Ix: N.o: 9 Juzzy Logic Date : setting bus when your Program code: pent ("enjey:", enjey(1)) import numpy as hp
import matplot lib. pyplot as plt
from skimage import io, color. from scipy. ndinage import convolve. import skluzzy as fuzz. sutput: Trigb = io. imread ("") I gray: rolor. rgb 2 gray (Ingl) plt. figure () plt. imshow (I gray, cmap = 'gray') plt. title ('Input Image in Grayscale') plt. axis ('off') ilust; .plt. show (). 7 - Igray : astype (np. float 64) the subject is verified.

Gix = hp. away ([[-1, 1]]) MANY - Kg Gy = Gx. T. Ix = convolve (I, G, x, mode = 'neavest') I'y = convolve (I, Gy, mode = 'neavest'). Lout need has a lary - new borship (x) Tout. plt. figiere () plt. imehow (Ix, Map = "gray") plt. title ('Ix (gradient in x direction)') Jusz where manbership (x, lette filt. axis (off) Vace 1) plt. Show () issalle, i] = I out - mem X: hp. linspace (-1, 1, 100) plt project) [x-zero = fuzz. gausemf (x, mean =0, sigma =0.1) Ty-zero = fuzz. gaussmf (x. mean = 0, sigma= 0.1) the course to said the for i in range (I. Shape [0]). for j in range (I. shape [1]): ix val = Ix (i, ij) fores I) water the in a sig - val = I i [i, grantethe gold allet . lla Ix - mem = fuzz . interp _ membership (x, Ix-zero, ix_val)

Iy - mem = fuzz. interp. membership (x, Iy : 3ero. iy-val) If Ix-mem >0 and Iy-mem >0; Lout_mem = fuzz . interp_membership (x, Tout_ () singly - it white, 1) (b. mainer (11) whap gray) else: Tout_men = fuzz. interp_membership (x, I out_ black, 1) pld. Show() Ieval[i,j] = Iout_mem plt. figire () plt. inshow (I. Amap = 'gray') plt, title ('original grayscale Image') plt. axis ('off') plt. show() ([6] 24642. 1) space the is 194. plt. figure () ((1) specific) specific in [14] plt. inshow (I, cmap = 'gray') plt. title ('Adge Letection rusing fuzzy logic' plt. axis ("off") Hit et a coop - more xt plt, show (). (which

.output: was sting ship un tragali matplether isline x train, of train = mine winds (in damples = Result: 400, retis : 0.05) Thus the program is successfully executed & the output is verified. 300 , NEWS = 0.05) She heatherplat (x = x - them 1:, 0], y (:: -1), hue = 4-train) but title (" I sain allot ") () walk the