MVJ COLLEGE OF ENGINEERING

Channasandra, Near ITPB, Bangalore-67

Department Of Computer Science and Engineering

(Affiliated to Visvesvaraya Technological University, Belagavi
Approved By AICTE, New Delhi,
Recognized by UGC under 2(f) & 12(B)
Accredited by NBA and NAAC)

Certificate

This is to certify that the mini project entitled **"Disco Cubes"** is a bona fide work carried out by **Rishabh Singh (1MJ16CS118)** a bonafide student of MVJ College of Engineering 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 2018-19. It is certified that all the corrections/suggestions indicated for Internal Assessment have been incorporated in the Report. The mini Project Report has been approved as it satisfies the academic requirements in respect of Project work prescribed for the said degree.

Signature of the Guide	**Signature of the HOD**
(Dr. S.K. Manju Bargavi)	**(Mrs. I. Manimozhi)**

Signature of the Examiners

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Internal	**External**

ACKNOWLEDGEMENT

The satisfaction and euphoria that accompany the successful completion of any task would be incomplete without the mention of the people who made it possible, whose constant guidance and encouragement crowned our effort with success.

I express my sincere gratitude to our Principal **Dr. Nagaraj Sitaram**, MVJ College of Engineering for providing facilities.

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I consider it a privilege and honour to express my sincere gratitude to my guide **Dr. S.K. Manju Bargavi** Associate Professor, Department of Computer Science & Engineering for her valuable guidance throughout the tenure of this mini project work, and whose support and encouragement made this work possible.

I wish to thank the faculty of CS&E department whose suggestions have enabled me to surpass many of the seemingly impossible hurdles.

Thank you.

<u>ABSTRACT</u>

This mini-project named "Disco Cubes" demonstrates all the 3D Geometric Transformations. All the cubes rotate on their axis and are around the main cube.

The cubes randomly choose between images while the mini-cubes randomly generate colors. All cubes are placed on a reflective surface. Also highlights displaying Rasterized text.

The visual will consist of an idealized cube, which will rotate back and forth. This will be implemented using C++ and OpenGL software. Various features of OpenGL like coloring, spinning, rotation, transformations and reflection will be used.

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LIST OF FIGURES

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<u>**BIBLIOGRAPHY**</u>

➢ During the course of this project reference to the following books and materials were made:

[1] Donald Hearn & Pauline Baker: Computer Graphics with OpenGL Version,3rd / 4th Edition, Pearson Education,2011

[2] Edward Angel, *"Interactive Computer Graphics"*, Pearson Publication, 5th edition

[3] F.S. Hill Jr,"Computer Graphics Using OpenGL",Pearson Publication,2nd edition

[4] James D. Foley,"Computer Graphics",Addision Wesley,1997

➢ Internet was extensively browsed for various materials related to this project

[1] http://www.opengl.org

[2] http://www.cs.usr.edu

[3] http://math.ucsd.edu/~sbuss/MathCG/OpenGLsoft

[4] https://github.com/kbranigan/Simple-OpenGL-Image-Library