ALGORITHM ANALYSIS DESIGN PROJECT PROPOSAL

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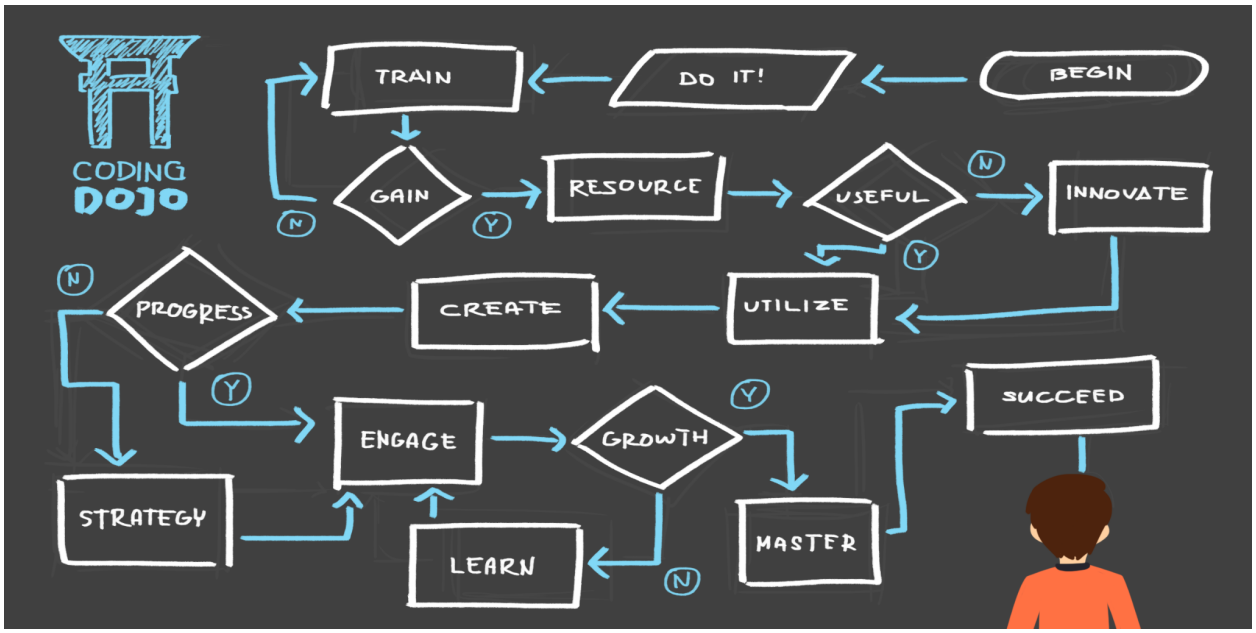
Group D



Algorithm Analysis Design - PROJECT PROPOSAL :

INTRODUCTION :

My proposal for the AAD Project is to build an interactive website for learning the different algorithm design techniques which were taught to us during the Algorithm Analysis and Design Course.

OVERVIEW :

Till this point the algorithm design techniques taught to us are :

- Divide and Conquer Strategy
- Greedy Strategy
- Dynamic Programming

So, I have chosen simple problems which are very essential for every programmer to learn which falls under these categories.

- Divide and conquer - Quick Sort, Merge Sort
- Greedy Strategy - Selection Sort, Dijkstra’s Algorithm
- Dynamic Programming - Nth Fibonacci number, Insertion Sort

There is also a scope for adding more and more examples under these categories and the upcoming ones (linear programming, backtracking, branch and bound).

WORKING PLAN :

I have planned to create an interactive menu driven console for the different algorithm design techniques which explains the concept and examples behind these techniques.

- The user can choose which design technique he/she wants to learn by selecting from the given menu.
- The website then explains the theory behind the selected design technique in simple steps.
- Then it directs the user to see the associated examples.
- The examples depict the techniques stepwise by automatically explaining and arranging the input sequence

DIVISION OF WORK :

I have divided this project into five phases.

- **Phase 1** : Rephrasing the theory of the algorithm design techniques into simple steps (or sub tasks)
- **Phase 2** : Selecting/refining the examples for each design technique
- **Phase 3** : Design the menu - driven program to make the website interactive
- **Phase 4** : Write programs to automatically execute the stepwise tasks of the chosen examples
- **Phase 5** : Write a report and do last minute changes to further fine tune the project before final submission.

TIMELINE :

Phase 1 & Phase 2 - 7 Days

Phase 3 & Phase 4 - 15 Days

Phase 5 - 15 Days