**Aleena Omar**

**BSIT 2043 7TH Semester Morning**

**Assignment 3**

**City Block distance**

% Initialize a 100x100 matrix with zeros

A = zeros(100, 100);

% Define the circle parameters

Cx = 50; % X-coordinate of the circle center

Cy = 50; % Y-coordinate of the circle center

Radius = 20; % Radius of the circle

% Iterate through each pixel in the matrix

for i = 1:100

for j = 1:100

% Calculate the City Block distance from (i, j) to the center (Cx, Cy)

distance = abs(Cx - i) + abs(Cy - j);

% Check if the distance is less than or equal to the radius

if distance <= Radius

A(i, j) = 255; % Set the pixel value to 255 (white)

end

end

end

% Display the resulting image

imshow(A, []);

