



Sindh Madressatul Islam University (SMIU)

Program: BSCS (Even)

Subject: Theory of Automata

Instructor: Mustafa Ali Bamboat

Assignment – 2

Due Date: 05-Nov-2024 (7th Week)

Q1. Build an FA accepting the Language L of Strings, defined over $\Sigma = \{a, b\}$, **beginning with and ending in same letters**

[2 Marks]

Q2. Using the technique discussed by Martin, build an FA accepting the following language

$L = \{w \text{ belongs to } \{a,b\}^*: \text{length}(w) \geq 2 \text{ and second letter of } w, \text{ from right is } a\}.$

[2 Marks]

Q3. Using the technique discussed by Martin, build an FA accepting the following language

$L = \{w \text{ belongs to } \{a,b\}^*: w \text{ neither ends in } \mathbf{ab} \text{ nor } \mathbf{ba}\}.$

[2 Marks]

Q4. Build a TG accepting the language of strings, defined over $\Sigma = \{a, b\}$, **ending in b.**

[2 Marks]

Q5. Build a TG accepting the language L of strings, defined over $\Sigma = \{a, b\}$, **beginning with and ending in the same letters.**

[2 Marks]