Group - 6

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KEYWORD HASH TABLE

(*) Please Turn Over

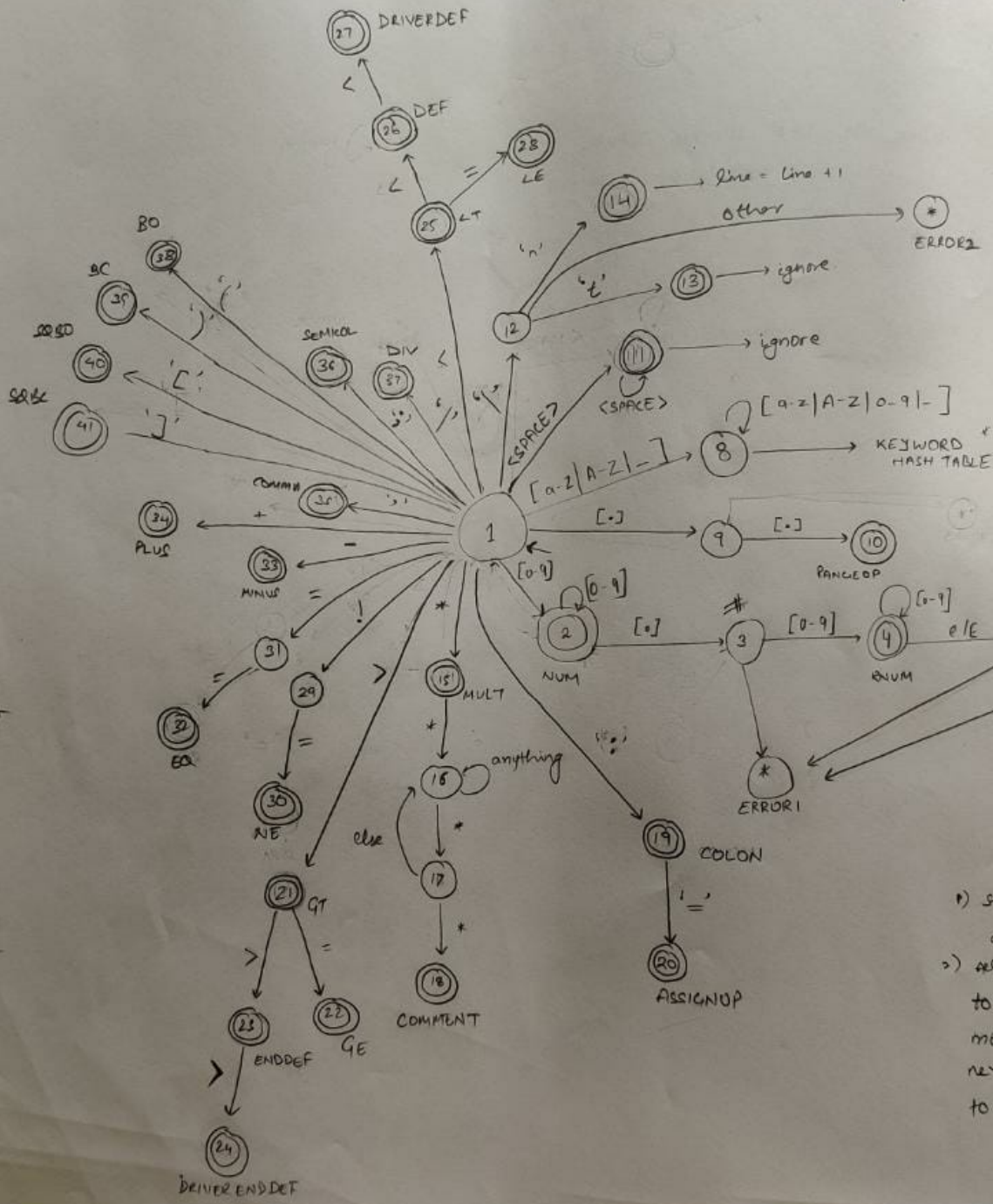
Retraction

In the case that at State 3, we come across another dot ([.]), we perform retraction

→ Shift forward pointer back by 1

→ Tokenize the number & go back to the start state

→ Read 2 dots ([.]) and make the transition 1 → 9 → 10 to tokenize the RANGEOP at state 10



ERRORS

ERROR1 — VALUE ERROR

ERROR2 — INVALID ESCAPE CHARACTER

Basic Assumptions

1) State (1) is a start state for all tokens
2) All final states ((*)) inherently tokenize the expression and, moves the begin pointer to the next character and goes back to the start state (State (1))

KEYWORD HASH TABLE

Keyword	Token
AND	AND
array	ARRAY
boolean	BOOLEAN
break	BREAK
case	CASE
declare	DECLARE
default	DEFAULT
driver	DRIVER
end	END
for	FOR
get_value	GET_VALUE
in	IN
input	INPUT
integer	INTEGER
module	MODULE
of	OF
OR	OR
parameters	PARAMETERS
print	PRINT
program	PROGRAM
real	REAL
returns	RETURNS
start	START
switch	SWITCH
takes	TAKES
use	USE
while	WHILE
with	WITH
FALSE	FALSE
TRUE	TRUE

- When the DFA reaches state 8 the token is copied and checked in the hash table.
- If there is a match then the string is tokenised accordingly.
- If not, it is tokenised as an identifier.