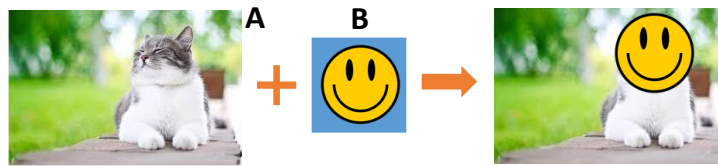


We will do a little more practice on indexing in this assignment. Your task is to copy a part of an image based on some "masking" condition and overlay it onto another image, illustrated in the example below:



Instead of gray-scale images used in Lab#02, we will use RGB images in this assignment for a little extra challenge. What you need to do:

- Use `imread` to load an image file as your source image (**A**). Without `img2rgb`, the image will be in a 3D ($M \times N \times 3$) array of type `uint8`. The third dimension represents the three color channels R, G, and B, respectively; an expression like `A(:, :, c)` gives you a single channel as a 2D array, where `c` (the channel index) is 1, 2, or 3.
- Similarly, load another image file as your overlay image (**B**).
- Create a 2D logical array based on some conditions on the pixel colors of **B**. "True" elements in this logical array indicate that the corresponding pixels in B are to be copied onto **A**.
- Compute the linear indices of the target elements in **A**, and then do the copying. The logical array specifies the source elements in **B**, and the linear indices here specify the target elements in **A**. You can do this in 2D and do the overlaying channel-by-channel (with a for loop). Or you can do this in 3D in one step; `sub2ind` can be used to compute linear indices in 3D arrays as well.

Submission:

- Submit your code (m file) through E3. Name your file `P1_#####.m`, where the `#####` represents your student ID. In addition, submit the two image files with your code.
- There will be a three-day grace period after the due date, during which there will be a 10%/day deduction for your grade.
- A "copy detection" will be applied to your submissions, and those found to have copied assignments will receive zero points for the assignment.
- Your code should include sufficient comments. This will be part of the grade. Include your name and ID at the top of your code.
- There will be demo session with the TAs (date/time to be announced later).