

LEAVE REMINDER APPLICATION

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ABSTRACT

With the current Covid-19 pandemic situation and offices moving to work from home, the work life balance of employees is being disrupted. It is easy for employees to lose track of time and overwork as there is no clear boundary between work and home anymore. This leads to a lot of stress, unhappiness and mental health issues among employees and impacts the productivity of the company in the long run. Taking a sufficient number of breaks to relax and rejuvenate is crucial in such a situation. Our project 'Leave reminder Application' is a tool that can be used to help aid the process and remind employees to actively take leaves and detach from work on a frequent basis.

The app comes with features that send reminders to the users every month if they have not scheduled any planned leaves for that month. It also gives the option to the users to customize the reminders based on how and when they would like to receive them. There is also a calendar available that shows the users the number of leaves they have taken in that year and the number of leaves that are available and will help them schedule their leaves accordingly.

INTRODUCTION

The Covid-19 pandemic has changed our daily lives completely. With social distancing guidelines in place, most offices have shut down and working from home has become the new normal. While it has its own advantages, it also comes with a lot of challenges. As the boundary between work and home disappeared, one of the major issues that the employees deal with is loss of work life balance. With the workplace and home being in the same environment, it becomes difficult to come out of the work mindset and

employees end up overworking. While this may seem to be good for the company, overworking and stress caused by it has shown to negatively impact productivity over the long run. This also affects the non - work relationships and social life of the employees and leads to a lot of unhappiness and mental health issues among them.

With travel restrictions all around the world, the number of vacations people are taking to unplug from work and relax has also reduced quite a lot. In such a scenario, taking leaves on a regular basis and spending some quality time with loved ones is quite important. Companies are strongly encouraging their employees to take leaves keeping their well-being in mind to prevent burnout during the pandemic.

This calls for a solution to actively remind the employees to take a leave on a periodic basis. Our proposed solution does exactly the same. It allows employees to configure and receive reminders when a planned leave is not scheduled in their calendar during the selected period of time. Such a tool ensures that the employees are reminded frequently to take leaves and results in a happy work environment.

RELATED WORK

1. There is an excel template that assists the user in tracking his sick leaves, personal leaves, and various types of leaves, as well as keeping track of the leaves taken. This template can also be used to plan ahead of time for a leave of absence. It keeps track of years' worth of data. This prompts the user to open the excel sheet and search for his leaves. We, on the other hand, make it easier for the user to keep track of his leaves by sending a reminder on a monthly basis. If the user has two leaves per month and has not taken a leave at the beginning of the month, this app will send a reminder that no leave has been taken. If the user

does not want to receive notifications about his leaves, he can opt out.

2. We discovered a leave tracker application that assists in locating monthly based leaves, such as how many leaves are left or taken. In general, the user must constantly navigate to the portal and select each leaf, whereas here we display the remaining number of leaves for that specific period and notify the user that they have not taken enough leaves for that period. This allows the user to keep track of the leaves. We made it user-friendly by sending reminders if they wanted to know the leaves at a specific time. We can also customize it, for example, if the user does not want to receive reminders about the number of leaves remaining, he can turn it off.

ARCHITECTURAL DESIGN

The process of defining a set of hardware and software components, as well as their interfaces, in order to lay the groundwork for the development of a computer system is called architectural design.

Each architectural style has system categories that contains:

1. A collection of components (for example, a database or computational modules) that will perform a system-required function.
2. The connector set will aid in the coordination, communication, and cooperation of the components.
3. Conditions governing how components can be combined to form a system.
4. Semantic models that assist the designer in comprehending the system's overall properties

1. Components are the fundamental elements that make up a project. All of the components work together to form a system.

The basic components that comprise the leave reminder app are as follows:

A. Database:

This component aids in the storage of data for this app. Before setting up the displays on the front end, it should be configured and all the details saved.

When necessary, all information about the number of leaves taken or yet to be taken is retrieved from this database.

We also keep track of the number of reminders sent and the content of the reminders by storing them in a database.

The display of the number of leaves taken or left is simplified by retrieving the information directly from the database rather than maintaining it with each update.

We use relational databases for this purpose because they help with database structure and make it easier to retrieve details..

B. Calendar

This is a component displayed on the application's front page that keeps the Calendar view and makes visibility easier for the user.

This is useful because it allows us to create an event on the fly, which is then saved in the database to keep track of the number of leaves. We created an automatic notification sender based on this component, which sends an alert every period if the user has not taken enough leaves.

When a leave is created, the calendar is updated with the leave details, and the database stores the total number of leaves for that period as well as the number of leaves added.

C. Reminder Configuration

This component is linked to the calendar and database components because it needs to retrieve information from the database as well as events from the calendar component in order to send reminders to the user.

This component allows the user to customize the frequency of reminders sent as well as turn off notifications based on the need.

2. This application is kept in a single-click format, allowing the user to navigate between different components. It enables users to create an event on the calendar and then navigate to a display of the number of leaves taken or left for a given period and overall.

3. All of the previously mentioned components, such as the calendar, database, and server side configuration, come together to form the system proposed for the leave reminder application.

REFERENCES

- [1] <https://trumpexcel.com/excel-leave-tracker/>
- [2] <https://www.vertex42.com/templates/employee-leave-tracker.html>
- [3] <https://developers.google.com/calendar/api/v3/reference>