**Advanced C Project Design Sheet**

By

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* It should be noted; my application was written using Microsoft Visual Studio Community 2015. I’ve included “password.txt” file and “project.c” file with my project. The password.txt file has a list of three usernames and three passwords in order for the application to run correctly.
* Successfully logging into the program is the first part of my application. After asking the user for their username and password the login function is called. This reads the file in and puts the variables into a structure called login\_t. What’s entered from the user and what’s in the file are checked for a successful match. 0, 1 or 2 is returned from the function.
* The rest of the main function is mainly just a do while loop which controls the menu functionality and calls all the main functions of my program.
* The program calls the load function which reads data from a file called “Surveys.txt”. Loop through the file and put each word or character into its designated type. E.g. ppsNum followed by firstName etc.
* Input, in the main do while loop, from the user is integer input and is validated in the program.
* The main functions of the program are:

1. AddSurvey()
2. DisplayAllSurveys() – Prints all Surveys to file
3. DisplaySurveyDetails() – displays a specific survey
4. Update() – updates an existing survey
5. Delete() – deletes a survey via pps number
6. GenerateStatistics() – generates statistics of the surveys in the database by calling individual functions.
7. PrintToFile() – prints the surveys and the statistics to “SurveyReport.txt”

* Finally, the program calls the Save Function which saves the surveys or any their updated information entered by the user to “Surveys.txt”.

**Extra Functions**

* I used a sort function which I call just before I Print the surveys to the screen. This function sorts the surveys by pps number in ascending order.
* I’ve a separate validate email function which only deals with validating an email address. The email address entered must contain at least one ‘.’, at least one’@’ and finish with “.com”.
* I also have mainMenu(), editMenu() and displayLength(). DisplayLength() just returns the number of surveys in the Linked List. The other two functions are just printf’s.

**Some References**

* I tweaked my sort function from some code I found on stack overflow.

[**http://stackoverflow.com/questions/5526750/linked-list-sorting-in-c**](http://stackoverflow.com/questions/5526750/linked-list-sorting-in-c)

* For entering asterisks in place of characters of the password I found some c++ code which I changed to suit my project.

<https://bytes.com/topic/c/answers/910429-how-display-asterisk-when-user-enters-password>