**Sheet 3**

**Discrete Fourier Transform (DFT)**

1. Compute the DFT for the following sequence x(n) = { 0, 1 , 2, 3}. Sketch the relation frequency versus amplitude and phase respectively, knowing that the sampling frequency is 4 kHz.
2. Compute the continuous FT for the sequence x(n) = { 0, 1 , 2, 3} from its DFT components knowing that the sampling frequency is 4kHZ.
3. Compute the data sequence back from its DFT components {6, -2+2j, -2, -2-2j}.