

CENG 465

Introduction to Bioinformatics

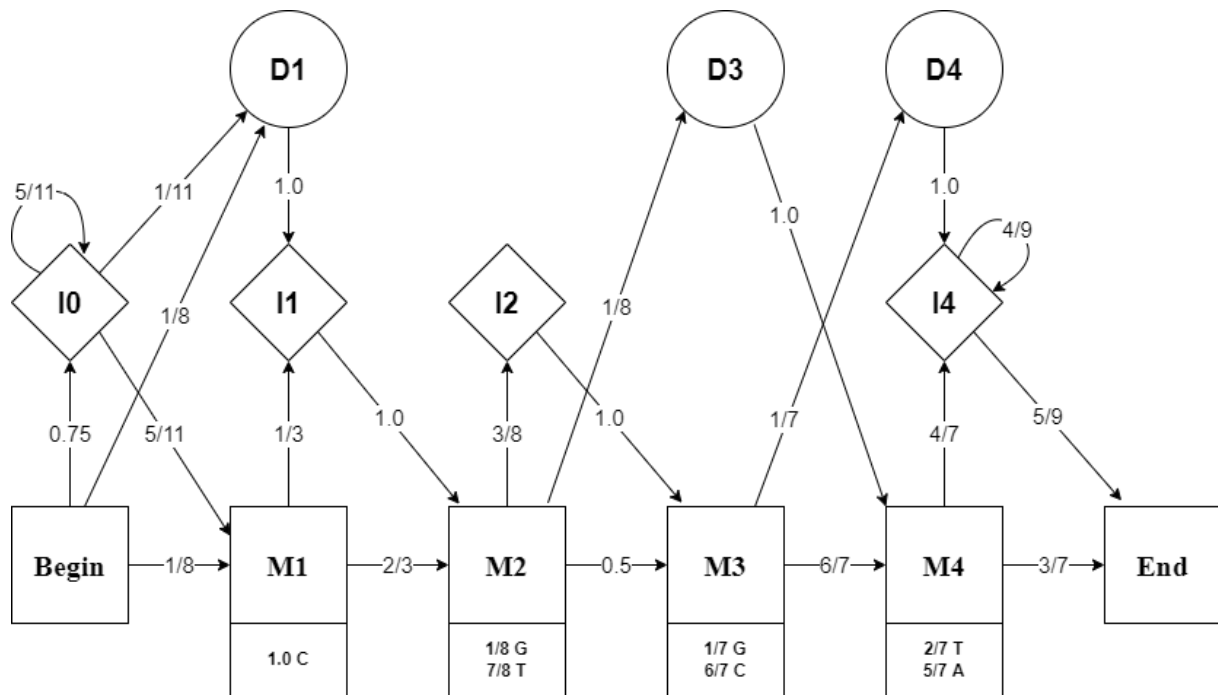
HOMEWORK 2

Student Information

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Part A



Sequence 1: Begin → I0 → I0 → D1 → I1 → M2 → M3 → M4 → I4 → End

Sequence 2: Begin → D1 → I1 → M2 → M3 → M4 → I4 → I4 → End

Sequence 3: Begin → I0 → M1 → I1 → M2 → I2 → M3 → M4 → End

Sequence 4: Begin → I0 → I0 → M1 → M2 → D3 → M4 → I4 → I4 → End

Sequence 5: Begin → M1 → I1 → M2 → M3 → M4 → End

Sequence 6: Begin → I0 → I0 → M1 → M2 → I2 → M3 → M4 → I4 → I4 → End

Sequence 7: Begin → I0 → I0 → M1 → M2 → I2 → M3 → M4 → End

Sequence 8: Begin → I0 → I0 → M1 → M2 → M3 → D4 → I4 → End

Part B

	" "	C	T	C	T	G	A
Begin	1.0	0	0	0	0	0	0
M1	0	1.25E-1	0	9.68E-3	0	0	0
M2	0	0	7.29E-2	0	5.65E-3	1.01E-4	0
M3	0	0	0	3.12E-2	0	4.04E-4	0
M4	0	0	0	0	7.64E-3	0	2.47E-4
I0	0	1.875E-1	2.13E-2	2.42E-3	2.75E-4	3.125E-5	3.55E-6
I1	0	3.125E-2	1.04E-2	4.84E-4	8.07E-4	6.25E-6	7.1E-7
I2	0	0	0	6.83E-3	0	5.3E-4	9.47E-6
I4	0	0	0	0	1.115E-3	1.09E-3	1.21E-4
D1	1.25E-1	1.7E-2	1.936E-3	2.2E-4	2.5E-5	2.84E-6	3.23E-7
D3	0	0	9.11E-3	0	7.06E-4	1.26E-5	0
D4	0	0	0	4.46E-3	0	5.77E-5	0
End	0	0	0	0	0	0	1.06E-4

Begin → I0 → I0 → M1 → M2 → M3 → M4 → End (Best path with probability 1.06E-4)