

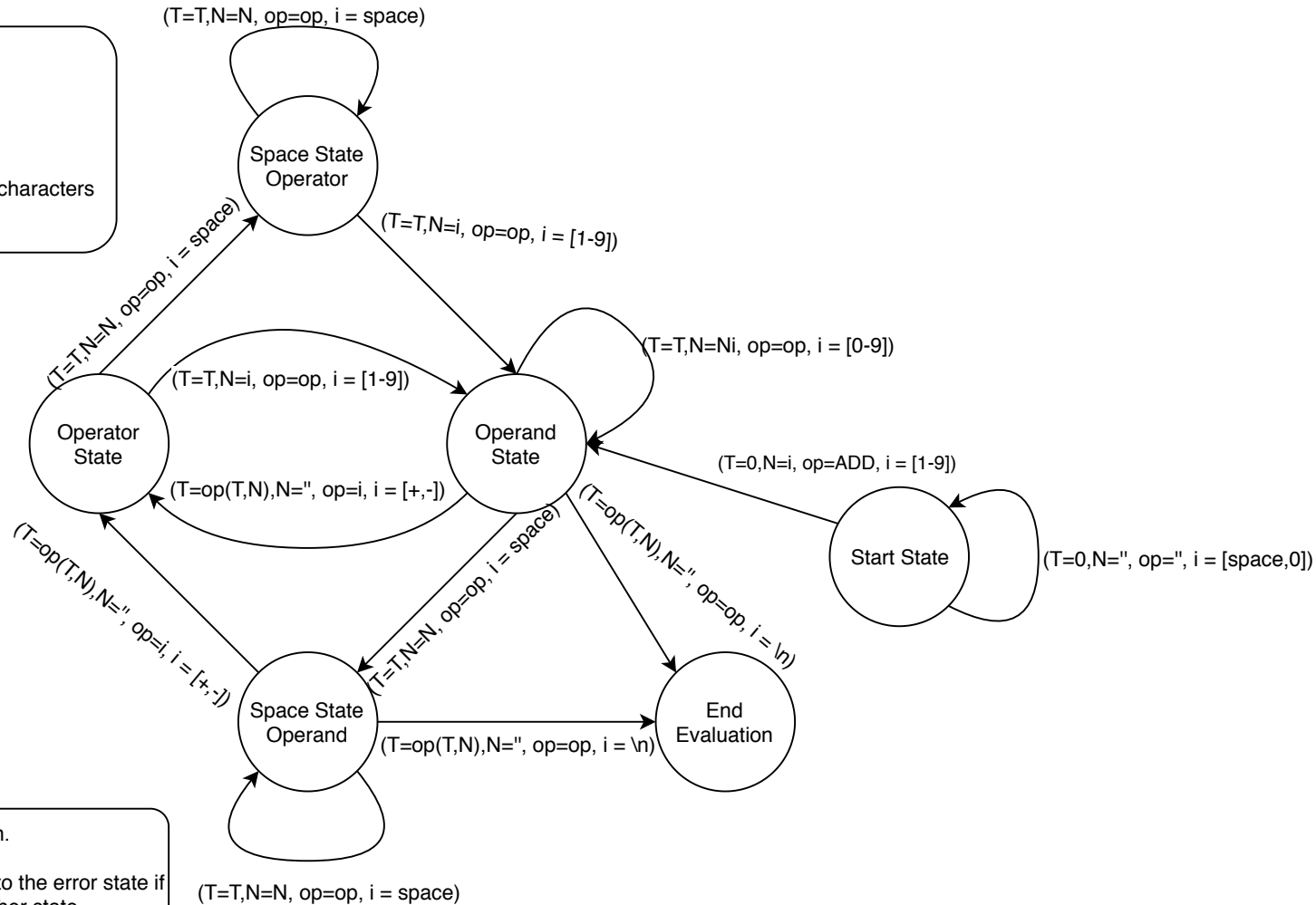
Expression Evaluator State Machine Diagram

Values Maintained in Memory.

T := current value of the expression
N := current operand being built (0-9)
op := current operator (+,-)

Transitions

(T, N, op, i = [S]) where [S] is the set of acceptable characters
and
i is the input character



For clarity, transitions to the error state are not shown.

Every state on the diagram has an implicit transition to the error state if the input does not have a transition defined to any other state.

Leading zeros are acceptable at the beginning of an expression.

$$09 + 27 - 10 + 2$$

Leading zeros on any other operand are unacceptable.

$$9 + 027 - 10 + 2$$