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# Video Studio Booking Website

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## Idea

At Leuphana University, a new video studio opened at the beginning of 2023. Students can film interviews, record podcasts, or edit their work for post-production there. It is located in the library and can be booked via email at the moment. I worked at the library and have booked the room multiple times, loving the quiet atmosphere for working on creative projects. However, there is one complication: the process of booking the studio. Students have to send an email request and wait for a response. If the room is already booked for the desired time slot, there are a lot of emails exchanged to find a suitable time slot when the room is available and the student is free. For some students, rescheduling can be difficult, especially for those who have to work or commute to Lüneburg.

An idea to solve this problem and make life easier for students who want to work creatively is to have a website where they can see available time slots and book them directly. This approach is similar to booking seats at a movie theater (Cinemaxx [vue n.d.](#)), where people can see which seats are still available, select as many as they want, and reserve them by entering some personal data. Another website that inspired this idea is the German website Doctolib ([Doctolib n.d.](#)), where people can book their doctor's appointments via their smartphones. Free time slots are uploaded to the website, and users can select them. Such websites make booking easier not only for the users but also for the staff managing the booking requests. There is no back-and-forth communication, and users can book at the last minute or well in advance, as suits them best. People who want to work creatively shouldn't have to get in such a trouble to book a room, they should be able to live their creativity to their fullest. That's why a booking website is the best idea for creative minds.

## Methodology

The time slots available for booking are aligned with the Leuphana timetable, so students can book a slot during their free periods. There is also an option to select multiple time slots, with the 30 minutes in between slots added to their booking time. The hardest part of coding was definitely the calendar with the option to select multiple slots, make it visible to the user, and provide a sorted list of the selected time slots. I spent a lot of time trying to apply what we learned to my problem step by step. Writing down the desired end result and the simplest way to achieve it with my current knowledge helped. I had to simplify my ideas into tiny steps. For example, to change the color of the buttons, I first had to implement all the buttons into one single list instead of creating them one by one. Throughout this process, I realized that coding requires creative thinking to achieve the desired outcome with simple and innovative steps. It's a different way of thinking to reach the point of developing an idea and implementing it in

Python. The most useful resources when I got stuck were the documents from Python and W3Schools, where methods were explained easily. I tested code in a testing file to see how it worked before implementing it into my complex script. This approach helped me understand and solve problems better.

One update since the first submission of the Techbasics 1 exam is displaying the current week. It shows the calendar week with Monday's date as the starting point for better understanding, since students might not always know the current calendar week, but can recognize the date. There is also a new feature preventing users from seeing past weeks, only the current week and the following ones. With the start of a new year, the calendar week resets to 1, while the start date of Monday continues. This way, the calendar is not limited to one year and can be used in the future without resetting.

To create the calendar, I also had to search for some coding principles not covered in class to implement my ideas as imagined. I applied these principles only to non-essential features that enhance the website's appearance. For example, I added an option for the list of selected time slots to be sorted by day and time using the functions ``sorted`` and ``split``, referencing multiple sources (Dalke & Hettinger, 2023; Programiz n.d.; W3Schools n.d.). Another feature added this way is a message box on the personal data page warning users to fill out names and email addresses (Python 2023). For the real operation of the website, this condition is crucial as it provides the necessary data for the staff to confirm appointments via email.

I also implement a helpers file for definitions needed in my pages, but despite reformatting everything, I wasn't able to put a lot of definitions in the helpers file, since no matter how I tried to do it, my code wouldn't work anymore. So, I decided to stick with only my main app and managed to move only one definition into the helpers file. But as can be seen with other python projects I did, I am able to use multiple source files at once.

## Design

The design has been modified to add new information on the first page, showing users what the app is for before entering anything. The color scheme was also updated to be friendlier and lighter, making everything more visible and soothing, similar to the studio's atmosphere, using a color palette I created with Adobe to ensure consistency. An image was inserted at the end to provide a nice closing page.

Overall, the GUI of the website is designed to be as user-friendly as possible. I used and combined all the different placement methods for the best layout outcome on each page. Most elements are relatively sized to expand and minimize to fit most computer screens. The user

can easily maneuver from page to page and revisited the beginning, if they made a mistake. It is easy to understand without the need for an introduction or help page and can be closed at any time by pressing the escape key. Buttons with image labels (Sharma 2023) are used for easier recognition and a neater look. I also added information about where to find the library number on the library card. Before creating the website, I talked to a staff member of the video studio who mentioned that users need to enter their library number to check out the studio key. If an academic without a library card wants to book the studio, they must fill in their address and birthday. Many students are unsure which of the two numbers on the card is the library number needed for booking, so I included this information as well.

In the future, the website could be integrated into the official Leuphana website, so students don't have to search for it separately. When they search for the video studio, they would immediately find a link to the booking website. This integration could encourage students to work creatively on different projects in the studio. The website would eliminate the need for numerous back-and-forth emails, making booking more straightforward. Additionally, students could book the studio at the last minute, which was not possible with email bookings.

## Limitations

One unfavorable solution is that the message box on the personal data page destroys the entered data, requiring the user to re-enter it, if they forgot to enter either their name or email. This should be resolved differently in future versions to improve user experience.

One big step I wanted to implement in optimizing my Tech Basics 1 idea, was implementing a database with two interfaces: one for the customers and one for the backend. The database would indicate booked slots by coloring them red and making them unclickable for the next user. It would also allow staff to check who booked the studio and for how many time slots. For data protection reasons, the publicly visible calendar on the website should not display the entire database, only the booked slots. Staff should be able to view and edit all database data, for example, to delete a booking if a user wants to cancel. I took inspiration from the lectures and started to do a lot of research on how to save the actual booking data, making it visible to other users and changing the buttons to be unclickable and in a different color. However, implementing this would have required rewriting almost my entire code. Considering the time needed for restructuring and trying out new features, I realized that it was too complicated for me. So, I decided to focus on showcasing my understanding of different features for optimal user flow, such as buttons as photos or saving which button was clicked in an updating sorted list.

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## Affidavit

I declare that the submitted academic paper has been written independently and no sources or aids other than those indicated have been used. All contents taken from the works of third parties or (my own work) which have been taken verbatim or in spirit from other sources have been marked as such appropriately and the respective source of the information has been clearly identified with precise bibliographical references. I have not submitted this paper before to an examining authority either in Germany or abroad.

A handwritten signature in black ink, consisting of stylized initials and a horizontal line extending to the right.

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