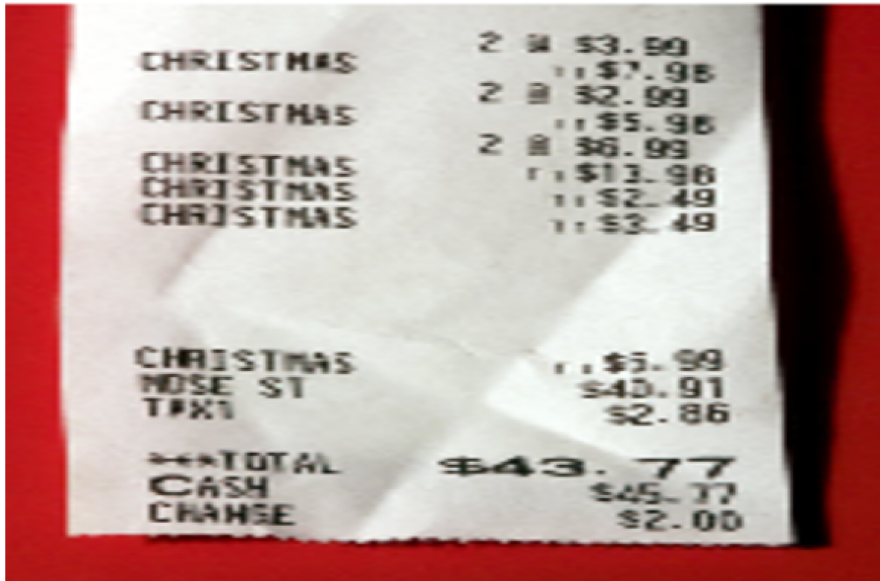


```
I = imread('one.png');
[S,BW,BWstripes] = processImage(I);
imshow(I)
```



```
s = size(I)
```

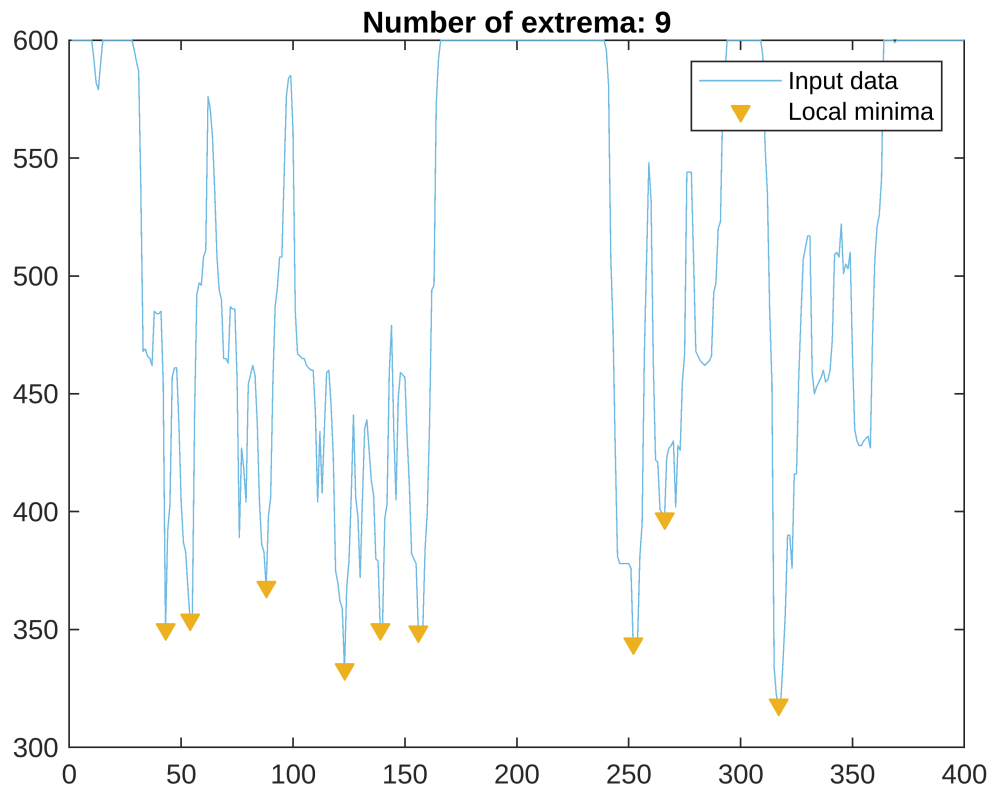
```
s = 1x3
    400    600     3
```

```
minIndices = islocalmin(S,'MinProminence',90,'ProminenceWindow',25);

% Display results
clf
plot(S,'Color',[109 185 226]/255,'DisplayName','Input data')
hold on

% Plot local minima
plot(find(minIndices),S(minIndices),'v','Color',[237 177 32]/255,...
     'MarkerFaceColor',[237 177 32]/255,'DisplayName','Local minima')
title(['Number of extrema: ' num2str(nnz(minIndices))])
```

```
hold off
legend
```



```
nMin = nnz(minIndices);
```

If logical is "1" then given image is Receipt otherwise its zero

```
isReceipt = nMin >= 9
```

```
isReceipt = logical  
1
```

```
function [signal,Ibw,stripes] = processImage(img)  
% This function processes an image using the algorithm
```

```
% developed in previous chapters.
```

```
gs = im2gray(img);  
gs = imadjust(gs);
```

```
H = fspecial("average",3);  
gssmooth = imfilter(gs,H,"replicate");
```

```
SE = strel("disk",8);  
Ibg = imclose(gssmooth, SE);  
Ibgsub = Ibg - gssmooth;  
Ibw = ~imbinarize(Ibgsub);
```

```
SE = strel("rectangle",[3 25]);  
stripes = imopen(Ibw, SE);
```

```
signal = sum(stripes,2);
```

```
end
```