```
function result = embedMessage(hiddenMessage, mainImg)%input is
character vector - user typed,
% and the image to embed the message
     hiddenMessageChar = char(hiddenMessage);
     messageBin = dec2bin(hiddenMessageChar,8); %converts characters
to binary values, nx8 char matrix
     [num_Chars,lenC] = size(messageBin); %gives size nx8,num_chars
number of characters to embed

     %mainImg = imread('dogImage.png'); % image us
     imgBinMain = dec2bin(mainImg,8);


     tempVec=imgBinMain; % tempVec will be the binary char array
     %that will be convert to an image with the embedded information

%embedding process
     for x = 1:num_Chars
          messageTemp = messageBin(x,:); %gets each binary in the
binary vector of the messages

          firstTemp = imgBinMain(2*x-1,:); %gets first binary value
of the image char array
          secondTemp = imgBinMain(2*x,:); %gets second binary value
of the image char array

          frontMessage=extractBetween(messageTemp,1,4); %gets first
four bits of the binary version
          %of the first character
          lastMessage=extractBetween(messageTemp,5,8); %gets last
four bits of the binary version
          %of the first character

          exFirstImg=extractBetween(firstTemp,1,4); %gets first four
bits
          %of first binary value in binary image char array
          exSecondImg=extractBetween(secondTemp,1,4);%gets first
four bits
          %of second binary value in binary image char array

          tempVec(2*x-1,:) = strcat(exFirstImg{:},frontMessage{:});
          tempVec(2*x,:) = strcat(exSecondImg{:},lastMessage{:});
     end

     %for loop adds ending message as last three characters
     endSign = '#';
     endBin = dec2bin(endSign,8);%converst symbol to 8-bit binary

     for y=(num_Chars*2+1:2:num_Chars*2+6)
          firstEndTemp = tempVec(y,:);
          secondEndTemp = tempVec(y+1,:);
```

```
            exFirstEnd=extractBetween(firstEndTemp,1,4);
            exSecondEnd=extractBetween(secondEndTemp,1,4);

            exSignFront=extractBetween(endBin,1,4);
            exSignLast=extractBetween(endBin,5,8);

            tempVec(y,:) = strcat(exFirstEnd{:},exSignFront{:});
            tempVec(y+1,:) = strcat(exSecondEnd{:},exSignLast{:});
      end

%need to have a character that specfies the end of the message, say
 ###


%RECOVERY TIME, read each line incrementally convert to character
 array,
%CHAR, and see if the last three characters are ### then break

      result = reshape(uint8(bin2dec(tempVec)),400,400,3);

%b=reshape(uint8(bin2dec(tempVec)),400,400,3); %converts binary vector
 to image
%imshow(b)

end
```

```
Not enough input arguments.

Error in embedMessage (line 3)
      hiddenMessageChar = char(hiddenMessage);
```

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