

ALGORITHM VISUALIZER



INNOVATIVE PLATFORM TO LEARN ALGORITHM WITH FUN !!!

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UNIVERSITY : IPS, UNIVERSITY OF ALLAHABAD

ABSTRACT AND OUTLINE

- Algorithm visualization illustrates how algorithms work in a graphical way
- Aims to simplify and deepen the understanding of algorithms operation
- No algorithm that has all properties, and so the choice of sorting algorithm depends on the application
- Outlines : Initials, Operations, Intermediate and Goals



INITIALS

 Play All	 Insertion	 Selection	 Bubble	 Shell	 Merge	 Heap	 Quick	 Quick3
 Random								
 Nearly Sorted								
 Reversed								
 Few Unique								

- Show how each algorithm operates
- Show that there is no best sorting algorithm
- Show the advantages and disadvantages of each algorithm.
- Show that worse-case asymptotic behavior is not always the deciding factor in choosing an algorithm.
- Show that the initial condition (input order and key distribution) affects performance as much as the algorithm choice

• **CONDITIONS**

• **BEHAVIOUR**

• **PERFORMANCE**



OPERATIONS

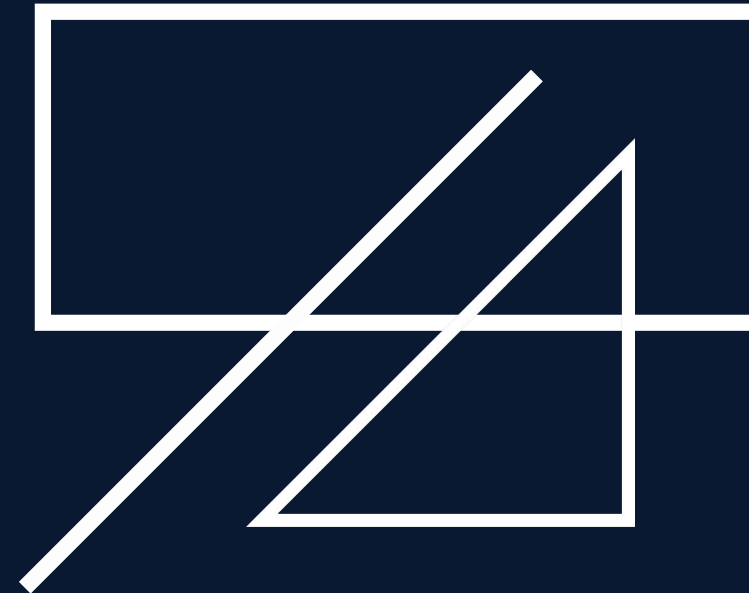


- HTML is used for describing the structure of Web pages.
- CSS is used for describing the presentation of Web pages, including colours, layout, and fonts.
- JavaScript is used to add dynamic behavior to the webpage and add special effects to the webpage.
- Bootstrap is an HTML, CSS & JS Library that focuses on simplifying the development of informative web pages (as opposed to web apps).
- React is used for handling the view layer and development of web applications.

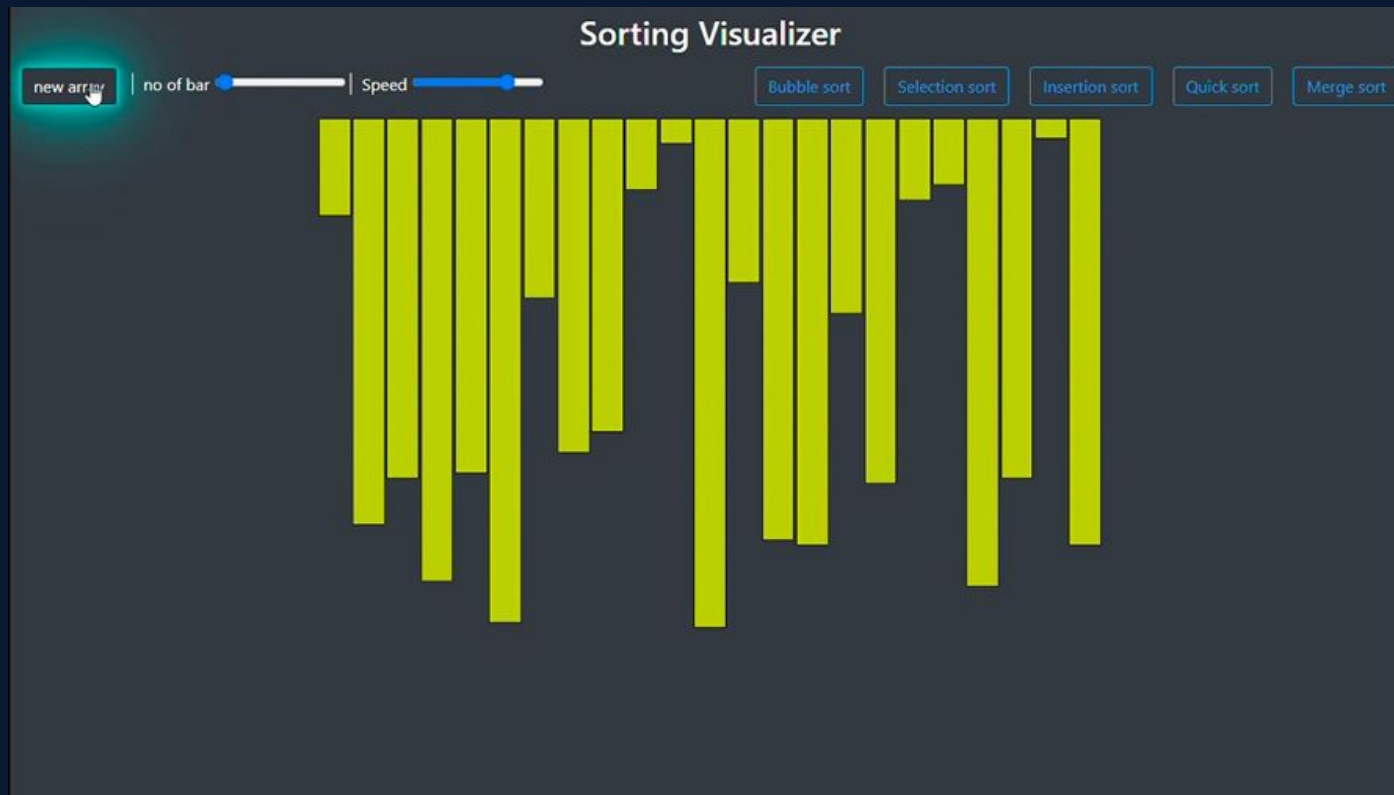
• **IMPLEMENTATION**

• **ANALYSIS**

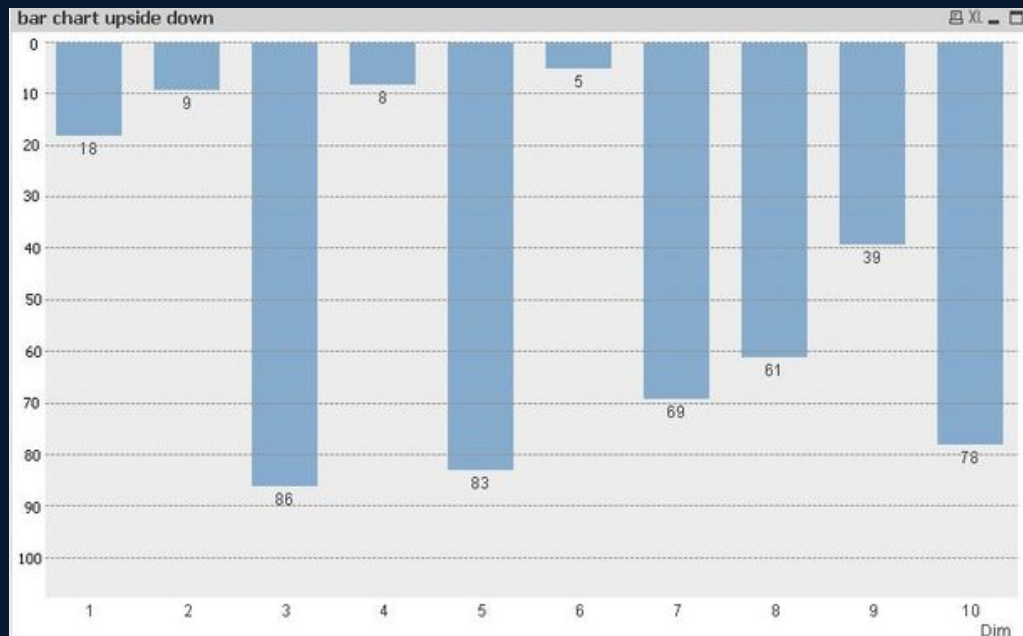
• **LANGUAGES**



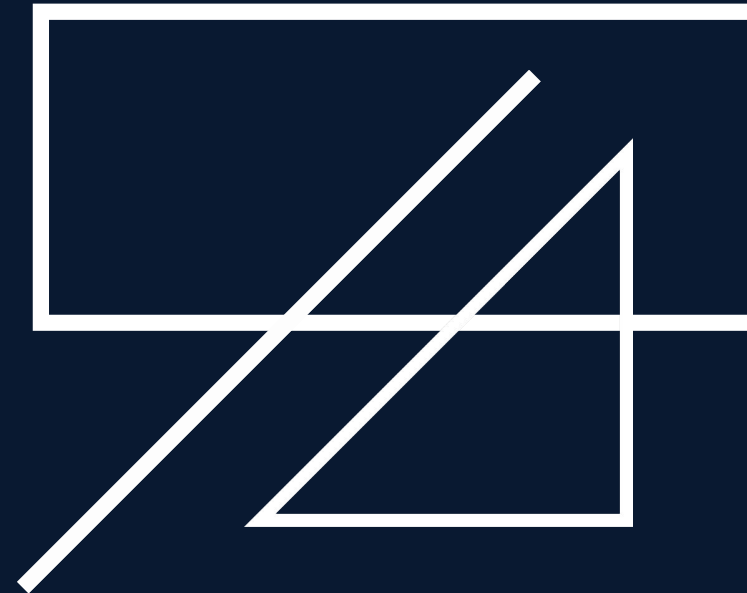
INTERMEDIATE



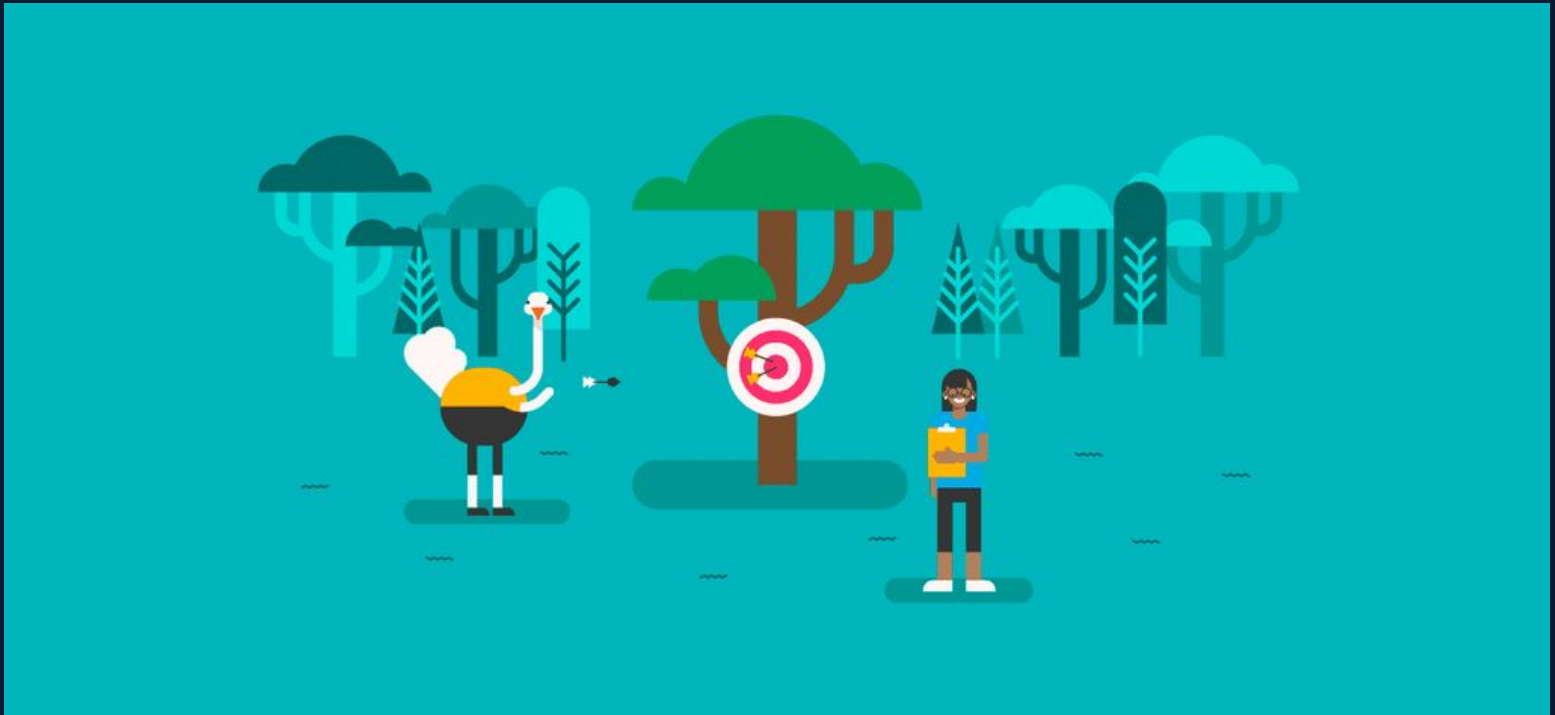
- Under the intermediate phase of this project specify how the algorithm visualizer implements sorting and the result that conveys the perfect ideology.
- Let's say here, multiple vertical bar represent different array. After picking the sort, bars will be in sequence while showing how the algorithm works.



- **PHASE**
- **WORKING**
- **RESULT-ORIENT**



GOALS



- The main objective of this project is to help beginners to be able to visualize the basic algorithms and get a better understanding of the underlying operations.
- This aims to simplify and deepen the understanding of algorithms functioning.
- This project will act as a tool, made with certain Front-End languages for visualizing sorting algorithms in an educational way. Our purpose is to portray the algorithms so the user can understand how a computer “move some pieces” to achieve his goal, having sorted data at the end!

• **OBJECTIVES**

• **INTERIORS**

• **UNDERSTANDING**

• **GOALS**





**THANK YOU FOR
LISTENING!**

HAVE A GREAT DAY AHEAD!