

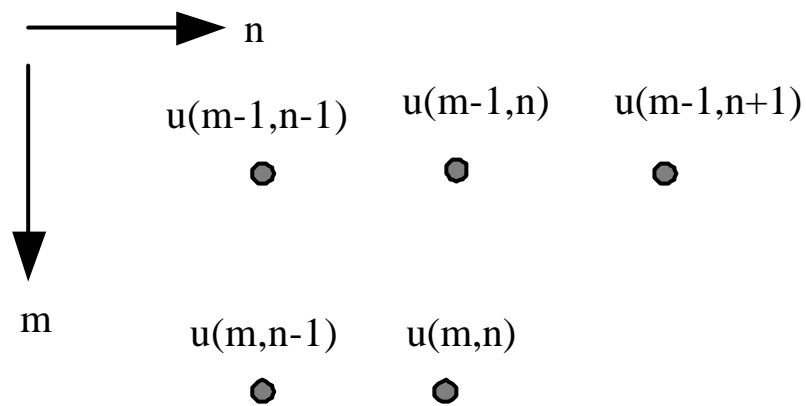
Project 8

2-D DPCM

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Refer to pp491-494(textbook)

Follow Eqn.(11.35), $a_1=0.95$, $a_2=0.95$, $a_3=-a_1*a_2$; $a_4=0$; to encode goldhill256.bmp with 1,2,3,4,5 bits, show the reconstructed images, and calculate the PSNR.



Predictor:

$$\bar{u}(m, n) = a_1 \hat{u}(m-1, n) + a_2 \hat{u}(m, n-1) + a_3 \hat{u}(m-1, n-1) + a_4 \hat{u}(m-1, n+1) \quad (11.35a)$$

Quantizer input:

$$e(m, n) = u(m, n) - \bar{u}(m, n) \quad (11.35b)$$

Reconstruction filter:

$$\hat{u}(m, n) = e(m, n) + \bar{u}(m, n) \quad (11.35c)$$