Processing programming project reflection

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The goal of this project was to develop a GUI library using Processing.This GUI library includes a number of commonly used widgets such as buttons, check boxes or images. My main objectives were to apply the knowledge I had acquired in Processing during college, strengthen my understanding of object oriented programming, and improve my project organization skills. Initially,

the project was supposed to last approximately 10 to 12 days, during which I planned to write a document describing all the deliverables and the schedule, create a UML diagram, implement the GUI, and finally develop a demo to showcase the library I had designed. On the first day of the project, I created

the documentation and a first draft of the schedule. I spent the first two days of the schedule to writing my documentation and creating the UML diagram in order to establish a well-structured plan before beginning coding. The next four to five days were allocated to developing all the main classes (GUIManager, Screen...) and implementing the originally desired widgets (Text Input, buttons, images...). I planned to dedicate a couple of days to building the demo, and reserve the final two days to go over the documentation and diagrams, as well as writing this reflection. In the end, the project was completed in nine days. Although the time assigned for reflection and documentation remained unchanged, the coding schedule changed significantly. Implementing the classes took only two days, and I spent the remainder of the week developing the demo, adding additional classes, and addressing issues. Building this library taught me how

to handle a project from start to finish and helped me see how organisation is key in the real world. I learned that planning the project architecture is just as important, if not more, than writing the actual code. A good plan made implementation easier and even gave me the chance of exploring unfamiliar concepts. Working alone on this project also helped me see how much more confident I

have become in my programming abilities and my knowledge of Java. A year ago, completing a project of this scope would have been extremely challenging, if not impossible. Now I was able to complete it in a week, including all the planning and documentation. Although it was an enriching experience, there

were moments of frustration. One particularly challenging aspect was understanding and implementing event-driven programming for the first time. For example, I encountered an issue where the buttons used to navigate between screens in the demo were skipping screens. To resolve this, I began handling user input directly through the mouse-Pressed() and keyPressed() functions. This approach really helped me understand how event-driven programming works. If

I had more time, I would have liked to implement theming functionality, such as a night and day mode, which would allow the user to switch color schemes. I would also consider adding more widgets, such as sliders or graphical elements, which could be included in future versions. In conclusion, I believe this project

demonstrated the knowledge and skills I have developed over the past few years, both in terms of programming and project organization.