Q.1: Complete the HMM Forward/Backtracking table (reference in the previous slide) using these transition and emission probabilities.

Day	Observation	? →	Sunny	Cloudy	Rainy
		V0(?)	0.333	0.333	0.333
1	Walk	P(W|?)	1.0	0.67	0.33
		V1(?) = V0(?)*P(W}?)	0.333	0.223	0.111
2		V1(S)*P(?|S)	0.000	0.22	0
		V1(C)*P(?|C)	0.000	0	0.14
		V1(R)*P(?|R)	0.000	0.03	0.03
	Umbrella	P(U|?)	0.000	0.33	0.67
		V2(?) = max(?)*P(U|?)	0.000	0.072	0.09
3		V2(S)*P(?|S)	0	0	0
		V2(C)*P(?|C)	0.002	0	0.006
		V2(R)*P(?|R)	0.029	0.029	0.029
	Walk	P(W|?)	1	0.67	0.33
		V3(?) = max(?)*P(W|?)	0.029	0.019	0.009

Q2: Construct a table (similar to but not the same as the reference HMM table in the previous slide) that shows the progress of the MDP process.

Iteration	State	V(s)	Q(State, C)	Q(State, A)	Policy(s)
0	Low	0	-	-	
	Medium	0	-	-	
	High	0	-	-	
1	Low	-1	-1.18	-0.46	Aggressive(A)
	Medium	3	6.24	6.6	Aggressive(A)
	HIgh	5	9.32	8.96	Conservative(C)
2	Low	-0.46	-0.1432	1.1276	Aggressive(A)
	Medium	6.6	9.6744	10.164	Aggressive(A)
	High	9.32	13.1432	12.6536	Conservative(C)
3	Low	1.12	1.62	3.26	Aggressive(A)

	Medium	10.16	12.94	13.48	Aggressive
	High	13.14	16.54	16.007	Conservative(C)