ALGORITHM ASPECTS OF RUBIK'S CUBE 3D GAME

V.Subaramya[1] and S. Krishnakumar[2]

[1] *Department of Physical Science, Faculty of Applied Science, Vavuniya Campus, University of Jaffna.*

[2]*Department of Mathematics and Philosophy of Engineering, Faculty of Engineering Technology, Open University of Sri Lanka.*

INTRODUCTION

The Rubik's Cube is a really captivating and fascinating puzzle and it is a 3D game. There are several applications available on Rubik's cube. Some of them are games with solutions. But there is no user friendly tool which guides how to solve the Rubik's cube. To overcome this problem this paper presents a different user friendly method to solve the problem. In this application if the user is not familiar with solving cube, they can get the automatic solution which will give the steps to solve the cube. The main objective of this project is to create an algorithm which helps users to solve the cube game quickly.

In a classic Rubik's cube, each of the six faces is covered by 9 stickers, among six solid colors. A pivot mechanism enables each face to turn independently, thus mixing up the colors. The main target of the puzzle is to show that each face of the cube is in a solid color. There are 6 center color pieces of different colors. There relative positions cannot be changed. They can only rotate around their own spindles. The color of a cube face is therefore decided by its center piece. There are 12 edge pieces, each with two colors and 8 corner pieces each with three colors in different combinations.

Learning to solve the Rubik's Cube helps to teach many life lessons such as following directions, perseverance, memorization and focus. It helps the users to imagine 3 dimensions.

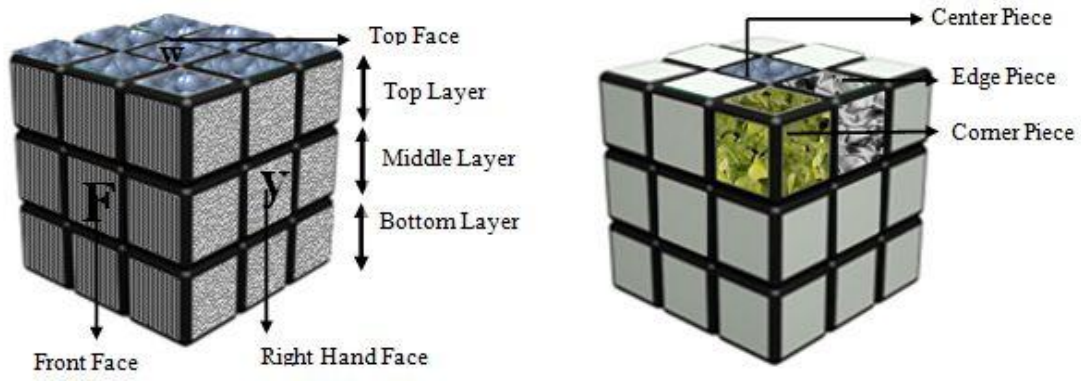

Figure 1: Rubik's Cube Structure

Email.:sabakrish@gmail.om T.P.+94714901737