Turing Machine Documentation

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1 Introduction

This document provides documentation for a Turing machine, which is a mathematical model of computation. The purpose of this machine is to perform computations on an input tape, which is a sequence of symbols.

2 Definition

A Turing machine is meant to make a stack and queue depending on the input

3 States and Transitions

The Turing machine operates by moving between states and performing transitions on the tape. The states and transitions are defined by the 7-tuple above.

- *Red* are all the reject states (q_{reject})
- *Green* are all the accept states (q_{accept})
- *Blue* is the Queue
- *Magenta* is the Stack
- *Black* are the initial states to set up the #

4 Examples

Here are some examples of input and output for the Turing machine:

- `Input: SA1A2D, Output: xxxxxx#1`
- `Input: QA1A2D, Output: xxxxxx#2`
- `Input: QA#A2D, Output: INVALID`

5 Conclusion

The Turing machine is a powerful tool for performing computations on input tapes. It has applications in computer science, mathematics, and other fields.