

AI

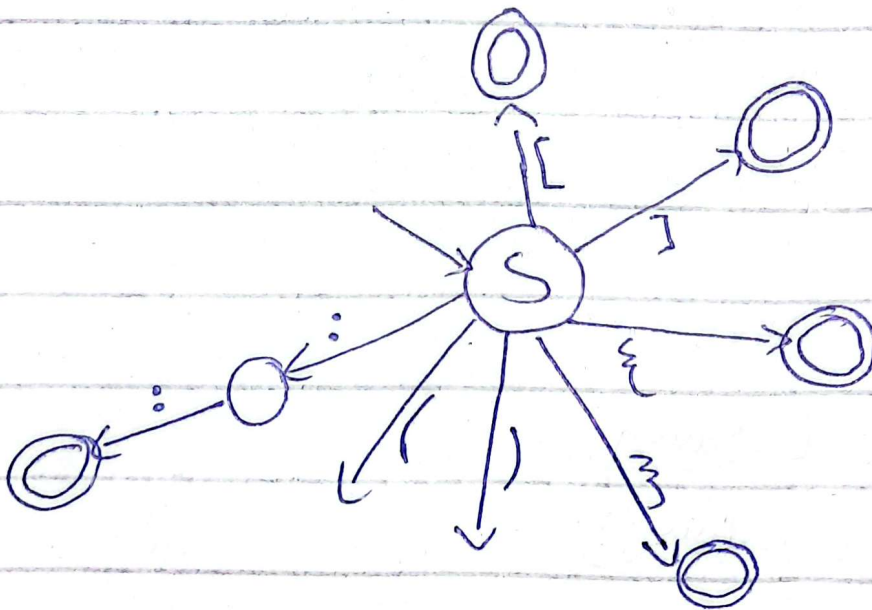
Assignment 1

Name:- M. Tayyab

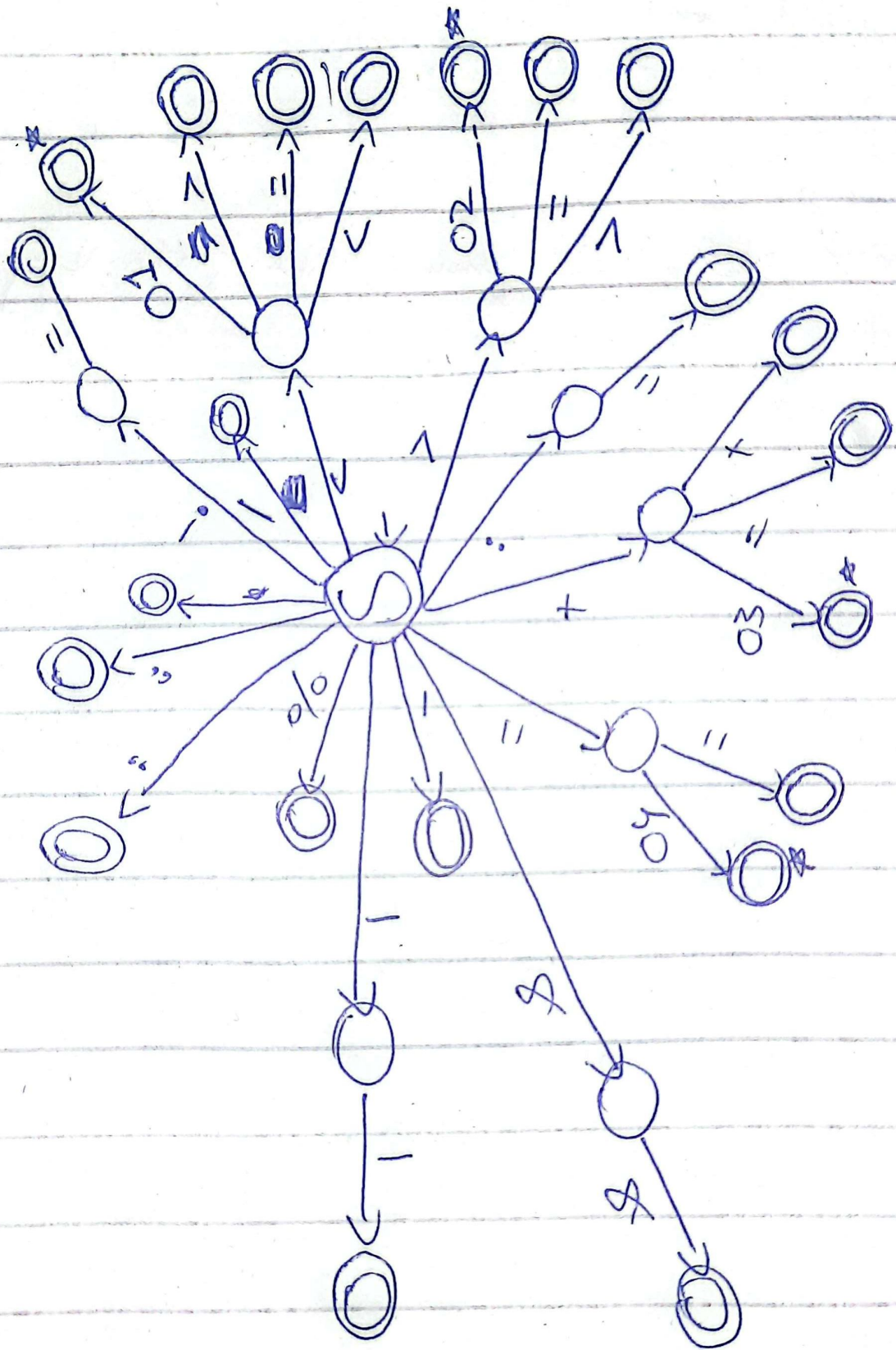
Roll no:- 22L-6795

Section:- 6F

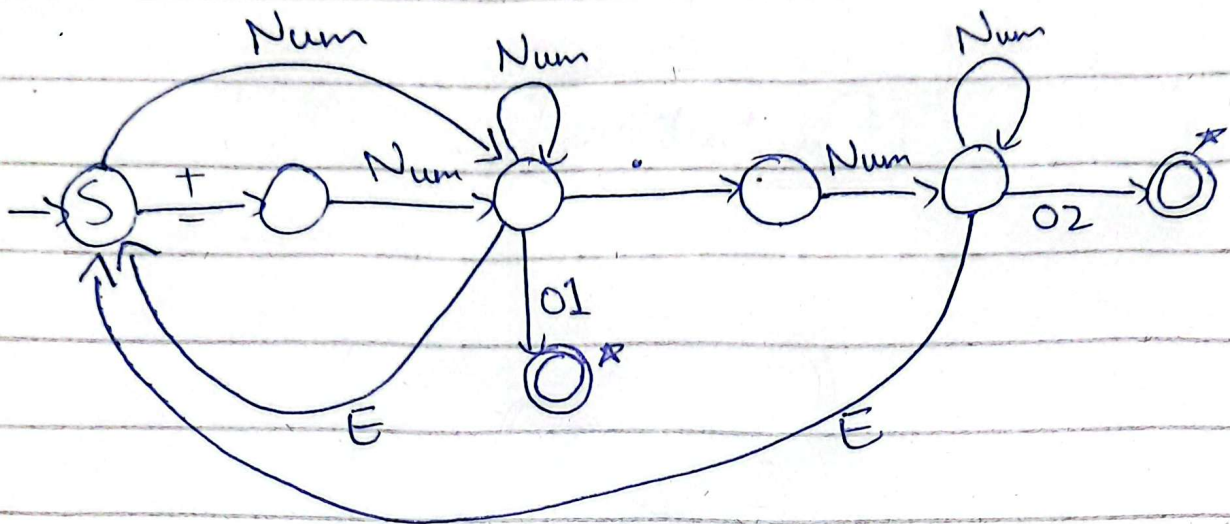
Punctuations



Operators



Numbers



$\text{Num} \rightarrow [0-9]$

$01 = \{Lc - \{., E, \text{Num}\}\}$

$02 = \{Lc - \{E, \text{Num}\}\}$

Identifier & Keyword

$\text{letters} \rightarrow \{A, B, \dots, Z, a, b, c, \dots, z\}$

$\text{digits} \rightarrow \{0, 1, 2, \dots, 9\}$

$\text{letters_E} \rightarrow \{\text{letters} - \{a, n, t, e, d, f, g\}\}$

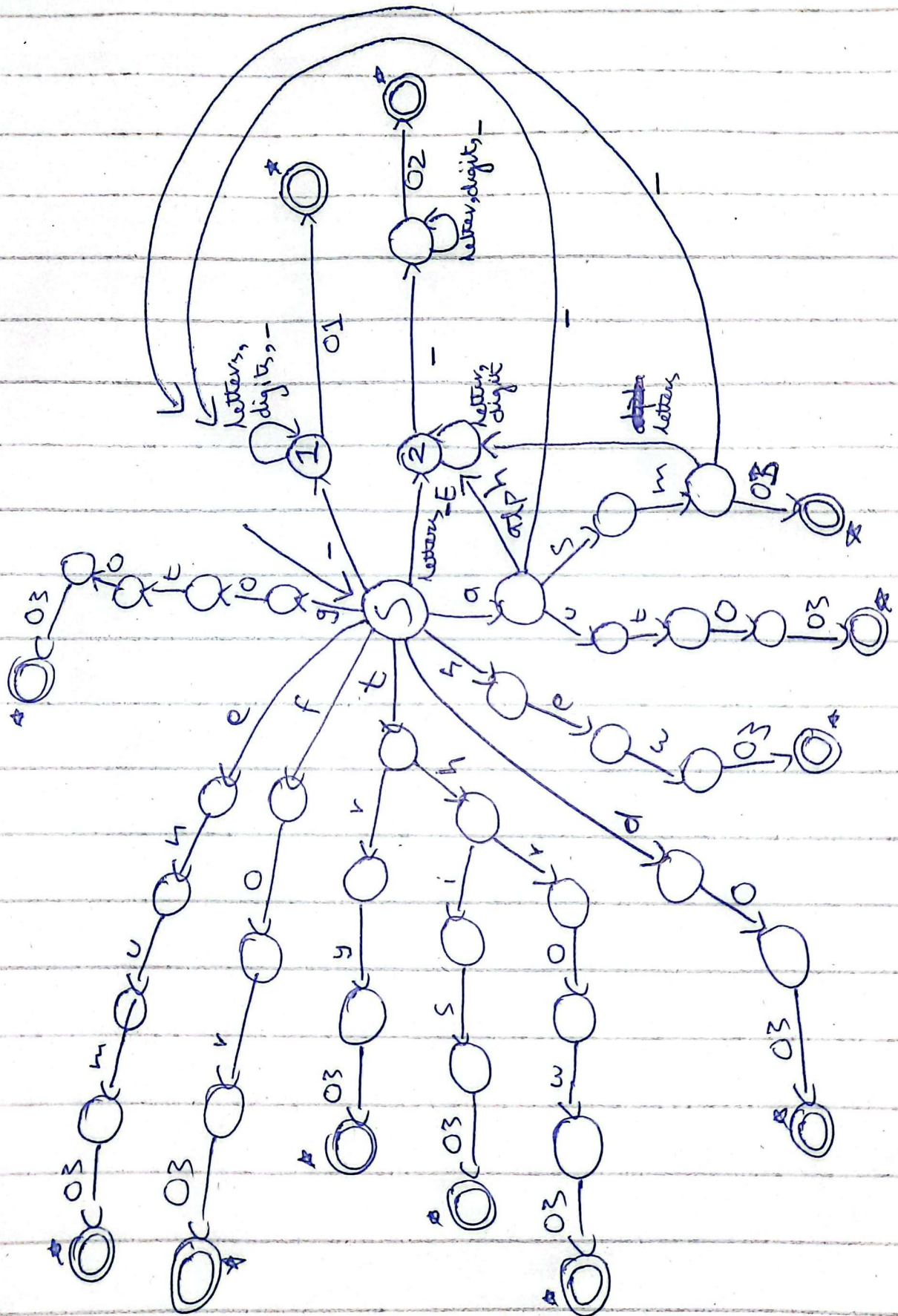
$01 \rightarrow \{Lc - \{\text{letters}, \text{digits}, -\}\}$

$02 \rightarrow \{Lc - \{\text{letters}, \text{digits}, -\}\}$

$03 \rightarrow \{Lc - \{\text{letters}, -, \text{digits}\}\}$

$\text{alph} \rightarrow \{\text{letters} - s\}$

Identifier & Keyword



Explanation:-

from every state there are other condition that should be handled

- 1) if underscore come '-' arrow should go to node labelled 1
- 2) if letter other than what should come next for key word for eg in "asmi" if after a letter occur other than s it should go to node labelled 2
- 3) There is a arrow to deadstate if char is not letter, -, or digit

Not show all because quite not possible on paper very difficult to understand and draw as it will be extremely messy

Regular Defs

Punctuation

Pun \rightarrow ('[' | '{' | '(' | ')' | ']' | '}' | ':' | ';')

operator

op \rightarrow ('<' | '>' | '<>' | ':' | '=' | '+' | '-' | '++' | '--' | '<=' | '>=' | '*' | '/' | '||' | 'BB' | '!=' | 'x' | '...' | '...' | '/' | '<<' | '>>')

keywords

key \rightarrow (asm | new | this | auto | enum | throw | do | try | for | goto)

Identifier

small \rightarrow [a-z]

cap \rightarrow [A-Z]

letter \rightarrow (small | cap)

digit \rightarrow [0-9]

id \rightarrow (letter)(letter|digit)* - (letter|digit|_)* | - (letter|digit|_)