System Specification Document

PAT Phase 1 – Grade 12



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# Summary

The problem: It is a known fact that time management is a struggle among teens. Some examples are:

* Teenagers do not know how to choose which task is more important to start with, and
* they have not developed a sense of how long it might take to do a task.

Time management plays a vital role in improving students’ academic performance and academic achievements. Each student should have time management ability which includes setting goals & priorities, using time management methodology and being organized in using time.

My program aims to address the need for students to manage their time effectively. The information about the task will determine a user’s planner. The program will organize and receive all necessary information. It will output a time management program that advises the user on how to do tasks and what aspects the user should focus on.

The target users for my program would be individuals specifically young adults, those in High School or College that struggle with managing their time when it comes to prioritizing tasks. Target users might have similar characteristics such as procrastinating, disorganized and unmotivated. This program will encourage these individuals to strive in task they never knew they had time for.

# Motivation and Research

I did not base my program off an existing program. However there many time management applications out there for both individuals but mostly teams. It includes but are not limited to the following:

1. **Remember the milk.**

This platform is best for individuals and for sharing tasks among one another.

“Remember the milk” provides a platform to remind individuals of task needing attention on their to-do-lists. It has a quick and easy function of adding task by Smart Add and reminders on task can be sent from multiple platforms.

The platform can be accesses from your browser or downloaded on your computer or smart device through their mobile app.

Features:

* Smart Add: allows the user to add a task with the elements in the task creating a more specific data collection.
* Assign tasks to other people.
* Date/time stamp on task notes

Price:

* Free

For more visit, their site: <https://www.rememberthemilk.com/>

2 **Clockify Time App**

This is best for both individuals and teams.

This is a time management application with no cost. It can be used on desktops and mobiles to track time. Can be used on both Windows and Mac desktop, while the app is for android, iPhone and iPad users.

Features:

* It provides a report on employees and their task.
* The report can be exported as a PDF and Excel format
* It will help the user with project tracking.
* Allows you to form group to make it easier to manage people.

Price:

* Free

For more visit, their site: <https://clockify.me/>

These products and platforms mentioned are quite inspiring for my program but they were not my reason for wanting to design this program. I want my program to focus more on the individual as a whole and task that have nothing to do with daily life or with a business. Therefor I would say that my program differs from the others mentioned because of the target audience and the function but are quite similar in the sense that it all comes down to one element which is managing ones time.

# Specifications of Program Function

**Login Screen**

* Display log in screen when program runs.
* Input Username and password
* Check if password is valid.
* If it is valid, open Application screen.
* If it is not valid display error message where details are incorrect and allow user to try again
* Another button will be provided for users that do not have an account yet and this will take the user to a register screen

**Register Screen**

* Display a screen allowing the user to add his personal information.
* If the information is same as another user an error message will be displayed showing that user already exists.
* If the user is not already in the database, the new user will be added.
* If information is correct and everything is entered it will take the user back to the login screen.

**Application Screen**

* Display a main screen which allows the user to choose between a Task List Screen Planner Screen, Helper Screen and Logout.

**Task List Screen**

* Allows the user to view all the task that will be put into his/ her planner.
* Buttons will be provided for the user to do the following:
* New Task: this will take the user to a Task Detail Screen where the user can add a new task to the list.
* Edit: This allows the user to update information about a certain task. It will take the user to the Task Detail Screen.
* Delete task by clicking on the delete icon next to the task you want to delete.
* If the “Get Help” button is clicked it will take the user to the helper screen.
* On this screen users will only be able to view information, if the user wants to add, edit or delete a task, the user will be taken to another screen known as the Task Detail Screen.
* A button will be provided to take the user back to the main screen

**Task Detail Screen**

* Display information about a certain task
* Display a screen to enter information for a new task.
* This information can only be changed if user has click on the “Edit” button on the previous Screen therefor this will be two screens with the exact same format.
* It will be stated where to add what kind of information for the user.
* If the submit button is pressed but variables are left open an error message will appear
* If all information is entered it must take the user back to the task list screen.

**Planner Screen**

* Displays a calendar. This will be in the form of a grid containing the days for the month we are currently in.
* If the user wants to go back to the main screen a “Return” button will be provided.
* If the user wants to view the task, he or she has for a certain day click on any of the days with a task and he or she will be taken to the Planner Detail Screen.

**Planner Detail Screen**

* On this screen the user can view information for a day.
* This information will contain all the details on the task and a task description which could be in the form of what notes to study or extra information given by a teacher
* If the user wants to go back to the Planner screen, they must click the “Close” button.

**Helper Screen**

* Displays a document that explains the purpose of each screen and elements in that screen.
* If user clicks on “Back” it will take the user back to the main screen or the screen they were previously on.

# Specifications of User Interface

* **Theme and Font:** The colour scheme of my program will consist out of dark blue, light blue and white(background). The font size will depend on whether the text is a heading, sub heading or just normal text. It will vary between 12 and 36. All text will be in Calibri.
* **Login screen:** User will enter his username and password. When the “Login” button is clicked it will be checked whether information is valid. If valid it moves to the “Application” screen. It also has a button for a new user to register called “Register” button.
* **Register Screen:** Here a new user must enter their Full Name, Password, Telephone number and Email Address in order to make a new account. When the “Register” button is pressed the user will be taken to the main screen also known as the Application Screen
* **Main Screen:** This is where the user can either select the following screens: Task List Screen, Planner Screen, Helper screen and the Logout screen.
* **Task List Screen:** On this screen information about that task will be displayed. The user will have the option to add a new task, edit a current task, delete a task. The user also has the option to go back to the home page. If the user wants to edit a task or add a new task it will take the user to the task detail screen
* **Task Detail Screen:** This screen is accessed when the user decides to add or edit a task. This screen will have all the necessary information about the subject such as: Task Name, Related Subject, Start Date, End Date, Time Allocation, Task Description. When the “Submit” button is pressed it will take the user back to the task list screen.
* **Planner Screen:** On this screen a planner for a whole month will be displayed. The user can click on a day that it is visible a task is active. When the user clicks on this screen, they go to the Planner detail screen. No information can be added. I the return to home page button is pressed it will go back to the main screen.
* **Planner Detail Screen:** This screen will be used to view the tasks information for the day chosen in the month. It consists of information that can only be viewed. This information includes Task Name, Related Subject, Start Date, End Date, Time Allocation, Days Remaining and Task Description. To return to the planner page user must click the “Close” button.
* **Helper Screen:** Information about how the product will work will be displayed on this window they will also be referred to an external pdf which will guide the user on how to use the program. A back button will also be provided which will take the user back to the main menu.
* **Logout:** Once the user is done with the program, they should click on the log out button which will take the user back to the login screen.

# Specifications of Help

Internal Help: A help menu will be provided on the main menu screen after logging in. This menu includes information that will help the user navigate and use all tabs effectively. If the user still does not understand, it will be advised in this menu to go and look at the external help which will be included as a PDF. The help will explain the function as well as the information about the tab itself.

Aspects found in help screen:

* How to log in
* Information needed to register and how to register
* Purpose of task list screen
* How to edit a task
* How to delete a task
* How to sort task and based on what elements a task can be sorted
* How to search for a element in a task
* How to add a new task.
* The information that can be found on the task detail screen
* How the calendar on the Planner Screen works
* What month the user is looking at
* How to search for a task in the calendar
* How the filtering works for the calendar
* The information that can be found on the planner detail screen.

External Help: And PDF document will be made available for the user. This PDF document will include a list of each screen and explain the information needed or information outputted for each screen. It will explain what the program allows you to do.

# Specifications of Data Storage

All information will be stored in a database which will be stored in Microsoft Access.

**tblUser:**

Fields:

* Username
* Password
* Phone number
* Email

When are the fields stored

* Stored in the database when user enters their information

When are the fields accessed

* When the user logs in to the program
* When the a new user registers to the program

When are the fields updated

* Fields can not be updated

**tblTasks**

Fields:

* Task Name
* Task Status
* Task Subject
* Task Due Date
* Task Start Date
* Task Complete
* Task Complete Date
* Time Allocation
* Task Description

When are the fields stored

* Stored in the database when task are added

When are the fields accessed

* When user views a task
* Accessing the calendar
* When user edits a task
* When user creates a new task

When are the fields updated

* When user decides to edit a task
* When time for the task have run out
* All tasks are completed the calendar will be updated

**tblSubject**

Fields

* Subject
* Subject Priority

When are the fields stored

* Stored in the database when the program is created.

When are the fields accessed

* User wants to view priority of their task
* When user search for the level of priority on a certain task
* When user views calendar or task list table

When are the fields updated

* When user changes the subject of a task
* When user adds a new task to database

**tblHelp**

Fields

* Menu
* Task List
* Planner

When are the fields stored

* Stored in the database when the program is created.

When are the fields accessed

* When user selects help option

When are the fields updated

* Fields can not be updated

# Specifications of Hardware and Software Requirements

## Hardware Minimum Requirements:

* Memory: 1GB RAM up to 3 GB RAM (if program allows for opening more than one window)
* 2.4GHz Processor
* Hard Drive Space: 80 GB Hard Drive

## Software Minimum Requirements:

* Windows 10 or later
* Mac

Users of the system will need:

* Java JRE (Java Runtime Environment) version 7 or later
* ODBC driver

Developers will need:

* NetBeans 8.2 or later OR
* Java JDK version 8 or later
* MS Access version 2019 or later