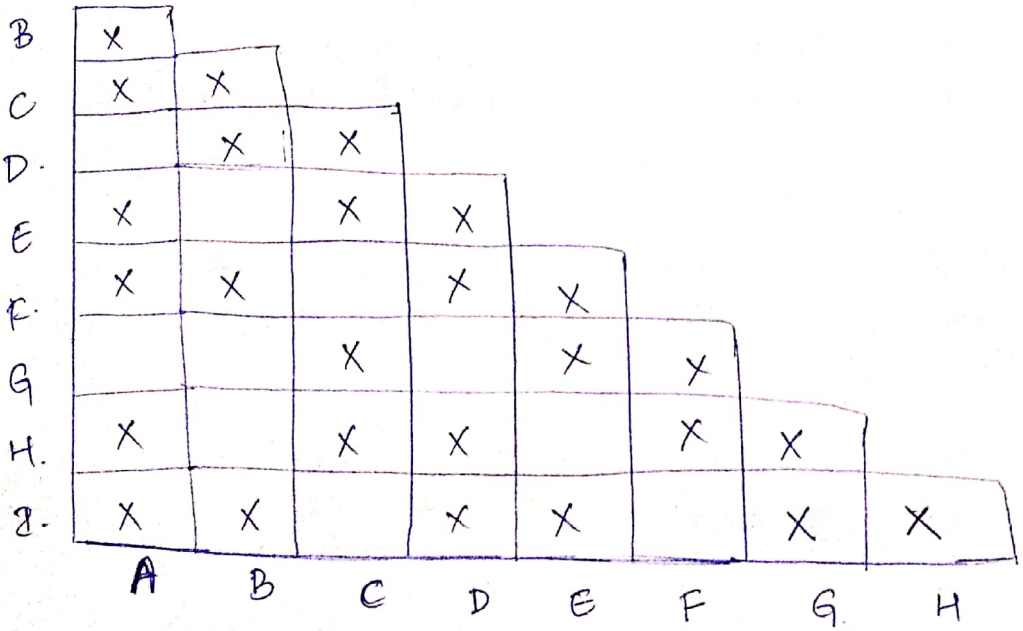
Draw the following DFA using table filling algorithm where A is the start state. The states C, F and I are the final states.

δ	0	1
A	B	E
B	C	F
*C	D	H
D	E	H
E	F	I
*F	G	B
G	H	B
H	I	C
*I	A	E



Step 1:- Cross combination of final and non final states.

combination of

A & B

	0	1	
A	B	E	(NF, NF)
B	C	F	(F, F)

A & D

	0	1	
A	B	E	(NF, NF)
D	E	H	(NF, NF)

A & E

	0	1	
A	B	E	(NF, NF)
E	F	I	(F, F)

A ≡ G

	0	1	
A	B	E	(NF, NF)
G	H	B	(F, F)

A ≡ H.

	0	1	
A	B	E	(NF, NF)
H	I	C	(F, F)

	0	1	
B	C	F	(F, F)
D	E	H	(NF, NF)

	0	1	
A	B	E	(NF NF)
D	E	H	(NF NF)

	0	1	
A	B	E	NF NF
G	H	B	NF NF

(X)

	0	1	
A	B	E	NF
H	I	C	F

	0	1	
B	C	F	F F
D	E	H	NF NF

	0	1	
B	C	F	F F
E	F	I	F F

	0	1	
B	B	E	NF NF
G	H	B	NF NF

	0	1	
B	B	E	NF NF
H	I	C	F F

	0	1	
C	D	H	NF NF
F	G	B	NF NF

	0	1	
C	D	H	NF NF
I	A	E	NF NF

(Y)

	0	1	
D	E	H	NF NF
E	F	I	F F

	0	1	
D	E	H	NF NF
G	H	B	NF NF

(Z)

	0	1	
D	E	H	NF NF
H	I	C	I F

(X)

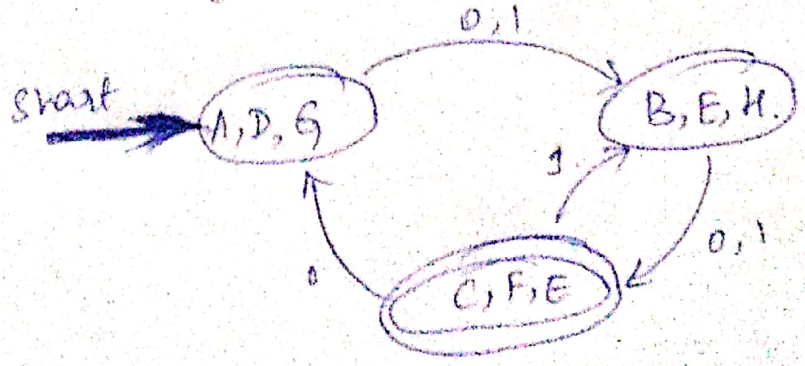
	0	1	
E	F	I	F F
G	H	B	NF NF

	0	1	
E	F	I	F F
H	I	C	F F

	0	1	
G	H	B	NF NF
H	I	C	F F

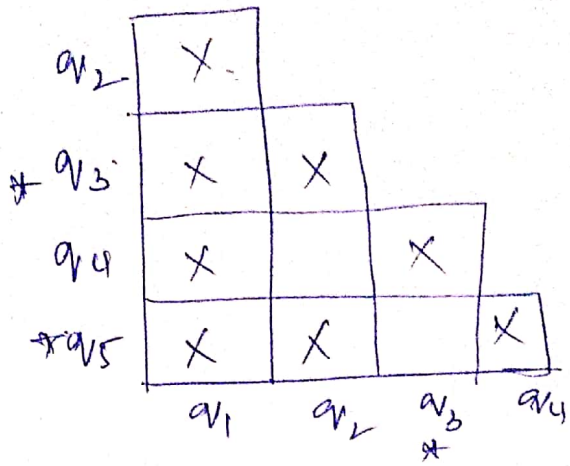
Pairs

(A, D) (A, G) (D, F) ⇒ (A, D, G)
(B, H) (B, E) (E, M) ⇒ (B, H, E)
(C, E) (C, I) (F, I) ⇒ (C, F, I)
(D, H) ⇒ ⇒ (D, H)



Consider the DFA given the transition table

δ	0	1
→ q_1	q_2	q_3
q_2	q_3	q_5
* q_3	q_4	q_3
q_4	q_3	q_5
* q_5	q_2	q_5

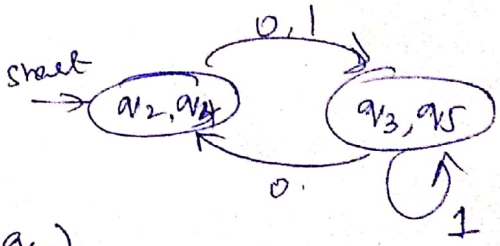


	0	1		
q_2	q_3	q_5	NF	F
q_4	q_3	q_5	F	F

	0	1		
q_1	q_2	q_3	NF	F
q_2	q_3	q_5	F	F

	0	1		
q_1	q_2	q_3	NF	F
q_4	q_3	q_5	F	F

	0	1		
q_3	q_4	q_3	NF	F
q_5	q_2	q_5	NF	F



Ans. (q_2, q_4)
(q_3, q_5)

(q_2, q_4) is equivalent because. they reach same destination.