```
function [r,c] = IMX(A,k)
% if ischar(A)
%     A = imread(A);
if nargout == 0     %輸出參數量 0
    if nargin == 1  %輸入參數量 1
        size_third_dim =size(A,3);
        if (size_third_dim~=1) && (size_third_dim~=3)
            error('The third dimension is %d.\n The third
dimension should be 1 or 3.',size_third_dim);
        end
        imshow(A);
    elseif nargin == 2  %輸入參數量 2
        %顯示不同顏色的灰階圖
        if isvector(k) == 1
            for ki = 1:length(k)
                figure(ki+3);
                if k(ki) > 0 & k(ki)<=3
                    imshow(A(:,:,k(ki)));
                else
                    error('k should be positive.\n');
                end
            end
        else
           if k > 0 & k<=3
                imshow(A(:,:,k));
           else
                error('k should be positive.\n');
           end
        end
    end
elseif nargout == 1  %輸出參數量 1
    %儲存不同顏色的灰階圖
    if isvector(k) == 1
        for ki = 1:length(k)
            if k(ki) > 0 & k(ki)<=3
                r(:,:,ki) = A(:,:,k(ki));
            else
                error('k should be positive.\n');
```

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                end
            end
    elseif k > 0 & k<=3
        r = A(:,:,k);
    else
        error('k should be positive.\n');

    end
elseif nargout == 2  %輸出參數量維 2
    %輸出圖的長寬
    r = size(A,1);
    c = size(A,2);
end
end
```