

CS 332 Programming Assignment 3 - Finite State Machine, Functional Language

Problem Statement: Write a program in Racket or Scheme that allows the user to define a Finite State Machine (FSM), and then operate that FSM on strings entered by the user. The FSM will accept or reject each string.

1. Input: Definition of a FSM and a string(s) to be tested.
2. Output: *string:Accept* or *string: Reject* for each string to be tested.

Notes:

1. Use $\Sigma = \{ a, b \}$.
2. The program should allow the user to test any number of strings, not just one string per run.
3. FSM definition may be input via file IO, GUI, or console.
4. Test strings may be input via file IO, GUI, or console.
5. Up to 80% credit (24 points) – the machine is hard coded in the program and can only be modified by changing the code and recompiling.
6. No requirements or design documents are required for this assignment.
7. Upload your code and any supporting files via Canvas.

Rubric:

1. Program Correctness: 20 points
2. Code Format, clarity, commenting: 10 points
3. Total: 30 points