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function task2_solution;

color = double(imread('soccer_field4.jpg'));

r = color(:,:, 1);
g = color(:,:, 2);
b = color(:,:, 3);

green = ((g - r > 10) & (g - b > 0));
green = imdilate(green, ones(4,4));
green = imerode(green, ones(8,8));
field = remove_holes(green);

figure(1); imshow(field);

%Red players
red = ((r - g > 10) & (r - b > 10));
red = imdilate(red, ones(4,4));
bound = (red & field);
bound = imerode(bound, ones(5,5));
red_players = remove_holes(bound);
figure(2);imshow(red_players);

%blue players

blue = ((b - g > 10) & (b - r > 10));
blue = imdilate(blue, ones(4,4));
bound2 = (field & blue);
bound2 = imerode(bound2, ones(5,5));
blue_players = remove_holes(bound2);
figure(3);imshow(blue_players);

end
```