

---

**VISVESVARAYA TECHNOLOGICAL UNIVERSITY  
BELAGAVI-590014**



PROJECT ENTITLED  
**“SNAKE AND LADDER”**

For the academic year 2016-2017  
Submitted by:

**ASHUTOSH KUMAR SHARMA (1MV14CS022)**

Project carried out at

**SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY  
BANGALORE-562157.**

Under the Guidance of

Mrs. Monika Rani H G  
Asst. Professor, Dept. of CSE  
Sir. MVIT, Bangalore.



**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING  
SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY  
BANGALORE-562157.**

---

# **SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY BANGALORE-562157.**

(Affiliated to Visvesvaraya Technological University, Belagavi)

## **DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**



### **CERTIFICATE**

Certified that the mini-project work entitled “**SNAKE AND LADDER**” is a bona fide work carried out by **ASHUTOSH KUMAR SHARMA (1MV14CS022)** in partial fulfillment for the award of Degree of **Bachelor of Engineering in Computer Science Engineering** of the **Visvesvaraya Technological University, Belagavi** during the year 2016-2017 in **Computer Graphics and Visualization Laboratory**. The project report has been approved as it satisfies the academic requirements in respect of the project work prescribed for the course of Bachelor of Engineering Degree.

Signature of the Guide

**Mrs. Monika Rani H G**  
Asst. prof, Dept. of CSE  
Sir MVIT

External Examiner

Signature of the HOD

**Prof. Dilip K Sen**  
HOD, Dept. of CSE  
Sir MVIT

Internal Examiner

## ACKNOWLEDGEMENT

We would like to express our immense gratitude to all the people who have helped us and supported us in our zeal for the completion of this project. The success of this project would not have been certain if it weren't for their help, whose constant guidance and support encourages us in our stride towards a better future.

We would like to acknowledge our principal **Prof. K R Kinni** for her continuous efforts in encouraging us throughout the course and creating a competitive environment for the student's growth.

We would also like to thank **Prof Dilip K. Sen**, H.O.D. of Computer Science and Engineering Department, Sir MVIT, Bangalore, for supporting us and helping us out in every way. To VTU for having given us this wonderful opportunity, to explore for ourselves the various possibilities in the field of Computer Graphics, and showcase our dedication and talent.

We express our sincere gratitude to our internal guide **Mrs Monika Rani H G**, Asst. Professor, Computer Science Department, Sir MVIT. We are thankful to him for clearing all our doubts and clearing all our queries and helping us in our understanding of the subject and thus, helping us in the success of our project.

We would also like to thank the entire faculty of the **Computer Science & Engineering Department** for their co-operation and suggestions without which the project wouldn't have been complete.

We are truly grateful to the above-mentioned people who have contributed in the completion of this Project.

- **ASHUTOSH KUMAR SHARMA (1MV14CS022)**

---

## ABSTRACT



**Snakes and Ladders** is an ancient Indian board game regarded today as a worldwide classic. It is played between two or more players on a gameboard having numbered, gridded squares. A number of "ladders" and "snakes" are pictured on the board, each connecting two specific board squares. The object of the game is to navigate one's game piece, according to die rolls, from the start (bottom square) to the finish (top square), helped or hindered by ladders and snakes respectively.

The game is a simple race contest based on sheer luck, and is popular with young children. The historic version had root in morality lessons, where a player's progression up the board represented a life journey complicated by virtues (ladders) and vices (snakes).

The project shows the order of events in three frames:

1. First frame shows homepage and player selection.
  2. Second frame shows rules and instructions to play the game.
  3. Third frame shows the game board.
  4. Fourth frame shows the winner information.
-

# CONTENTS

CHAPTER	TITLE	PAGE NO.
	Certificate	I
	Acknowledgement	II
	Abstract	III
<b>1.</b>	<b>Introduction</b>	<b>1-2</b>
1.1	About Computer Graphics	1
1.2	About OpenGL	1
1.3	About Project	2
<b>2.</b>	<b>System Requirements</b>	<b>3</b>
2.1	Hardware Requirements	3
2.2	Software Requirements	3
<b>3.</b>	<b>System Design</b>	<b>4-5</b>
<b>4.</b>	<b>Source Code and Implementation</b>	<b>6-20</b>
4.1	Source Code	6-20
4.2	Implementation	13-20
<b>5.</b>	<b>Snapshot</b>	<b>21-23</b>
<b>6.</b>	<b>Conclusion</b>	<b>24</b>
6.1	Conclusion	24
6.2	Future Enhancement	24
	<b>Bibliography</b>	<b>25</b>



## FIGURE CONTENTS

CHAPTER	TITLE	PAGE NO.
<hr/>		
5.1	Welcome Screen	21
5.2	Instructions and Rules Window	21
5.3	Game Window Left click Event	22
5.4	Game Window Right click Event	22
5.5	Game Completion Window	23

