

## EDGE DETECTION

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### A. EDGE DETECTION

1. Simpan program berikut dengan nama coins.jpg, kemudian jalankan:  
Dalam laporan anda harus menjelaskan bagaimana rumus edge detection dengan metode Sobel dan Canny.

```
I = imread('coins.jpg');
imshow(I);
% menampilkan deteksi sobel dan canny
BW1 = edge(I,'sobel');
BW2 = edge(I,'canny');
imshow(BW1)
figure, imshow(BW2)
```

2. Tulis dan jalankan program berikut, dalam laporan, anda harus menjelaskan tiap baris dalam program ini.

```
% -----1-----
I = imread('coins.jpg');
imshow(I);
%-----2-----
BW = im2bw(I);
imshow(BW);
%-----3-----
dim = size(BW)
col = round(dim(2)/2)-90;
row = min(find(BW(:,col)))
%-----4-----
boundary = bwtraceboundary(BW,[row, col],'N');

%-----5-----
imshow(I)
hold on;
plot(boundary(:,2),boundary(:,1),'g','LineWidth',3);
%-----6-----
BW_filled = imfill(BW,'holes');
boundaries = bwboundaries(BW_filled);
%-----end of this program-----
for k=1:10
    b = boundaries{k};
    plot(b(:,2),b(:,1),'g','LineWidth',3);
end
```