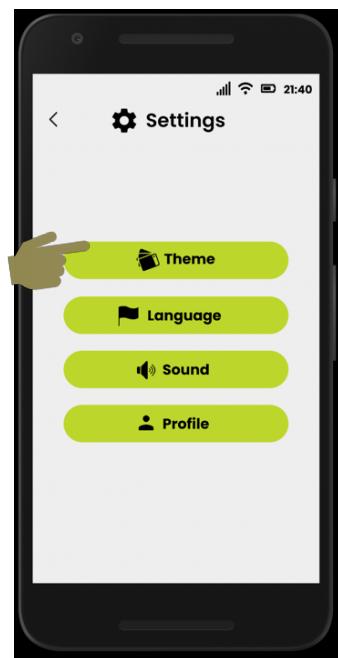
Design Prototype

1. Home Page

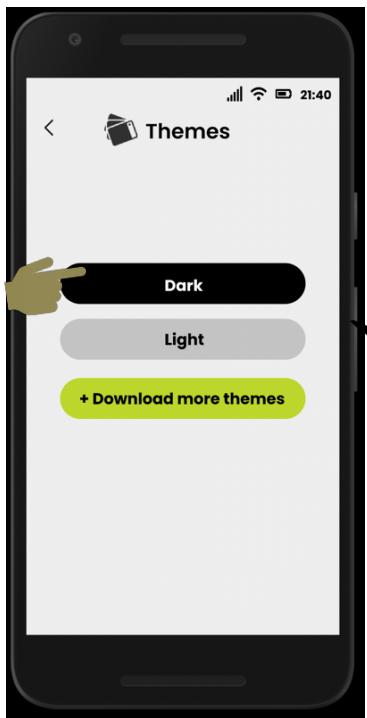


The gold hand shows where the user has tapped, and the arrow shows a transition after a tap except from the first to the second page.

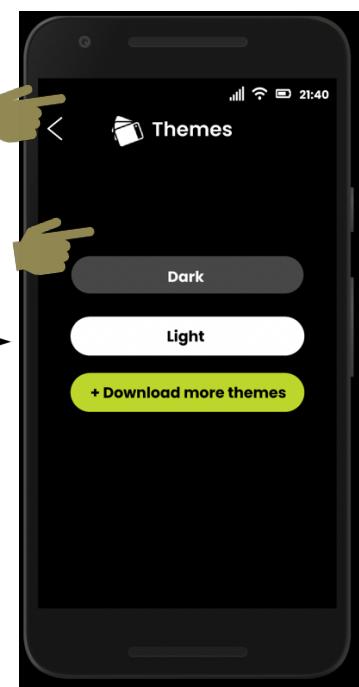
2. Settings Page



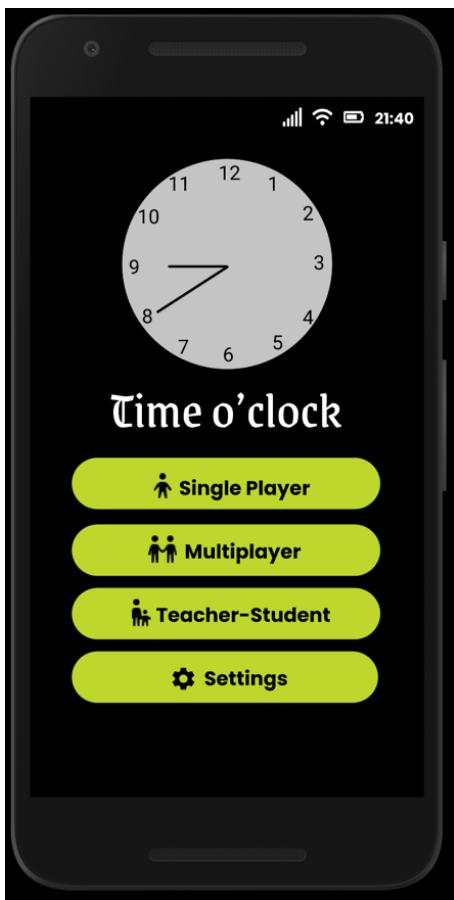
3. Themes



4. Theme(Dark Theme)



5. Home page (Dark Theme Activated)

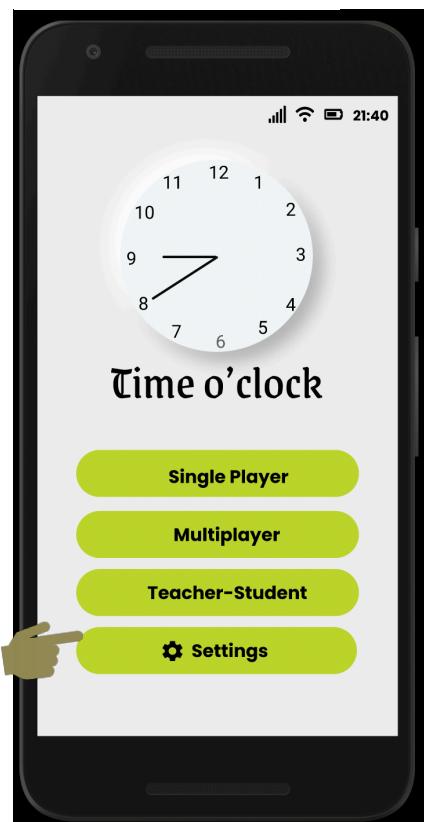


Feature 3 – Support for Multiple Languages

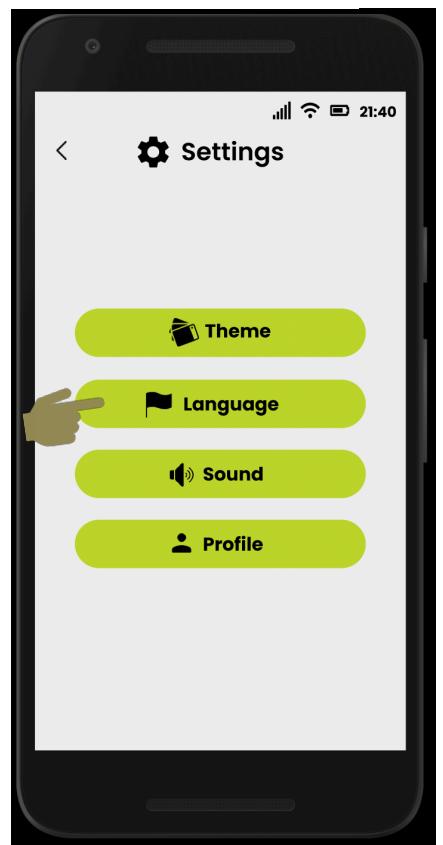
Feature Rationale

Based on the input we got from one of our interviewees and their motive for suggesting a support for multiple languages we have decided to include it in our prototypes. This serves pretty well because most schools teach English as an additional language. Since it easier for someone to understand their own home language, teaching kids in their mother tongue will be faster and effortless. To keep it simple we've added the support of the widely spoken languages in the county i.e IsiZulu, IsiXhosa and Afrikaans. Once a language gets selected, texts(in words) in the entire interface gets translated to the selected language.

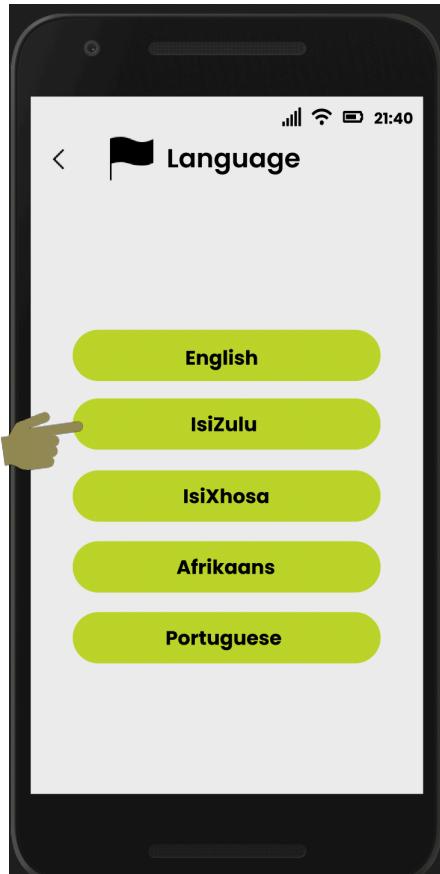
1. Home Page



2. Settings Page

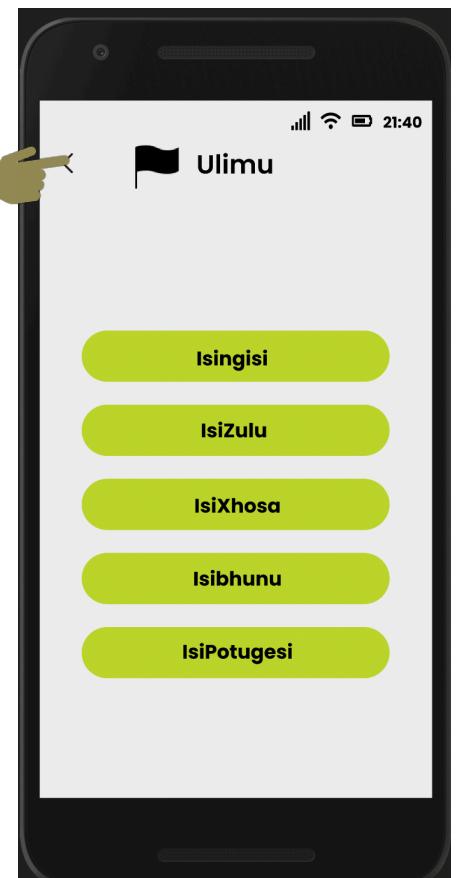


3. Language Page



Changes take place
Hand to navigate
bake

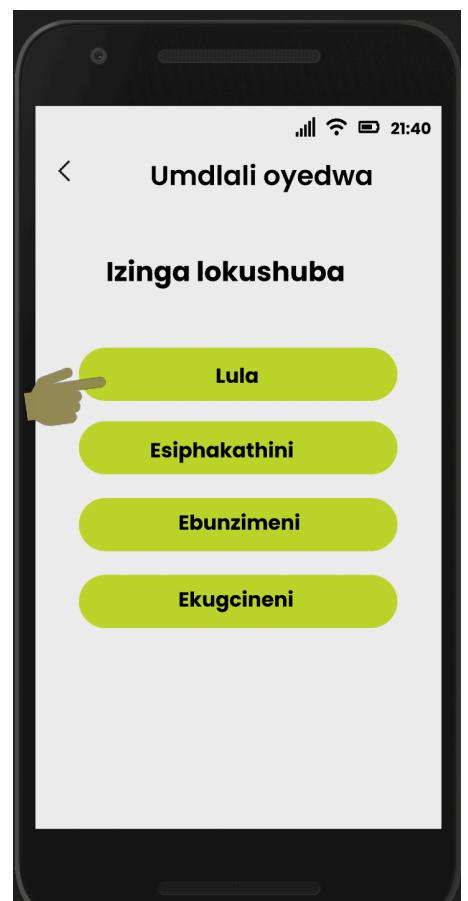
4. IsiZulu selected



5. Settings(IsiZulu)

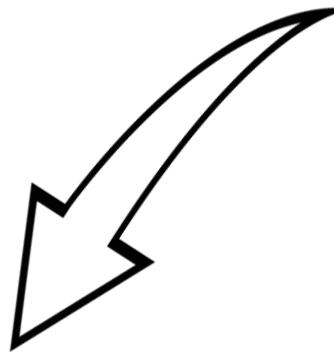


6. Single Player Menu page(translated)



7. Level Page (IsiZulu)

The hand for entering the user input. Hours and minutes. Selection by scrolling



Design Rationale

The user selects a language to switch to clicking its name on the list . Once the user switches to a different language the whole interface changes. Now they can navigate back to the home page, select the level of difficulty written in the language of their choice. When inputting the time in hours and times, a keyboard input was avoided to prevent the invalid input format.