

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

“Jnana Sangama”, Belagavi-560014, Karnataka



CGV MINI PROJECT REPORT

ON

“Snake Game Simulation”

*SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE
CGV LAB*

**BACHELOR OF ENGINEERING
IN
COMPUTER SCIENCE & ENGINEERING**

Submitted By

VARSHITHA TN[1SV20CS055]

Under the guidance of

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

Assistant Professor, Dept. of CSE.



**SHRIDEVI
EDUCATION**

N. Renukaradhya P.C.
PRINCIPAL
S.I.T. TUMKUR.

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.)
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY

(Recognised by Govt. of Karnataka, Affiliated to VTU, Belagavi and Approved by AICTE, New Delhi)

Sira Road, Tumakuru - 572 106. Karnataka.

Phone: 0816-2212629 | Fax: 0816-2212628 | Email: info@shrideviengineering.org | Web: http://www.shrideviengineering.org



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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CERTIFICATE

This is to certify that, Computer Graphics and Visualization Mini-Project of entitled "Snake Game Simulation" has been successfully carried out by Varshitha TN [1SV20CS055], 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.

Principal
PRINCIPAL
SIET, TUMKUR.

Signature of H.O.D

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

Name of the Examiners

1. *Harsh*

2. *Renukaradhya P.C*

Signature with date



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DECLARATION

I, Varshitha TN [1SV20CS055], 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 "Snake Game Simulation", embodies the report of four 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.

Place: Tumakuru

Date: 4/7/23

Varshitha T.N

Student Name & Signature

Varshitha TN
[1SV20CS055]

Renukaradhya P.C.
PRINCIPAL
SIET, TUMKUR.

ABSTRACT:

The Snake Game Simulation on Computer Graphics is a mini project aimed at implementing the classic Snake Game using computer graphics techniques. The project focuses on creating an interactive and visually appealing simulation of the game, providing an engaging and enjoyable experience for the players.

The Snake Game is a well-known and popular arcade game where the player controls a snake that moves around a grid-like board, consuming food and growing in length. The objective of the game is to guide the snake to eat the food while avoiding collision with walls and its own body. As the snake grows longer, the game becomes increasingly challenging.

This mini project utilizes computer graphics concepts and algorithms to develop a visually pleasing interface for the Snake Game. The simulation incorporates techniques such as rendering, animation, and collision detection to create an immersive gaming environment. The graphics rendering engine generates a two-dimensional grid-based board with the snake and food objects, rendering them with suitable colors and textures..

In addition to the basic gameplay, the project aims to enhance the user experience by incorporating additional features. These may include power-ups, different levels of difficulty, sound effects, and a score tracking mechanism. The simulation also supports user customization options, allowing players to choose different visual themes or snake designs.

The Snake Game Simulation on Computer Graphics mini project serves as an excellent demonstration of computer graphics techniques and algorithms applied in the context of a classic arcade game. It provides an opportunity for students and enthusiasts to gain hands-on experience in implementing interactive and visually appealing simulations, while also showcasing the timeless appeal of the snake game.

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.

Nandhu Kumar

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