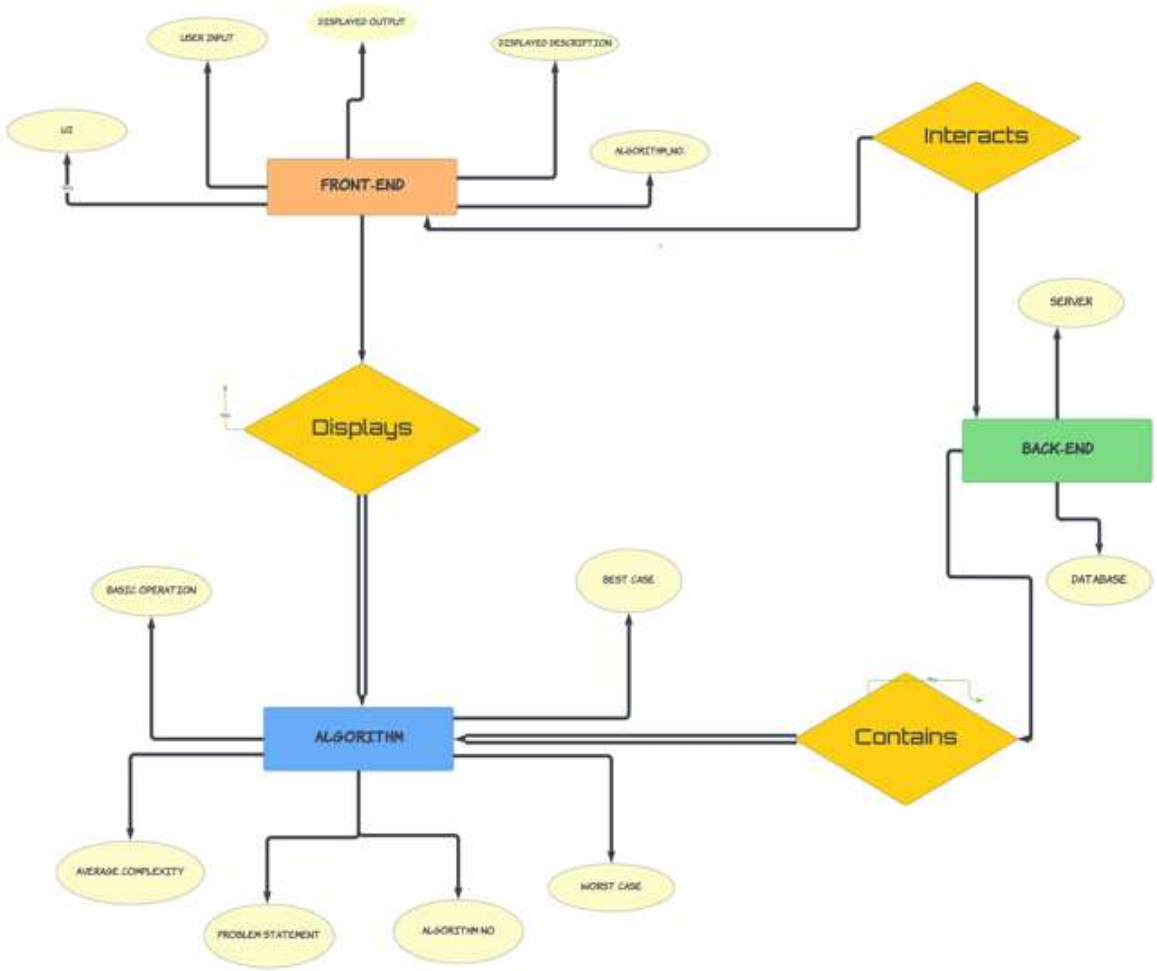
SE Project Week 3 – Algorithm Visualizer

Prototype Details

ER Diagram



Description:

1.Algorithm

- **Algorithm No:** It is the key attribute, which uniquely identifies the algorithm

- **Problem Statement:** The wording of the algorithm and what it does. Ex: Sorting, Path-finding
- **Basic Operation:** The operation which occurs in the innermost loops and determines the operations
- **Average complexity:** The average case complexity of this algorithm
- **Best case:** The input for which the algorithm gives the fastest output
- **Worst case:** The input for which the algorithm takes the most time to complete

2.Front-end

- **Algorithm No:** Reference key for the primary key of algorithm entity
- **UI:** Information about the user interface
- **User Input:** Takes user input from the user
- **Displays output:** Output which is displayed on the screen
- **Displayed description:** Description of the algorithm

3.Back-end

- **Database:** The database containing all the different algorithms and the domains of values which they take
- **Server:** The backend server which will be running throughout the procedure

Relations

- **Displays:** The front-end displays the output of the algorithm on the screen

- **Contains:** Backend contains the list of all attributes with the domains
- **Interacts**: Frontend and backend interact with each other to let the software run properly

Image Prototype examples from online

Sorting Example

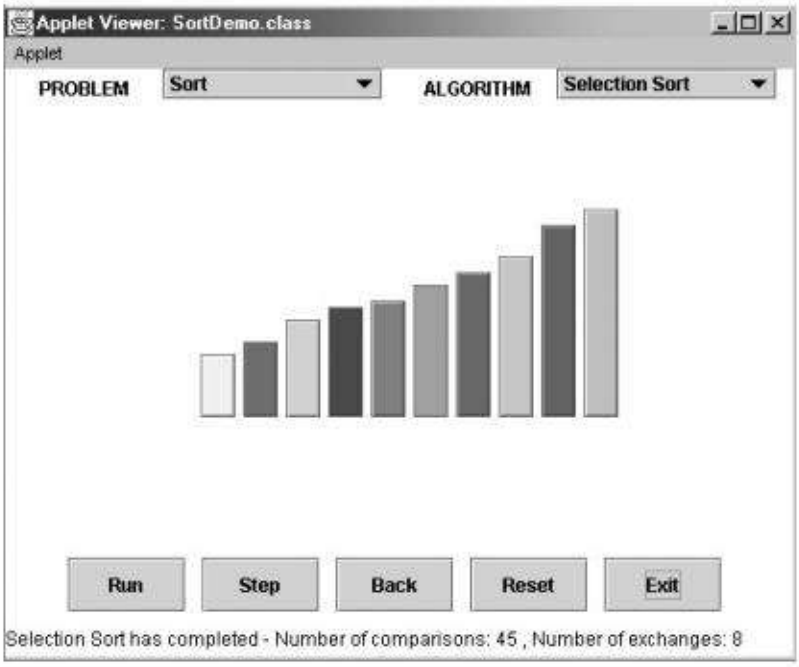


FIGURE 2.8 Initial and final screens of a typical visualization of a sorting algorithm using the bar representation.

Pathfinding Algorithm