README FILE

PROJECT : IMAGE PROCESSING

This is a project of IMAGE ROTATION. It Rotates images by a given angle. This can be implemented using a lot of techniques and languages, but, I implemented this using OPEN CV WITH C++.

TECHNIQUES USED :

For this project ,I used "OPENCV WITH C++".

OpenCV is an open source C++ library for image processing and computer vision.Therefore you can use the OpenCV library even for your commercial applications. It is a library THAT aims at real time processing .Now it has several hundreds of inbuilt functions which implement image processing and computer vision algorithms which make developing advanced computer vision applications easy and efficient.

FUNCTIONS :

main()-This is driver function.This will take image as input and then process it to rotate according to angle which is set by the user from the trackbar.

imread()- Function to take image as input.

namedWindow()- Function to create a window.

imshow()-Function to show image to that window.

createTrackbar()-Function to create trackbar.

getRotationMatrix2D()- This function returns 2x3 affine 1 transformation matrix for the 2D rotation.

warpAffine()-This Open CV function applies affine transformation to an image. An affinity is a geometric transformation that preserves lines and parallelism.

PROCESSING OF CODE :

If u want to use this program to rotate any image, you just have to run this code in your c++ IDE (open cv must be downloaded already and the enviromental variables are also adjusted, visual studio etc).Then, you have to enter the path of your image using keyboard(exactly copy that path as it is), and then paste it in imread function inside main() and then run your programme. After that you will see 2 screens:-

one of original image and another of rotated image with a taskbar in it,from where you can set the angle to rotate that image