

Criterion A

Describing the Problem:

My Client (My mum) is currently a high school teacher teaching Japanese. She teaches grades 9 through 11 - Quite a large number of classes to keep track of. Lately, my client has been finding it difficult to organise lesson plans effectively. Up until now, she has been writing and using a physical planner, which is time-consuming to constantly update and could even be misplaced.

My client approached me with this problem and I immediately noted that it was a perfect opportunity for my Computer Science IA. She explained what she wanted: a new, more efficient lesson planner that she could swiftly and easily access and edit.

Aware of the limitations of a physical planner, I instead offered to create a digital Java-based lesson planner.

My computer science teacher approved this idea and my IA project commenced.

Rationale:

As my client said during client consultation, education is becoming heavily digitalised: Gmail, Google Classroom, and PowerSchool are just a few of the teaching tools and assistive technologies that are now commonplace within the classroom. Creating a digital lesson planner makes it only a click away from other important digital teaching applications - Maintaining all these tools within the same place would greatly contribute to a more organised teaching space for my client.

Rather than a physical planner, my digital planner - developed in Java due to its GUI support through Java Swing and file handling capabilities - could be easily opened, edited then closed, all saved within the computer. While written planners could be lost, digital planner data can be saved on the computer and thus always accessible, a more secure medium of storage rather than a notebook.

During client consultation, my client emphasized how she needed a more efficient and accessible lesson planner. Specifically, she asked whether she could plan lessons far in advance, which led me to consider a calendar system for long-term planning, allowing her to assign lessons to specific dates and update them dynamically.

Moreover, there is definitely a niche in digital lesson planners for teachers. There are generic planners such as Google Calendar, but these offer day-wide scheduling features and thus lack specific functionality for the classroom. My program can be specifically tailored for teaching needs, offering specialised features such as subject-specific templates or lesson schedules.

Certainly, a digital lesson planner would be a greatly effective solution.

Success Criteria:

- Main Page opens on Start, with loaded image and 3 buttons, "Schedule", "Calendar" and "Template"
- Once "Schedule" is clicked, it opens a grid of 4x5 buttons to correspond to a lesson schedule.
- Planner page opens without complications, with all editable text fields and 3 buttons, "Save", "Clear" and "Load".
- Lesson plans are saved on the computer as .txt files, when the "Save" button is clicked
- Saved lesson plans are automatically loaded onto the text field once a lesson plan has been opened
- If "Load" button is clicked, it allows the user to choose a .txt file plan. Selected plan text will then load onto the various text fields.
- If "Clear" button is clicked, it clears the text fields and clears the corresponding plan file
- Clicking "Templates" from the Main page will open a Planner page without "Clear" button. An additional text field will also appear called "file name"
- Saving templates will save the .txt file in an accessible directory, using the specified file name identifies the file.
- When "Calendar" is clicked from the Main page, it opens a Calendar with drop down options for Year and Month.
- Clicking a day from the Calendar will open options for periods, which open a Planner page when clicked.