Department of Computer Science and Engineering

CS4093D Image Processing Laboratory - *Assignment II*

February 25, 2021

1. Compute the 1D basis vectors for a 4-point DCT. Using these results, compute the 2D basis vectors $C(i, j)$ for a 4*4 DCT.
2. Repeat the above for Walsh, Hadamard transforms.
3. Perform following operations on a sample standard gray level image of size 256*256.
   (a) Compute the Discrete Fourier Transform.
   (b) Compute the Discrete Cosine Transform.
   (c) Compute the Walsh Transform.
   (d) Compute the Hadamard Transform.

   Remove some fixed number of transform coefficients and reconstruct the original image. Report your observations.