

**VISVESVARAYA TECHNOLOGICAL UNIVERSITY
BELAGAVI-590018**



**A PROJECT REPORT
ON**

VISUALIZATION OF NUCLEAR POWER PLANT

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In the partial fulfillment of the requirement for VI Sem. B. E. (CSE)

COMPUTER GRAPHICS LABORATORY WITH MINI PROJECT

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CERTIFICATE

This is to certify that the project entitled “**VISUALIZATION OF NUCLEAR POWER PLANT**” is submitted in partial fulfillment for the requirement of VI sem. B. E. (Computer Science & Engineering), “**COMPUTER GRAPHICS LABORATORY WITH MINI PROJECT**” during the year 2018 – 19 is a result of bona fide work carried out by

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ABSTRACT

Computer Graphics is one of the most effective and commonly used methods to communicate the processed information to the user. It displays the information in the form of graphics objects such as pictures, charts, graphs and diagram instead of simple text. In computer graphics, pictures or graphics objects are presented as a collection of discrete picture elements called pixels.

OpenGL is a software interface to graphics hardware. This interface consists of about 150 distinct commands that you use to specify the objects and operations needed to produce interactive three-dimensional applications. OpenGL is easy to learn, and it possesses most of the characteristics of other popular computer graphics system.

Nuclear power plants are a type of power plant that use the process of nuclear fission in order to generate electricity. They do this by using nuclear reactors in combination with the Rankine cycle, where the heat generated by the reactor converts water into steam, which spins a turbine and a generator.

In this project we use OpenGL library to demonstrate the working of nuclear power plant. We implement it in C. Initially we construct the schematic diagram of the nuclear power plant using different OpenGL primitives. We also give different colors, textures and thickness to various parts. Once the schematics is completed we'll show how the coolant flows through the entire power plant, moving of control rods and also how the turbine rotates.

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