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Total Time Spent: 9 hours

Code Development:
I managed my development and testing by using GitHub to back up the code. My main strategy was running the tape file first of all three tapes to see if I parsed the file correctly. Then incrementally checked if the output of the test files were correct. As well as added print lines between functions and key pieces of code to see if I was achieving the desired output.

https://github.com/HureraRanjha/CSC-30400-Hurera-Ranjha-Turing-Machine-Project

Language and Libraries Used:

I used Python 3 for my implementation

The libraries I used were:

sys for command line parsing
Os for the file path handling
StringIO to capture the printed output for the result files of the test files

Key Data Structures:

Tapes:

I used a list of chars keep track of the individual of characters

Tape Heads:

The current position of each tapes head is stored as a list of integers

Transitions:

Transitions are stored in a dictionary where the rule is:

```
{
  "initialState": str,
  "inputSymbol": [symbols],
  "newState": str,
  "newTapeSymbol": [symbols],
  "direction": [L/R/S]
}
```

State Information:

The Start, Accept, and Reject state is stored as a string
The list of states are stored as a list of strings