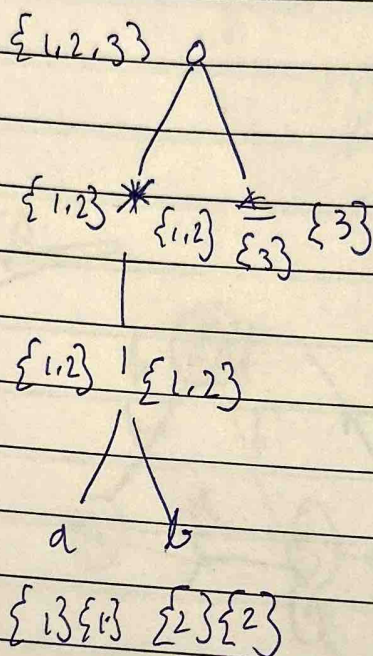


# Direct Method

- Name - Pulkit Shringi
- Reg No. - 996

2)  $(a|b)^*$

$$z^* = (a|b)^* \#$$



Let  $A = \{1,2,3\}$

States  $(A, a) = \text{follow}(1) = \{1,2,3\} = A$

States  $(A, b) = \text{follow}(2) = \{1,2,3\} = A$

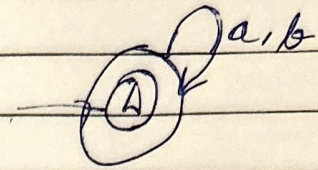
Follow  $(1) = \{1,2\} \cup \{3\} = \{1,2,3\}$

Follow  $(2) = \{1,2\} \cup \{3\} = \{1,2,3\}$

Follow  $(3) = \phi$

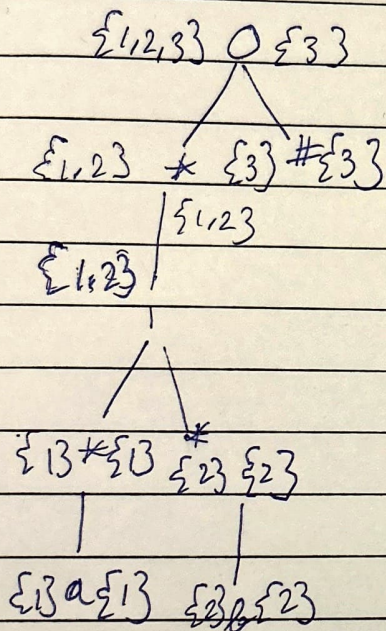


Position	Follow
1	$\{1, 2, 3\}$
2	$\{1, 2, 3\}$
3	$\emptyset$



3).  $(a^* / b^*)^*$

$z\# = (a^* / b^*)^* \#$



Follow (1) =  $\{1, 2\} \cup \{3\} = \{1, 2, 3\}$   
Follow (2) =  $\{1, 2\} \cup \{3\} = \{1, 2, 3\}$   
Follow (3) =  $\emptyset$

Position	Follow
1	$\{1, 2, 3\}$
2	$\{1, 2, 3\}$
3	$\emptyset$

let  $A = \{1, 2, 3\}$

$\delta_{trans}(A, a) = \text{follow}(1) = \{1, 2, 3\} = A$

$\delta_{trans}(A, b) = \text{follow}(2) = \{1, 2, 3\} = A$

