

### Quiz 13. Viterbi algorithm

Below is the table of the dynamic programming computation of the most probable path for occasionally dishonest casino with the following transition and emission probabilities:

HMM Parameters			
	L	F	e(6)
B	0.52	0.48	
L	0.60	0.40	0.50
F	0.17	0.83	0.17

	Sequence	3	6	6	6	Max(F,L)
States	L	→ 0.052	→ 0.0156	→ x=	→ 0.0014	y
	F	→ 0.080	→ 0.0111	→ 0.00153	→ 0.000312	

- Fill in the missing values in the dynamic programming table  
 $x = \text{Max}(0.0156 * 0.60, 0.0111 * 0.17) * 0.50 = 0.0156 * 0.60 * 0.50$   
 $y = \text{max}(0.0014, 0.000312)$

- Perform traceback and write the sequence of most probable states for this observed sequence  
 LLLLL