

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama", Belgaum 590018, Karnataka

Department of Computer Science & Engineering



A Computer Graphics Mini Project on

“STEAM ENGINE”

In partial fulfilment of COMPUTER GRAPHICS Laboratory(18CSL67) In

Computer Science and Engineering for the Academic Year 2021-22

SUBMITTED BY

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UNDER THE GUIDANCE OF

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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING



CERTIFICATE:

This is to certify that **UMESH ABBANNA(1SK19CS043)** of **SIXTH Semester** have successfully completed the mini project on “**STEAM ENGINE**” in **COMPUTER GRAPHICS LABORATORY (18CSL67)** as prescribed by the **VISVESVARAYA TECHNOLOGICAL UNIVERSITY** for the academic year **2021-2022**.

Signature of the guide

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B.E , MTECH, Asst. professor,

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Signature of the HOD

Dr . PRADEE KUMAR

M.TECH, Ph.D

Assoc, Professor & HOD

Name of the Examiner

1.) _____

2.) _____

Signature With Date

1.) _____

2.) _____

ACKNOWLEDGEMENT

A unique opportunity like this come very rarely. It is indeed a pleasure for me to have worked on this project. The satisfaction that accompanies the successful completion of this project is incomplete without the mention of the people whose guidance and support are made it possible for me to complete this project.

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ABSTRACT

AIM:

The aim of the project is to create a **STEAM ENGINE**. A steam engine uses heat and steam to create mechanical power.

A steam engine is a heat engine that performs mechanical work using steam as its working fluid. Heat is obtained from fuel burnt in a closed firebox. The heat is transferred to the water in a pressurized boiler, ultimately boiling the water and transforming it into saturated steam. Steam in its saturated state is always produced at the temperature of the boiling water, which in turn depends on the steam pressure on the water surface within the boiler. The steam is transferred to the motor unit which uses it to push on pistons to power machinery. The used, cooler, lower pressure steam is exhausted to atmosphere.

The project simulates the working of a steam engine. It illustrates how the linear motion of the piston is converted into rotary motion. The engine is initially at rest. On right clicking, the user is provided with a menu which provides five options-shaded, animate, increase speed, decrease speed, transparent.

The animate option starts the steam engine from rest or stops the engine if it is running. The speed of the engine can then be increased by the option or decreased by the decrease speed option. The texture of the engine can be changed by the shaded option. There are two textures. One being the normal solid fill and the other being wireframe. The transparent option makes the front portion of the cylinder transparent and shows the up and down motion of the piston.