2.Software Requirment Specification

In this program we display a 2-dimenshional 3x3 face of Rubiks cube by using simple cpp in which first the 9 blocks will be displayed and then colours will be filled in them.

Other non graphocal code is written by using code blocks   software.

First we define a structure name Face which contains a 3x3 2 D array and 4 pointers of type face.the 4 pointers point to the 4 adjacent faces of the given face.

Structure has 3 functions the function void rf(face*p,int n):this function takes an object of type face and an integer.It rotates a face which the pointer is pointing to as per the the integer passed to the function .

void swap(int*a,int*b,int*c,int*d,int n):this function 4 integers are passed by reference to it and other integer as a value it sswaps the 4 values n times anticlockwise.

int*getelement(int i,int j): this function accepts two integers and stores it in variables i,j and returns the address of elements present in ith row and jth column of array to which the object of face points to.

Class rubicscube is defined which has the following variables and member functions

face*front

face*left

face*right

face*rear

face*top

*face*bottom*

thesse 6 pointers points to 6 faces of rubiks cube.

we define a constructor

public:rubicscube():   default constructor.

*void rs(face*s,int n):this function accepts a reference of face and stores it in s.Also accepts an integer and stores it in n.It rotates the side corrosponding to the face which the pointre points to and rotate it n times anticlockwise.*

int num (string m):   accepts string and returns an integers corrosponding to the given string.

*void word(face*s):Accepts the pointer of the face and displays a name of face pointerr pointing to.*

int num(face*s):Accepts the pointer of the fsce and returrns an integers corrosponding to the given face.

face*num(int n):   Accepts an integer and returns the reference of the face corrosponding to that integer.

int*L(face*s,int n),int*R(face*s,int n),int*S(face*s,int n):   These function helps in rotation of a side by returning the corrospinding address which would change during rotation

GRAPHICAL PART

We use simple cpp for the graphics.

these are the following functions we used:

void map_code_to_color(int code,int&r,int&g,int&b):   This takes in code of color of a given square and returns the color as r,g,b by reference.

void printcube(face*s,polygon s[3][3]):

This function accepts the pointer to a face and an array of polygons and prints a face of a cube.