

ABSTRACT

Computer graphics can do many things, including modeling simulation and visualization of an object. Problem modeling is a representation of how people describe or explain an object, system, or a concept, which is usually manifested by simplification or idealization. This can be represented by physical models, the model image or mathematical formulas. Visualization can also be done to facilitate the delivery of a material in a formal classroom or school.

Client-server communication is a fundamental concept in computer networks, enabling the exchange of data and services between clients and servers. This communication model follows a request-response pattern, where clients initiate requests for specific actions or resources, and servers respond by processing those requests and providing the requested information or services. Connection establishment allows for data exchange, which can be in various formats like text, binary, or multimedia. Security measures ensure the confidentiality and integrity of transmitted data. Client-server communication is scalable, accommodating multiple simultaneous connections. Understanding this model is essential for developing networked applications and services that leverage the power and resources of servers to meet the needs of clients efficiently and securely. This project is the visualization movement through computer animation. This visualization shows the communication between the client and server as a visual. OpenGL support this modeling capability as OpenGL has additional features to better produce something more realistic OpenGL allows us to create a graph that can be run on any operating system only minor adjustments.

The aim of this project is to create an interactive client server architecture animation that illustrates how the client sends request and downloads the data. A survey of other work in the field is carried out and a requirements list is formulated. Novel aspects of the program's design and implementation are described. A tour of the finished program is presented, along with the results of testing and an analysis of the same. In the conclusion, proposals for improving the program are outlined.

Keywords – Simulation | Security | OpenGL | Computer Animation | Client – Server Architecture
