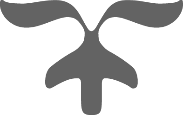


A Level Computer Science Project

[Document subtitle]



June 18, 2018

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# **Analysis**

## WHat is the problem?

Describe what the problem is, the cause of the problem, and how it will benefit the client from any other program

After having an interview with my client and getting the requirements, the problem they want me to solve is fairly straight forward. They want me to make a program which logs a flight mission, import a KML, allow them to write a timeline of events during the mission, save it in a database and then print as a PDF. Currently, my client uses a notepad and pen to record down the variables of the flight during the flight is taking place, and after the mission has ended, they input the data into a computer program. Now, the client want some sort of software that allows them to do this electronically. The manual note taking is useless because inputting data is repeated, and can be made redundant because the problem I will be trying to solve will allow the user to input the variables there and then – taking out the notepad stage. In addition to this, the problem I will be trying to solve will visualise

* To visualise
* Notepad is redundant, repeated data

The client want a program that records the different variables related to a flight mission (such as: engine on, take off, ETD (estimated time of departure), working out the flight time, then saving the inputs into a database. My client can have the option to upload a KML (Keyhole Markup Language) which can then be placed over a Google Maps (or other geographical software). My client can then see all the different dates and can select one, opening up all of the inputted data in a table format and the KML – the layout will be the same as if it was printed. There will be an option to view a timeline for each date and the client can add to the timeline: for example, at 10:00, something happens during the mission so a client can add this information to the timeline. Another table would be needed for this – having time and details as the column headings. However, if the user then adds a note at 09:00, then this will go before the 10:00 note so I need to create a function that orders the timeline in a numerical order. The client can have the option to print the table of data, KML, and timeline as a PDF, having the table of data and KML on one side, and the timeline on the other. My client also wants the DEA (Diamond Executive Aviation) logo printed on the PDF so I’ll need to import that image somehow.

This is needed because it is an efficient way of recording the values and it allows the user to import a KML. Currently, my client uses a notepad and writes down all of the variables related to the flight time, and now they want some sort of software that allows them to do this electronically. The program will allow the client to view the flight times and information needed for each flight, in an easy, readable format.

## Computational Methods

Described and justified the features that make the problem solvable by computational methods, explaining why it is amenable to a computational approach. Describe my a manual system is not good for this problem

This problem needs a computational approach to solve it, rather than a manual/human approach, because the program would need to store a lot of information; if there is, for arguments sake, 100 different dates, then it is much more efficient to store the data for each date on a computer rather than a human hand-writing the information and storing it in a folder. The program also needs to import a KML and a computer is needed in order to do this – this cannot be done manually. Furthermore, if the user enters a note in the timeline for 10:00, and then decides to add another note at 09:00, the program can rearrange the table timeline so it is in numerical descending order; however, if the user was doing this manually, then they would have to try and fit the time and notes above the current time and/or throw the paper away and start all over again. Allowing the user to edit and change current data, this program will help the user if they make mistakes.

## Stakeholders

### Identified suitable stakeholders for the project and described them explaining how they will make use of the proposed solution and why it is appropriate to their needs.

The stakeholders who would use the program are people who want to record their flight time, such as people who work for the military, boarder control agencies such as Frontex, or people who are in the Drone business and want to record their jobs they have for clients.

## Resaerch

**First interview**

**Existing Products**

* Adobe Acrobat allows me to convert, edit and sign PDF’s.

**Second Interview**

## Appropriate features to incorporate into the solution

### Researched the problem in depth looking at existing solutions to similar problems, identifying and justifying suitable approaches based on this research.

## Features of the computational solution

### Identified the essential features of the proposed computational solution explaining these choices.

## Limitations

### Identified and explained with justification any limitations of the proposed solution.

## requirements

### Specified and justified the requirements for the solution including (as appropriate) any hardware and software requirements.

## Success criteria

### Identified and justified measurable success criteria for the proposed solution.