README

This is a project on ***IMAGE PROCESSING*** *. This is a project of* ***IMAGE ROTATION.*** *Rotating images by a given angle is a common image processing task. Tis can be implemented using a lot of techniques and languages, but here i've implemented this using* ***OPEN CV WITH C++.***

TECHNIQUE USED:-

*For this project ,i've used "**OPENCV WITH C++**".OpenCV is an open source C++ library for image processing and computer vision, originally developed by Intel, later supported by Willow Garage and and is now maintained by Itseez. ... Therefore you can use the OpenCV library even for your commercial applications. It is a library mainly aimed 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 AND THERE WORK:-

main()-*This is driver function.This will take image as input and then process it to valid rotation 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*

transformation matrix for the 2D rotation.

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

HOW CAN A USER RUN YOUR PROJECT AND USE IT:-

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 setted)(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'll 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.