

MINOR PROJECT SYNOPSIS

SORTING AND PATH ALGORITHM VISUALIZER

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❖ Purpose

- The purpose of this project is to help the other students as well as teachers to have a better understanding of how different algorithm works and which algorithm takes more time and which takes less time to complete the given task. While learning some new skills, if you visualize its working and approach then you will have better understanding of that particular skill and it will also have long lasting impact and stays in your one's mind for quite a long time.

❖ Objective

- The objective of this project is to improve my knowledge of different algorithms, learn to implement them in the real-world problem and to create a project where I can keep all algorithm at one place for easy access.

❖ Project Scope

- This project is quite useful as it makes the learning process quite easy and attractive which makes learning fun. Hence this project has a good scope

❖ Technologies Used

- **LANGUAGES**
 - JavaScript
 - HTML
 - CSS
- **FRAMEWORK**
 - React JS
- **OPERATING SYSTEM**
 - Windows 10
- **IDE**
 - Visual Studio Code

❖ **Existing System**

- There are existing systems which are similar to my project but some do not have many algorithms at one place, other do not have user friendly interface and most importantly most of them do not have visually appealing graphics and layout.

❖ **Propose System**

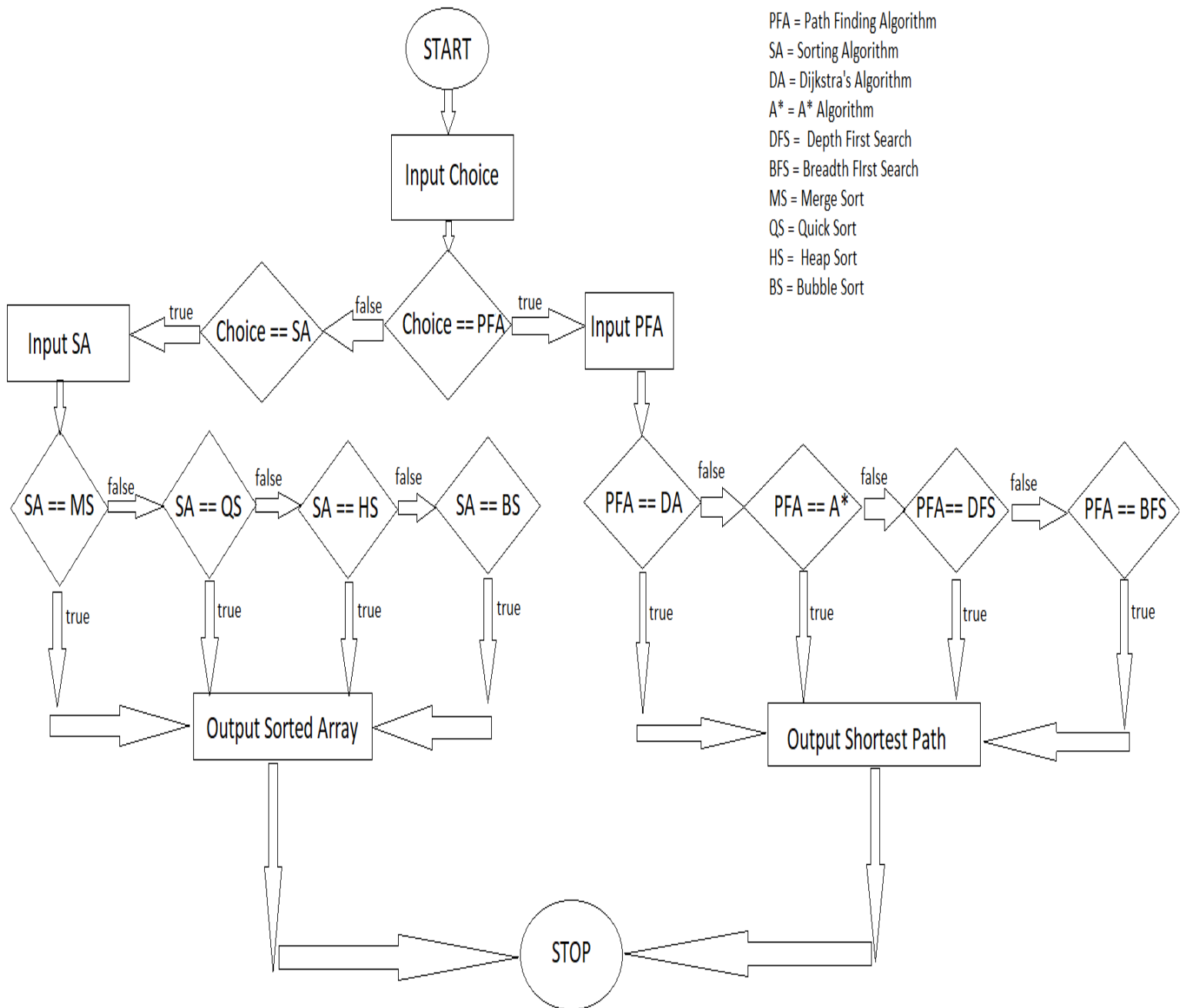
- In this project I added many path finding algorithms as well as sorting algorithm in one place so that the user does not have to visit different website to learn different algorithms as I will provide all of them at one place with user-friendly interface and visually appealing graphics and layout.

❖ **Feasibility Study**

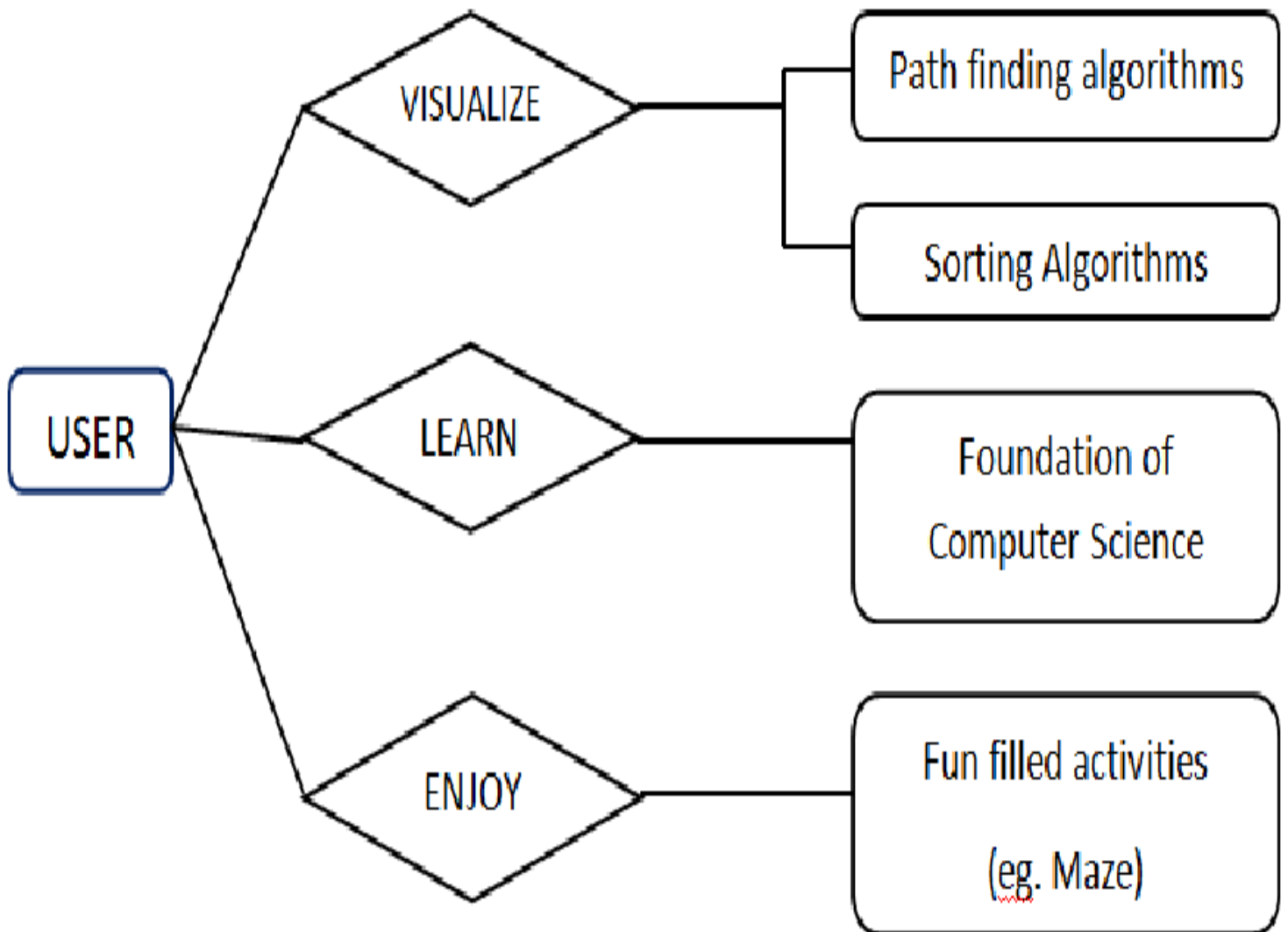
- As in this project I am combining multiple algorithms at one place and visualizing the working of the algorithm with quite simple and interactive interface. So, this is quite unique and useful project, hence this project is feasible.



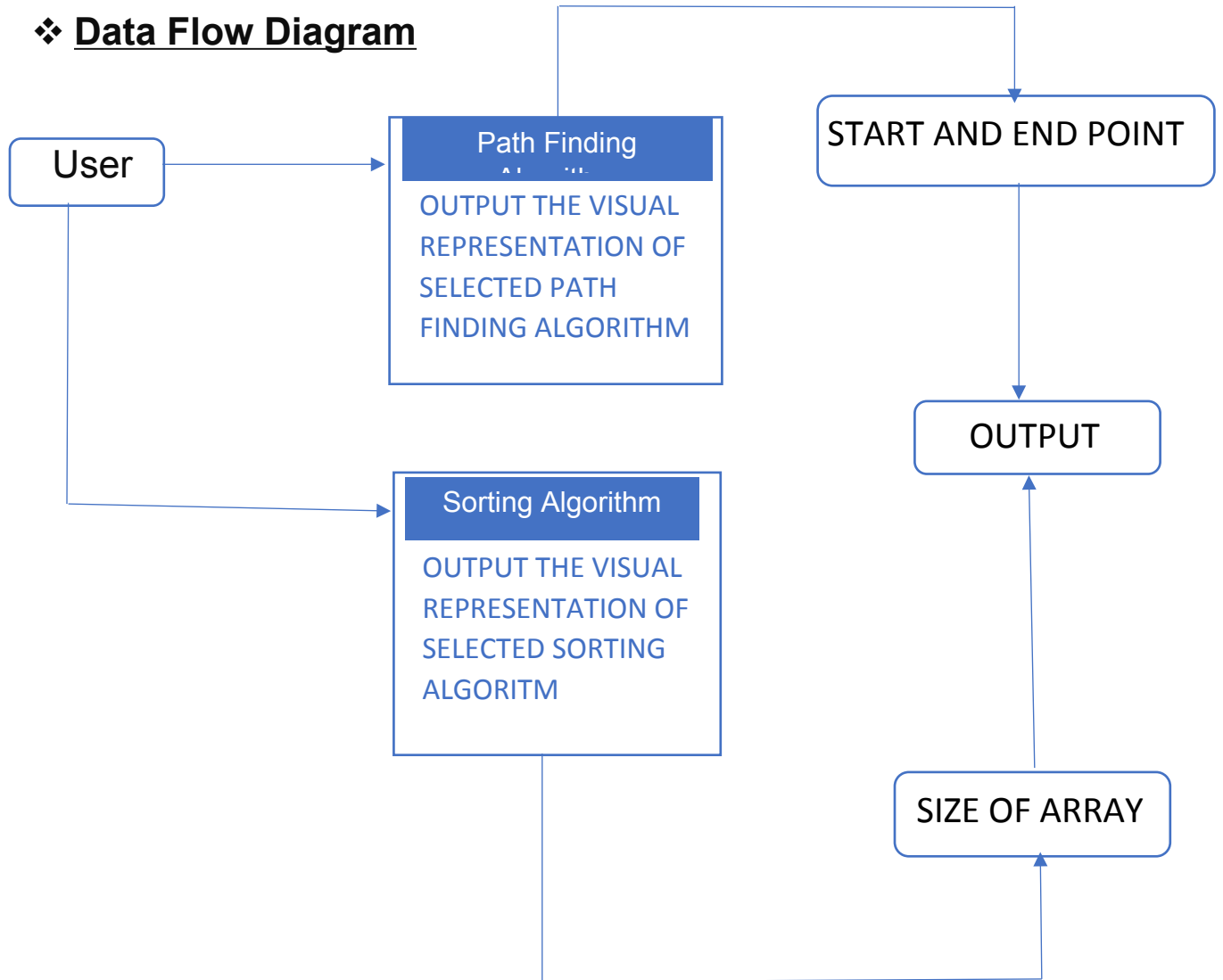
PROCESS FLOW CHART



❖ ER Diagram



❖ Data Flow Diagram



❖ **Future Enhancement**

- For future enhancement I have few thoughts in mind such as,
 - I will introduce some more algorithms to this project
 - I will also improve the interface and will make it more interactive.
 - I will also try to make this project dynamic where we can take inputs from users and outputs it's visualization for better understanding of the user

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