Step.1: Specify Order N, Upsampling factor L and Downsampling factor M

Step.2: Compute Coefficient matrix H and write the output response.

Step.3: Compute the output response for polyphase approach

Step.4: Apply coefficient symmetry to the H matrix and decompose the matrix in terms of centro symmetric elements to get coefficient symmetry structure[Ref21].

Step.5: To have optimization in performance, CSE and CSD Representation is applied to all the coefficients.

Step.6: Performance comparison