Project: Course Timetable

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Executive Summary:

The goal of the project is help the students manage their course schedules, course hours, how many courses they attended and take notes on calendar so they dont miss the events. I used ReactNative as my framework and got help from Expo framework while i executed the project.

This report explains how in the project the students will check their courses via days and will take notifications if needed, how to track the calendar for upcoming events and see if they attended the courses they have in our schedule or not as well how i programmed the whole code for the project.

Introduction:

When students starts the semester they may struggle to follow the course times and assignments given to them or may even miss a few classes on this process. This obstacles cause from not having a proper tool for students to use with the features like tracking of course times, showing how many courses they attended and a calendar for them to use as reminder in one place.

The goal of this project is to build a mobile app that can store the given courses by students track their time, send notification to students, let students a place to track down their assingmant days and show how many courses they attended. The app entirely focuses on the data that students input. The project cant take the notes on by himself for complete the classes or adding a new day. The app developed using ReactNative to support for both ios and Android platforms but for now it only tested in Android platform.

System Design and Implementation:

This project is a mobile application to help students keep track of their schedules. When developing the application i developed a feature and tested it continuously at each step i took it further and implemented new features. The app developed using React Native because it gives us cross-platform accesibility and Expo framewrok used for simplifiying the development process and testing. The user interface desinged for being simple but effective, in the days page only being days shown in screen adn a button for adding new days, in calendar page there is a simple calendar and description for it and lastly in the statistics page there is two part that shows the total attended classes and invidualy classes under it. When students use this app they will enter the infromations manualy for all the days information for example day name, class name, class hour and tasks and user can change these later on if they want. The same principle applies to the claendar page too user can interact with days to leave a not efor themself to see later but students cant interact with the statistics page because it is a page for just seeing the attendance.

I used JavaScript language fort he project and React Native framework. Libraries like Expo Notification sor AsyncStorage used for features and the program made in Vs Code editor.

The project follows tab-based architecture where each important feature can be reached in different tabs(pages). These pages names are days page, calendar page and statistics page. The application uses navbar in Days page for navigation between pages:

1. Days page
2. Calendar page
3. Statistics page

Each page offers different features fort he application. For example where Days page contains all the days and course information, Calendar page contains a calendar that student can interact and Statistics page contains the data for attended classes. The application responds to user input in real time. The system is designed to support both Android and ios platforms using React Native framework but for now the app only tested on Android platform.

When students enter the application fort he firs time they are going to start in Days page as its the home page for application. Days page contains 3 main part these are the navbar that helps students to navigate trough application, the Days menus that contains most of the screen and a button for adding new days to the page. İn days information students can change the day name, course name, course hours and add or delete tasks fort he courses. Students also can toggle the attendance button in the main days bar or in the information modal to send data to statistics page. When students opens a new day fort he first time it shows in the statistics page in real time. Days page and Statistics page is connected to one another but the calendar page is a free space for students to take note on the calendar for themselfs.

When developing the project of course i encountered problems such as local data storage and notifications not showing up correctly. For now the project doesnt save the data local on phone but it can be changed with asyncstorage. As the notification problems when i implemented the feature i run across a set of problems such as expo go doesnt support the expo\_notifications library as whole i tried to build my own application library for using notifications but i got a lot of errors during the proccess so i turned back to expo go and expo\_notifications library it does its mission for sending notifications to telephone but the expo go is not supporting notifications whole some time in the future it needs to be move to another application library for stability.

Testing and Evaluation:

The first feature i added was the Days menu and adding a Day to the page first i added them to page they were very simple but i did not run across any problem they worked on first try then i added Calendar page and calendar then i added day information in calendar first the information modal was out of page and you couldnt reach the buttons but i solved it pretty quickly then i added more features to the day information modal like hours and attendance toggle, at first attendance toggle was not working right i wanted it to sync both buttons the i made them sync then i took the days storage and make a separate page for Days and statistics page to share so they can take the data from them in real time. And lastly i added notifications but as i stated earlier it is not stable without a standalone build.

Results and Conclusions:

Implemented features:

* Adding day
* Editing the day information modal
* Toggle attendance
* Real time acces between days and statistic pages
* Calendar information modal
* Navigation bar in Days page
* Statistics page data showing

When the ui designed it desgined for usability and satisfaction for the user. Tried achieving with white shade colors and a simple ui with just the features. Application runs fast and doesnt load anything or make the user wait for loading anything. The strong parts of the application is the Days page that shows days information and adding day as well navigating other pages, statistics page and calendar page that does the different features on different pages. The weak side of the application is it doesnt store localy to phone and the notification feature is not stable for now. In this project i learned how to make a mobile application for Android platform( i coulndt test in ios platform but it is working cross platform), how to use React Native for the projects and using expo libraries for it. Also i learned how to share the same storage on different pages and interaction between them in real time. I can improve this project by adding a better storage system in the future and can transfer the project from expo go application to my own standalone build for stable notification procces and for adding other features.

External resoursec i used:

<https://reactnative.dev/docs>

<https://docs.expo.dev>

<https://github.com/wix/react-native-calendars>

<https://docs.expo.dev/versions/latest/sdk/notifications/>

<https://reactnavigation.org/docs/getting-started>

<https://icons.expo.fyi/>

<https://expo.github.io/router/docs>

<https://reactnative.dev/docs/components-and-apis>