# OCR A LEVEL COURSEWORK – WEBSITE FOR FINANCIAL ADVISOR

BY SERGEY SHKOLNIK

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# ANALYSIS

## Description

My project is a website for a financial advisor that will help them manage their timings and client bookings. The website will give a description about what services are offered by the finance advisor and it will allow the admin (the finance coach) to manage their timetable of meetings with their clients. The website will allow a user to create an account, login and request times for a meeting. Whereas the admin will be able to post free time slots for the day which will be filled up by their clients. The website will then send a reminder to the user and the admin about their scheduled appointment. Furthermore, the website will have a billing system so the clients can view different prices and it will also have a chat system between the client and the finance coach so that plans about meetings can be further discussed.

## Why is the problem solvable by a computational approach?

* The given problem is amenable to a computational approach because it requires the management of large amounts of data from different clients. This can be solved using a database which is able to store different types of data safely and this data is protected and can be fetched at any time by the permitted user. Whereas without the use of a computational method, the user would have to remember their timings for their meetings on their own or use paper to write down their timetable which has a risk of being lost or misplaced.
* Furthermore, to help the user remind themselves of the timings, a computational method can be used to send the user automatic reminders about their scheduled meetings. This will reduce the risk of missing a scheduled meeting as action from the user is not required to remind themselves.
* The use of computational methods also allows the finance coach to keep in touch with their clients with a chat system integrated into the website. This way the user doesn’t have to find the contact of their client elsewhere and can keep all their work-related communications in one place.

## Stakeholders

1. My mum – my first stake holder for this project is my mum as she works as a finance advisor and a finance coach. She has a growing number of clients and meetings getting booked. My mum will represent the admin side and the experience of a finance advisor using my website. The ways in which she will use my website include logging in and creating an account, allocating free time slots during which she can take meetings, manage her schedule and contact her clients. This is appropriate for her as this will replace a physical diary and save her from scrambling around pieces of paper while trying to keep organised with her tight schedule.
2. Alua An is one of my mum’s clients who has meetings with her and other financial coaches. She will represent the user of the website from a client’s perspective. The ways in which she will use the website includes logging in and creating an account, booking meetings with the finance coach, using the chat system to contact her finance advisor about a particular topic and organise and manage her meeting schedule. This is appropriate for her needs as she has a very busy schedule with work and other commitments and my solution will help her keep her meetings organised on top of her daily life.

## Interview with stake holder

1. Do you have any struggles with organising your meetings and schedule?

No, there are not many struggles at the moment. However the number of my clients is rising and I would like a more efficient system to help me organise my consultation as well as other study materials.

1. How often do you use a diary for planning your schedule?

Everyday, because I have different types of meetings everyday: meetings with clients and I’m also a co-trainer in business training courses. So I have to attend different types of meetings with different people, therefore a diary is essential for me.

1. How many clients do you currently have?

I currently have 6 clients but I am planning to expand in the coming months because I am finishing my training in financial service.

1. Do you ever find it hard to keep track of your schedule?

Not at the moment, but since I am expanding my services, I would like to be on top of all the things that I have to do. In doing so, I would like to avoid hiring an assistant and having an automated system that can effectively manage my busy schedule.

1. What key features do you look for in the project?

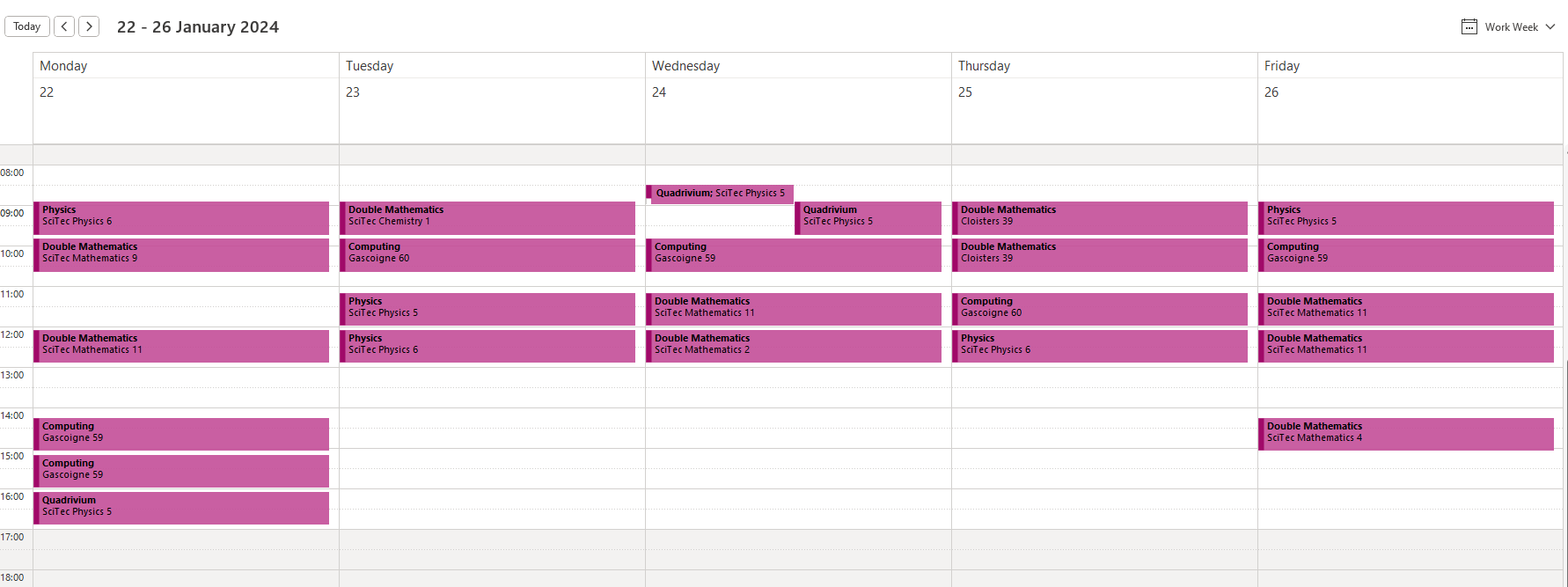
Easy to use and user friendly so that an average person can sign up for a meeting with me.

I want the website to attract clients instead of scaring them away by the complexity.

## Research of existing solutions

**Example 1- Microsoft Outlook**

**Viewing Timetable**

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Microsoft Outlook allows a user to view their schedule with a clear visual representation. There are options to change the view from ‘Work Week’ to ‘Day’ to ‘Month’ which allows the user to view their schedules in the distant future. The format of the timetable is in the form of a diary which gives an ‘easy-to-read’ experience for the user.

The scheduled meetings are arranged in chronological order so the timing of the meeting can be easily read and in the Work Week option the days are displayed as columns so different days are clearly separated.

The arrows at the top of this online diary allow you to flick through consecutive weeks and view your schedule in a month’s or a year’s time. Meetings are furthermore clearly highlighted with a different colour, again, allowing the user to clearly visualise and not miss any scheduled meetings.

**Booking Appointments**

A screenshot of a computer

Description automatically generated

Outlook also allows their users to create their own appointments at a specific time. Users also have the option to make the meetings recurring or singular which is convenient for weekly/ daily meetings.

When adding a person to a meeting, the user can view their participants’ schedule and take into account any conflicting meetings. This is useful because the meeting can be booked at a comfortable time for both the admin and the user.

Again, the schedule is presented in chronological order so it is easy to navigate through the booking screen. And you can select the timing of the meeting via the dropdown menu and a visual calendar which displays different dates.

This clear visual representation of the calendar and different times makes Microsoft Outlook one of the best platforms for creating and scheduling meetings.

A screenshot of a calendar

Description automatically generatedA screenshot of a computer

Description automatically generated

Another useful feature of Microsoft Outlook is the ability to click a free time slot in your schedule which will automatically direct you to the page that allows you to schedule a new meeting.

A screenshot of a computer

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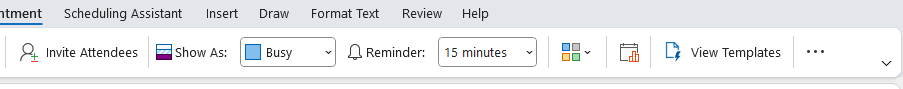
Description automatically generated

**Microsoft Outlook – Meeting Reminders**

A screenshot of a computer

Description automatically generatedMicrosoft Outlook sends automated reminders to meeting participants and the timing of the reminders can be set by the creator of the meeting.

This is a good way to ensure that meeting participants don’t forget about their scheduled meetings as the reminder window pops up at the bottom of your screen and makes a distinct sound.

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The menu bar, as well as allowing the admin to set reminder timings, also has a scheduling poll which uses analysis of schedules to suggest a comfortable time for all members of the meeting.

The menu bar also allows the admin or user to set their availability status to let all of their teammates know how occupied they are at different times of the day.

**A screenshot of a phone

Description automatically generated**

**A screenshot of a computer

Description automatically generated**

**Example 2 – Microsoft Teams (chat system)**

A screenshot of a chat

Description automatically generatedMicrosoft Teams allows the user to be able to live chat with any member of the company/team. The chat page is accessible via the nav-bar on the right which makes it easy to access for the user of Teams. There is the option to hide each chat by clicking the drop down arrow at the top.

You can also view the status of each user to see if they are available or ‘Out of Office’ so you can contact them accordingly.

**Examples of different status’**

A person in a suit

Description automatically generated

Busy Offline Away

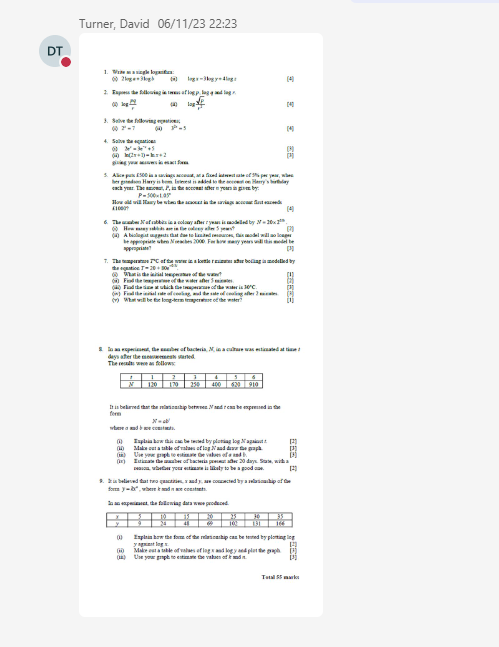
The user can manipulate their visual layout of their chats by being able to ‘Pop out chat’, ‘Mark as unread’, ‘Pin’, ‘Mute’, ‘Hide’. This gives the user an opportunity to manipulate their personal messages screen to either make it look aresthetically pleasing or have all of their work chats visible on the page.

Microsoft Teams also allows users to send messages of high importance by making them highlighted so that the receiver of the message can take particular notice of them.

A screenshot of a screenshot of a smiley face

Description automatically generatedA screenshot of a computer

Description automatically generatedThe Microsoft Teams chats are extremely versatile as users are able to send each other many things such as files, pictures, text and emoji’s.



**Microsoft Teams – Channels and Teams**

**A screenshot of a computer

Description automatically generated**

Microsoft Teams allows users to be a part of a team where admins can post relevant information to their class and this material can be accessed by all members of the class. Messages such as reminders, assignments and files can be sent to the whole class. Members can reply to the messages and interact with each post for example liking or reacting to the message.

Members of each team can start their own conversations in each team so separate conversations can be made for each topic of discussion. Messages can be marked as ‘Important’ if they are of high importance and members of each team can be mentioned in the messages so if someone hasn’t done their assignment, the admin or anyone else can follow up on that.

A screenshot of a computer

Description automatically generated

Microsoft Teams has a separate section for files where all relevant files for the gives group/ class can be stored. The file system operates in the same way as a normal file explorer where files can be organised in different folders. File types that can be stored in Microsoft Teams include Microsoft Word, Power Point presentations, Excel spreadsheets and PDF files and many more.

A screenshot of a person

Description automatically generated

A screenshot of a computer

Description automatically generated

Here, a user can find all the files that have been posted to the general channel and they can see what date they were posted and by whom. This is very convenient for users to navigate through any prior files that have been posted if they need to catch up on any work they haven’t done or a presentation they might have missed.

**Example 3 – Google Calendar**

**Scheduling Tasks**

**A screenshot of a calendar

Description automatically generated**

The Google Calendar allows the user to schedule tasks for themselves at any date or time with the user having the option to give a description of their task and set the task for the whole day instead of a specific time.

**Scheduling Events (7.99$ a month)**

A screenshot of a phone

Description automatically generatedA screenshot of a computer

Description automatically generatedA screenshot of a computer

Description automatically generatedThe ‘Scheduling Events’ option in the google Calendar allows the user to schedule a meeting/ event with other people. By clicking the find a time button, the program suggests a free time slot to the user in which they can schedule their meeting. The user can also set a location for the meeting if they want to do it in real life to let the members know the meeting venue. Furthermore the user has the ability to choose the time period to set the reminder for the meeting for e.g. 30 minutes or 15 minutes.   
**Scheduling Appointments – Setting up meetings**

A screenshot of a calendar

Description automatically generatedIn order to create an appointment schedule Google Calendar has a drop down menu in which you can find the Appointment schedule option. From there, you are redirected to create your own booking page where you are able to see your timetable and create booking slots accordingly. This is a simple and aesthetically pleasing feature which makes the option to create meetings and schedule appointments very easy and simple for the user.

A screenshot of a calendar

Description automatically generated

Once you are on this page, you are given the option to set up time slots during which you are available throughout the week. In the example it can be seen that the user is only available from 0900 to 1700 on Monday, Tuesday and Wednesday. After setting up the times during which the admin is available, they can then customise the length of their consulting sessions with pre-set options ranging from 15 minutes to 2 hours, however there is also the option to customise the duration of the meetings. This makes the program adaptable to different types of meetings, for example if it is a lesson, the length can be set to 1 or 2 hours whereas if it is a catch up business call the duration can be set to 15 or 30 minutes.

A screenshot of a calendar

Description automatically generated

A screenshot of a appointment schedule

Description automatically generated

A white background with black text

Description automatically generatedIn case the admin has had a change of plans or their schedule has changed, they have the option to edit their availability slots during the day. In the example below, the admin has realised that they wont be able to meet on the 20th of April so they changed their availability status to ‘Unavailable’. This is a useful feature because it allows the admin to adapt for their flexible time schedule and edit their ‘online diary’ whenever they need to.

Google calendar also allows you to set up the minimum time that the user must book the appointment for before it starts. It also lets you set up the maximum time period for which you can pre-book your meetings with the consultant. This is convenient for the admin because if they don’t know their schedule well enough in advance and if they aren’t sure if they are available in the future, they can’t get pre-booked too far ahead of time.

A screenshot of a phone

Description automatically generated

A screenshot of a calendar

Description automatically generatedThe admin can add a buffer time between each meeting and can also set a maximum amount of meetings that they can do per day. This gives the admin complete control over their diary schedule so that if the admin requires a break or time between each meeting to prepare their material for their next meeting, they have the ability to do that.

A screenshot of a chat

Description automatically generatedThe admin can also set the location of the meeting and link in a Google Meet link so that the participants are directed straight to the meeting. This provides more information about the logistics of the meeting that is being scheduled and makes it very practical for finding the physical or online location of the appointment.

**Sharing the appointment with others – Google Calendar**

A screenshot of a phone

Description automatically generatedFirst, in order to gather some extra information about the recipient of the meeting the admin can create a form for the participants of the meeting to fill in. These include first name, surname and the email address as well as any other relevant information such as their phone number which could be useful for the admin. This allows the admin to know a little bit about their student/ the participant prior to their meeting which will help the flow of the lesson.

A screenshot of a calendar

Description automatically generatedYet again, just like in scheduling events, the admin can set reminders for each meeting with different time periods before each meeting. These reminders would be sent on email to the recipient of the meeting with a specified period of time before the meeting. This is efficient because it prevents the participants from forgetting about the scheduled meeting.

The link to the booking page can be shared via email or other methods and once it is accessed, the user is directed to the following page, where they choose one of the available times that was set up by the admin.

A screenshot of a computer

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A screenshot of a computer

Description automatically generated

A screenshot of a computer

Description automatically generatedOnce the user selects one of the times for the meeting, they are directed to the form that was set up earlier to fill in their information. Once they have filled in their details their appointment has been scheduled. This is an effective way for users to book meetings due to the easy to read visual layout of all the available time slots and the accessibility they have by the admin sharing the booking page link with them.

## Essential features of my project

1. My website will allow the admin to allocate free time slots during each day. For example, if the times during which the admin is free are from 9am to 5pm they can allocate free time slots anywhere between these times so that the users can book these free slots.
2. The admin and user will be able to view their schedule and change the view of their schedule between day, week, and month. Their schedule will be laid out.
3. The admin will be able to cancel scheduled meetings. For example, if the admin has a scheduled meeting at a certain time and their plan changed so that they can no longer attend the meeting, they will be able to cancel this meeting.
4. The website will be personalised for my mum and will have the description of her services and other relevant information about meetings and pricing.
5. There will be a chat system between the client and my mum so that any relevant information and lesson material can be sent between them.
6. The client will be able to book meetings during the allocated free slots that the admin (my mum) has assigned.
7. There will be an automated reminder sent via email to the participant and the admin at a set time before the meeting.

## Potential limitations of the proposed idea

1. The first limitation for my proposed idea is that my website won’t be collecting any credit or debit card information from its users. This is because this feature could have risks associated with it such as malfunctioning could cause unwanted transfer of money which would be a big problem.
2. Another limitation is that my website will not offer a calling or video calling service for the finance coach to have the meetings with their clients. Instead it is suggested that the users of my website will use an external service such as Skype or WhatsApp for their meetings. This is because such platforms will provide better and more stable calling quality than one that I could make.
3. My website’s calendar will be a stand alone system therefore a person’s meeting calendar cannot be copied into other platforms like Outlook. This is because it will be too complex to enable such a function to work.

## Requirements for solution

**Developer requirements (my requirements)**

Software: The software requirements for the developer include having access to an IDE such as VS code. This will be used to write and debug the code. Being able to run and test the website with a suitable browser such as Google Chrome so that I can perform development and final testing on my code. Having a suitable method to host the website on a server so that at the end of the development, I can host the website locally or publicly so that people can view it and use. This will involve using XAMPP for hosting the website and creating the databases on a local device and once the development of the website is complete a suitable website hosting platform which will be determined later. The programming languages that I will use will be HTML and CSS for designing the webpage, Bootstrap for adding custom design features to the website, MySQL to manage and create databases and tables, and PHP to manipulate databases.

Hardware: All I will need for the development of the website is a computer that can run VS Code and Google Chrome. A mouse and keyboard may be needed (optional).

**Requirements for the finance advisor**

Software: My mum will require access to a web browser and access to the internet so that she can get onto the website to view her online schedule and manage her classes. An email address so that she can receive meeting reminders which will prevent her from missing a meeting.

Hardware: A computer or a phone so that she can get onto a web browser and access the website.

**Requirements for all website users**

Software: All users will need to have access to a web-browser to be able to access the website. An email address so that they can receive meeting reminders which will prevent them from missing a meeting.

Hardware: A computer or a phone so that they can get onto a web browser and access the website.

## Success Criteria

1. Upon completion, users will be able to create an account and be able to login to the website.
2. The users will be able to book meetings with the finance advisor in one of the free slots that was allocated by them.
3. The users will receive emails with reminders about their meetings at a certain period of time before the meeting.
4. The users will be able to use a chat system to communicate with the financial advisor.
5. The users will be able to see their calendar within a month, a week and a day.
6. The admin will be able to create free time slots during the day during which the users can book their meetings.
7. The admin will have the option to set a minimum time between the bookings so that they can have a break and prepare material for their next meeting.
8. The admin will be able to view their calendar within a month, a week and a day.

# Development

## ER Diagram

A diagram of a diagram

Description automatically generated

Tables

TblUsers

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Field Name** | **Data Type** | **Validation** | **Typical Data** | **Justification** |
| Surname | VARCHAR(20) | Presence Check (required) | Smith | For player identification |
| Forename | VARCHAR(20) | Presence Check (required) | Michael | For player identification |
| UserID | INT(3)  Auto- Generated | Required | 007 | Auto-incremented automatically. Used as primary key for users |
| Password | VARCHAR(50) | Hidden | Password123 | Hidden so that people can't look at your password |
| Email Address | VARCHAR(50) | Required | craigndave@gmail.com | Email is required so that reminders can be sent to you. |
| Phone Number | INT(20) | Optional | 07774172654 | Phone Number is optional so that users have the option to receive potential calls if they like. |
| Comments | VARCHAR(100) | Optional | Hello! My name is Michael Smith I would like to use your services | Comments are optional so users can give more information about themselves. |