```
image = imread('Elephant.jpeg');

%Check whether the given image is gray or color and change it to gray image
if size(image, 3) == 3
    grayImage = rgb2gray(image);
else
    grayImage = image;
end

% Create a binary mask
% For this example, let's use a simple thresholding approach
threshold = 100; % Adjust based on your image
binaryMask = grayImage > threshold;

subplot(1, 2, 2);
imshow(binaryMask);
title('Binary Mask');
```


```
% Let's apply low-pass filters
% Apply Gaussian filter
sigma = 2;
gaussianFiltered = imgaussfilt(grayImage, sigma);
```

```
% Apply Average filter
averageFiltered = imfilter(grayImage, fspecial('average', [5, 5]));

% Lets display low pass filtered images
figure;
imshow(gaussianFiltered);
title('Gaussian Filtered Image');
```


```
imshow(averageFiltered);
title('Average Filtered Image');
```

Average Filtered Image

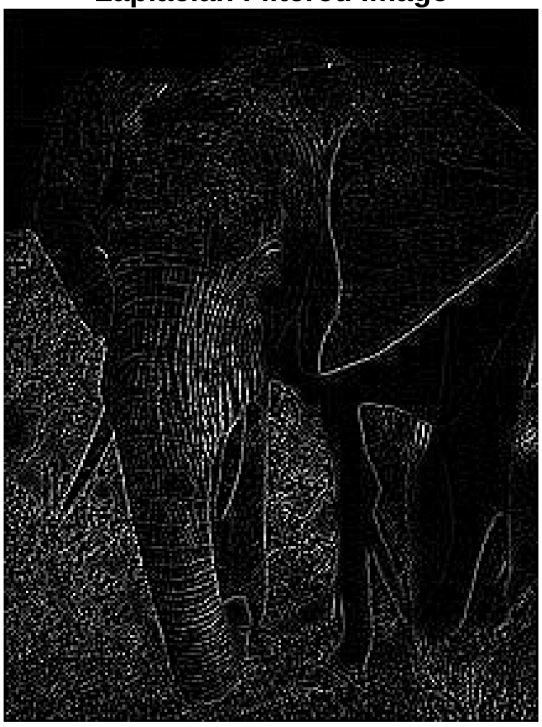
```
%Let's apply High pass filters on the Gray image

% Laplacian filter
laplacianFiltered = imfilter(grayImage, fspecial('laplacian'));

% Prewitt filter
prewittFiltered = imfilter(grayImage, fspecial('prewitt'));

% Lets display high pass filtered images
figure;
imshow(laplacianFiltered, []);
title('Laplacian Filtered Image');
```

Laplacian Filtered Image



```
imshow(prewittFiltered, []);
title('Prewitt Filtered Image');
```

Prewitt Filtered Image