

Criterion A: Planning

Defining the problem:

The minimization of paper usage especially at the present environmental situation is very important and that's what my client, **Ms. Arya Timilsina** values. She is an IBDP student who has been keeping journals in the conventional notebooks for a long time but has been recently looking at ways to digitalize her accountings. She told me that she started having a hard time searching for a particular journal entry despite organizing it according to their dates because there were too many journal entries. Since she knew I am a computer science student, she initially messaged me on Viber introducing me to her idea of keeping a digital diary¹. I really appreciated her idea and wanted to know more about it so I requested to have a short informal interview with my client, where I got to know more about the digital diary².

After listening to her problem, I immediately accepted her request and agreed to help her because I empathized with her since I know managing and searching for an old journal entry can be difficult and very time consuming despite being organized. With accepting her request, I would not only be able to help my client with time management and sustainable storage but I would also be able to do this project as my Computer Science's Internal Assessment (IA).

My advisor for my IA will be **Mr. Prayaschit Bhandari**, my computer science teacher, who will be providing me with feedbacks and guidance throughout the duration of the making of a digital diary for my client.

Word Count: 255

Rationale:

After listening to my client talk about her requirements and reading the mail³, I decided that using Object Oriented Programming for certain database functionalities would be the best solution as it supports reusability and flexibility, and also helps the developer with coding an effective problem solving application. It will also help in the long run to meet my client's needs of new features. As I will be developing a web-based application, I decided on using the software Visual Studio Code to code with languages PHP (procedural), JavaScript, HTML and CSS.

Visual Studio Code is a free-source code editor with several features supporting debugging, syntax highlighting, embedded Git, etc. I chose this particular software because it supports multiple programming languages and provides cross platform support and also because of its quick debugging and ease of use. Since my client values a good front-end design, I decided to use HTML, CSS, and JavaScript as these languages are easy to learn and implement, supported by all the modern browsers and they are free of cost as well as compatible with each other. I will also be using

¹ Refer to Appendix A.1 (Initial messages)

² Refer to Appendix A.2 (Transcript of the interview)

³ Refer to Appendix A.3 (Request via mail)

Bootstrap to efficiently work with the front-end. For the server-side, I decided to implement PHP as it is platform independent, easy to use and integrate, and works efficiently with databases. I have used version 5.7 of MySQL database via phpMyAdmin for connection because it is compatible with PHP and also I have used it in my class making it easier for me to work with.

Word Count: 250

Success Criteria:

1. After registering the user, the application will be able to ensure privacy using username and password
2. Provide the client a user-friendly interface with easy usability and a section explaining how to use the web application
3. The application will have 3 sections; entries, planner and expenses. The user will be able to;
 - Add, delete, edit/update the required information
4. Can insert an image within an entry
5. It will have a search functionality where the user can search for a journal entry by inserting the title
6. After searching, the data will be displayed in a tabular form according to symbol number, title, and date
7. The expense section will have a calculator and a table where the user can store their monthly expenses
8. All the data saved by the user will be stored in a database
9. Application will have a rich front-end that is understood by the user
10. The information in the tables can be sorted as required.