VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama", Belagavi-560014, Karnataka

CGV MINI PROJECT REPORT
ON

"Parachute Simulation"

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE CGV LAB

BACHELOR OF ENGINEERING
IN
COMPUTER SCIENCE & ENGINEERING

Submitted By

Habibulla Sadik Mulla

1SV20CS013

Under the guidance of

Mr.Renukaradhya P.C B.E., M.Tech.,

Assistant Professor, Dept. of CSE.

PRINCIPAL
SIET. TUMKUR.

SHRIDEVI EDUCATION

Department of Computer Science and Engineering

SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY
(Affiliated To Visvesvaraya Technological University)
Sira Road, Tumakuru – 572106, Karnataka.

2022-23

Sri Shridevi Charitable Trust (R.)
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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CERTIFICATE

This is to certify that, Computer Graphics and Visualization Mini-Project of entitled " Parachute Simulation" has been successfully carried out by Habibulla Sadik Mulla [1SV20CS013], in partial fulfillment for the CGV Lab of **Bachelor of Engineering** in **Computer Science & Engineering** of the **Visvesvaraya Technological University, Belagavi** during the academic year **2022-23.** It is certified that all the corrections/suggestions indicated for internal assessments have been incorporated in the report. The Mini- Project report has been approved as it certifies the academic requirements in respect of Mini-Project work prescribed for the Bachelor of Engineering Degree.

Signature of Guide

Mr. Renukaradhya P.C B.E., M.Tech.,
Assistant Professor,
Dept. of CSE,
SIET, Tumakuru.

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5/12/23

Signature of H.O.D

Dr. Basavesha D M.Tech., Phd
Associate Professor & HOD
Dept. of CSE,
SIET, Tumakuru.

Name of the Examiners

1 .....

2 .....

Signature with date

13/12/23

13/12

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DECLARATION

I, Habibulla Sadik Mulla [1SV20CS013], student of VI semester **B.E** in Computer Science & Engineering, at Shridevi Institute of Engineering & Technology, Tumakuru, hereby declare that, the Mini-Project work entitled **"Parachute Simulation"**, embodies the report of our Mini-Project work carried out under the guidance of **Mr. Renukaradhya P.C. Assistant Professor, Department of CSE**, SIET, Tumakuru as partial fulfillment of requirements for the CGV Lab in **Bachelor of Engineering in Computer Science & Engineering of Visvesvaraya Technological University, Belagavi,** during the academic year **2022-23**. The Mini-Project has been approved as it satisfies the academic requirements in respect to the Mini-Project work.

Habibulla

Place: Tumakuru
Date: 04/07/23

Student Name & Signature
HABIBULLA SADIK MULLA
[1SV20CS013]

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ABSTRACT:

The Parachute Simulation using OpenGL project focuses on creating an interactive and realistic simulation of a parachute system using the OpenGL graphics library. This project aims to provide users with an immersive experience by visualizing the behavior and physics of a parachute in a 3D environment. The objectives of the project include developing a visually appealing 3D scene using OpenGL, implementing a physics-based model for the parachute system considering factors such as gravity, wind, and air resistance, enabling user interaction to control the parachute system, and providing visual feedback to the user. The simulation aims to optimize real-time performance for smooth and responsive user interaction. The methodology involves designing and implementing a 3D environment in OpenGL, modeling the parachute system using physics principles, integrating user controls for parachute manipulation, implementing collision detection algorithms, and optimizing the simulation for performance. The project expects to deliver a visually appealing environment, a realistic simulation of the parachute system, user controls for interaction, visual feedback to the user, and a seamless user experience.

In conclusion, the Parachute Simulation using OpenGL project aims to create an immersive and educational simulation by accurately representing the behavior of a parachute system. This project leverages the capabilities of OpenGL to provide users with an interactive experience, allowing them to explore and understand the dynamics and control of parachutes in a visually engaging manner

Technology used Graphics Software:
various software packages are available for creating computer graphics, including 3D modeling and animation software.

Computer Hardware:
A powerful computer with a good graphics card and sufficient storage capacity is required to run graphics software, C++ and python languages are used in graphics.

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