Question 1

NCC template matching

1. There is an elephant in the room. Can you find it? Search for the template template.png in the search image search.png using color-based NCC. Assume the origin is in the center of the template image for each approach (Note: there should be a border around the search image where the metrics cannot be computed).
2. Sort the resulting scores from best to worst. Plot all of the sorted scores and show the patches corresponding to the 1st, 2nd, 5th, 10th, 100th, and 500th closest matches. Compare the results and shortly discuss them.
3. **Submission**: 1. Submit your code. 2. Write a report (pdf file), which includes the result image and your comments.

Question 2

Harris corner detection

1. Compute and display the Harris pixel-wise cornerness function R (response) values for the image checker.jpg. Remove the negative values (set to 0) and show the response (R value) image. (You do not have to set a threshold for R and do the non-maximum suppression)
2. You can select your Gaussian kernel to compute G_x and G_y (gradients) and trace weight factor (α). Discuss what the influence is if different parameters are used.
3. **Submission**: 1. Submit your code. 2. Write a report (pdf file), which includes the result image and your comments, comparison and discussion.