



- 1- Frame number 75 was selected from the Football video sequence with QCIF resolution, and the Y, U, V components in the YUV color system and the Y, Cb, Cr components in the YCoCr color system were obtained and each one was stored in a separate matrix. and display the relevant images.
 - 2- Perform color subsampling with 4:2:2, 4:1:1 and 4:2:0 formats on two color band 1 systems. and display the results and corresponding images (for pixels that do not have a color component, use the color value of the adjacent component for that pixel).
 - 3- Calculate the bit rate for the images in paragraph 2 and compare it with the bit rate values of the images in paragraph 1.
 - 4- Obtain the peak signal-to-noise value (PSNR) for the images of band 2 (for the YUV color system) with the image of band 1.
- Upload the written codes as well as the results of the program in the form of a PDF file in the Samyad system on the due date.