Q1：

The color distribution method is better. The averaging method can not separate the moving object which moves in a fixed block of space, because in this situation averaging the pixel will make mistake, such as the swing trees.

Q2:



We can mix every pixel in each frame. Because each pixel have RGB 3x1 vector, we can finally get (row x column) of (3 x frame) matrixes.

Put every (3 x frame) matrix into the SVD, then can get the . Remove the small number of singular value, which means removing the noise of the picture. Finally, we can get every pixel of S. And arrange them, the matrix is the background.