

FORMAL LANGUAGES AND AUTOMATA
Homework-2

1. Reduce the states of the incompletely specified Mealy machine below using:
 - a. Complete cover
 - b. Minimal closed cover

	00	01	10	11
A	A/0	-	F/1	-
B	E/0	-	C/0	D/1
C	-	B/1	E/0	-
D	-	C/0	-	B/1
E	C/0	C/1	-	D/0
F	A/0	E/0	A/1	-

Also, draw the state transition table of the reduced machine in Moore model.

2. Define the set of Fibonacci numbers F , using induction (recursion). What is the height of the element 13?
3. Let A be a language defined over Σ . What is the minimum possible value of X in the statement below:

$$(AA^+)^* \cup X = A^*$$

Submission Deadline: 21 March 2013