

# Assignment 5

## Automata & Theory of Computation

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1. Find a regular expression for the language

(1)  $L = \{ a^n b^m : n \geq 3, m \text{ is odd} \}.$

$$aaa(a)^*(bb)^*b$$

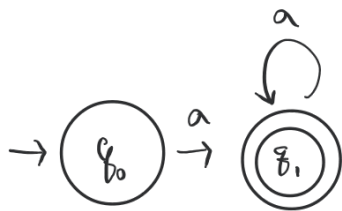
(2)  $L = \{ a^n b^m : n \geq 3, m \leq 4 \}.$

$$aaa(a)^*(\lambda + b + bb + bbb + bbbb)$$

2. Find an nfa that accepts  $L(r)$ , where  $r = (a^*a + ab)$ .

$$(\underbrace{a^*a}_{m_1} + \underbrace{ab}_{m_2})$$

$m_1$ :



$m_2$



$m_1 + m_2$

