Data Structure Visualizer in C

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Outline

- Problem Statement
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Problem Statement

- Overcome limitations of traditional teaching methods.
- Developing software which would reduce the faculty work to visualize models
- Problems faced by students to visualize data structures

Introduction to Solution

- Handy and easy to use tool written in “C”
- 3D demonstration of Data-structures
- A visual debugger for students
- Transforming the way of learning

Research

- Tried and tested various C graphic libraries
  - Finalized OpenGL for 3D rendering
- Points dispersion Algorithms
  - Young–Fibonacci lattice points dispersion algorithm
- Utilizing Color spreading
  - For appealing appearance

Future Scope

- Refining User interface
- Implementing Heaps, Tries, Quad trees.
- Providing a 3D layout for tree representation
- Adding Animations to make it even easier to understand things
- Applying Array representation for model

Conclusion

- Enhanced understanding
- High usability in day-to-day education and data analysis
- Assignment evaluation can be done by viewing output
- Successful in making learning fun and interesting…

References

- OpenGL Documentation
- Young–Fibonacci lattice dispersion algorithm

THANK YOU