

# **VISVESVARAYA TECHNOLOGICAL UNIVERSITY**

**“Jnana Sangama”, Belagavi-590018**



**A  
Mini Project Report  
On  
“Tic-Tac-Toe”**

**SUBMITTED IN PARTIAL FULFILLMENT FOR 6th SEMESTER**

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

**SUBMITTED BY**

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**CERTIFICATE**

Certified that the Mini Project Work entitled "**Tic-Tac-Toe**" carried out by Mr. **SANJITH S**, bearing USN 1JB21CS132 is a bonafide student of **SJB Institute of Technology** in partial fulfilment for 6th semester 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 corrections/suggestions indicated for Internal Assessment have been incorporated in the Report deposited in the Departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project work phase-1 prescribed for the said Degree.

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# **ABSTRACT**

The aim is to develop a Tic Tac Toe game using OpenGL and C++ to explore fundamental concepts in computer graphics and image processing. The project leverages OpenGL's graphics rendering capabilities to create an interactive gaming experience while employing C++ for logic implementation and game management. The methodology involves setting up the OpenGL environment within a C++ development framework, defining the game board, implementing user interaction mechanisms, and integrating game logic for move validation and win detection. Graphics rendering is accomplished through OpenGL primitives to visualize the game board and player moves. Through meticulous testing and iterative development, the project aims to achieve a polished and functional implementation of the Tic Tac Toe game, providing players with an engaging and immersive gaming experience. Additionally, the project serves as a practical application of computer graphics principles, reinforcing concepts such as coordinate transformations, geometric transformations, and rendering techniques.

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