

The project chosen for assignment three is a Graphical User Interface of an employee timecard. My father's company has paper timecards for their business and my father had complained about having to submit timesheets in person. An idea of mine was to copy the design of the paper timecard, remaster it in Microsoft Excel, and have him use that instead. For him, the Excel sheet was too difficult, which is why I thought of the idea of editing the Excel sheet through a Python GUI. Some of the complex objects interacting with one another are the GUI, the Excel Sheet, and the process of converting the Excel sheet to a PDF. One person will design and implement the basic structure of the GUI. This includes learning the Syntax of the chosen GUI PyQt, and being able to help others learn the syntax. The next person will create GUI methods to convert the Python objected data into Excel. The last person in the group will create a method to convert the Excel Sheet into a PDF and have it get emailed to a person. The communication between Python and Excel will need to be explored, along with how to store the data on the Excel sheet. It will be noted that the conversion between Excel and PDF is expected to be more difficult than the other two portions of the project and will require multiple external Python libraries. Ways that all the parts are going to interact with each other through specific methods. The plan is when buttons are pressed onto the GUI, some method is called that allows the input of the data, the storage of the data onto Excel, and the visual display of the data onto the GUI. Also, there needs to be a property of the input of data to where data can be re-entered. An important design of the GUI is whether data will be stored in the Excel file once it was been entered, or all the data will be entered at once. While it would be more efficient to save the data once it is entered exactly, it will be more visually appealing to have a button the user pressed to upload all the data. Due to this feature, there will need to be a small display saying whether the data is saved correctly and also downloaded as a PDF correctly. Some basic tests were implemented such as entering inputs and seeing if data is being stored correctly in the Excel file, along with downloading a copy of the data. These will be successful.