

PROJECT PROPOSAL



CS 102 - DATA
STRUCTURES &
ALGORITHMS

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TASK MANAGEMENT SYSTEM

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This project is aimed to create a task management software that could help in an efficient planning of tasks, reminders and idea generation. Binding to the learning achieved from the course, this project will be executed by the use of different data structures that include but not limit to; queues (priority queue, circular queue), stacks, dictionaries and lists. It will also involve different sorting and searching algorithms that we worked upon, in the course.

The project is supposed to make me able to work upon the algorithms in solving some real world problems, and to learn how different techniques can help execute the problem faster. Also, the project overall tends to make this system, a very simple, faster, easy-to-use and interactive, as much as possible. The tentative duration for this project will be 1 month, which will cover code fragmentation, debugging, application of GUI and finalization.



RESOURCES

- <https://dzone.com/articles/9-features-that-make-a-great-task-management-tool>
- <https://www.freecodecamp.org/news/send-emails-using-code-4fcea9df63f/>
- <https://www.probytes.net/blog/plotting-graphs-in-python/>
- <https://www.geeksforgeeks.org/python-gui-tkinter/>
- Library resources, Discussions with TAs, RAs and Professors.

This is only a tentative list which will be updated as confusions would be encountered.



Ideas that I have listed to work upon, while executing this project, are as follows.

- Making the user able to organize tasks by adding them, prioritizing them, marking them as done & deleting them.
- Letting user create a collection of different tasks, by categorizing them or creating a label under which several sub-tasks may be added.
- User is able to search for a task. through filters, so that he/she may get to the extra details.
- Tracking time for each tasks and keeping a queue of user's progress in executing his/her tasks.
- Adding features like calendar, remind through e-mail.
- Scheduling recurring tasks, so that, they are already queued up on a routine-base.