```
clc;
close all;
clear all;

% Read Colour Image and convert it to a grey level Image

% Load in an input image
im = imread('image1.jpg');

% We also cast to a double array, because K-means requires it in matlab
imflat = double(reshape(im, size(im,1) * size(im,2), 3));
K = 3
[kIDs, kC] = kmeans(imflat, K, 'Display', 'iter', 'MaxIter',
 150, 'Start', 'sample');
colormap = kC / 256;

% Scale 0-1, since this is what matlab wants
% Reshape kIDs back into the original image shape
imout = reshape(uint8(kIDs), size(im,1), size(im,2));
imwrite(imout - 1, colormap, 'image1.jpg');


K =

     3

  iter  phase      num         sum
     1      1   104760  1.20229e+07
Best total sum of distances = 1.20229e+07
```

Published with MATLAB® R2022a