Notes :

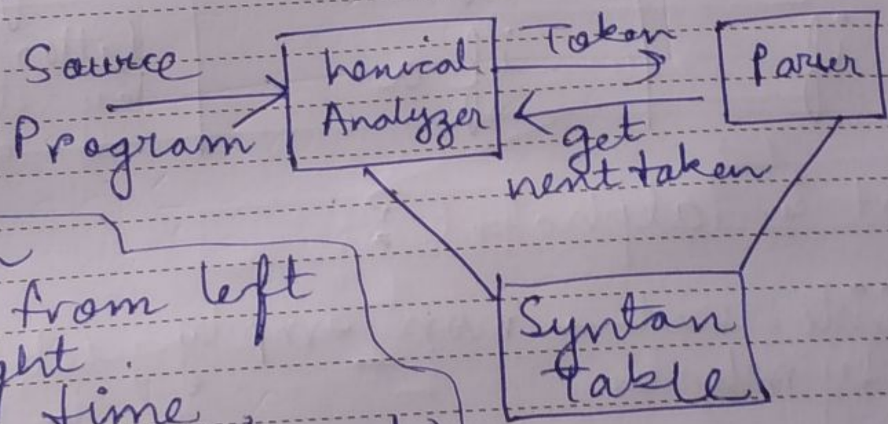
Photorealism GTA

অণু biology, শহরের পাঁচালী, হিরক রাজা, গুপী গাইন
চেমলক Society

AH Sir

Lenical Analysis → Role ?

Input → Source Program, goes through lenical Phase,
Output → Parser



6 Token read from left to right.
◦ At a time, one character read)

~~2 types of token:~~

★ Terms :~

★) Lenemes : sequence of characters in source ~~tso~~ program that is matched by the ~~a~~ pattern for a token.

★) Pattern → set of strings is described by a rule called a pattern associated with the token.

eg of token is lexeme → variable

Token	lexeme	Pattern
id	D2 count	letter followed by letter or digits
if	if	if
Keyword if	if a	letter followed by letter or digits

Q.S) What is alphaket?

A - ~~Finite not~~ non empty set of symbols

Q.S) What is string?

A = Finite sequence of symbol chosen from alphaket.

Q.S) What is language?

A: set of strings

Qs) ✱) Empty String → ϵ or λ

✱) Empty Language $\phi = \{\epsilon\}$

✱) Prefix of String → If we keep removing trailing symbols from a string, we get prefix.

✱) Substring of string → either prefix, suffix, or by deleting prefix, suffix, what we get is substring.

✱) Regular Expression →

$id = (L(L+D)^*)$ → Regular expression

eg:-

$a \rightarrow \{a\}$

$\epsilon \rightarrow \{\epsilon\}$

$a|b \rightarrow \{a, b\}$

Qs) What are the operations on Language?

Ans: Let $L = \{a, b, \ldots z, A, B, C, \ldots Z\}$

$D = \{0, 1, 2, \ldots, 9\}$

LUD ← Union, ~~Intersection~~, Complement,

LD ← Concatenation, Closure

~~Difference~~

Qs)

Closure

Kleene

L^*

(Zero or more Concatenation)

$$L^* = \bigcup_{i=0}^{\infty} L^i$$

Positive

L^+

(One or more)

$$L^+ = \bigcup_{i=1}^{\infty} L^i$$

$$a^* = \{\epsilon, a, aa, aaa, \ldots\}$$

$$a^+ = \{a, aa, aaa, \ldots\}$$

☆) $L(L \cup D)^*$ → Pattern ?

A: Letter followed by letters or digits

☆) $a(a|b)$ (I) , $a(a|b)^*$ (II)

Difference bet two ?

Ans :- I → aa
ab
L = {aa, ab} } Strings

II → a
aa
ab
aaa
abbb
;
; } Many strings

L = { a, aa, ab, aaa, abb, .. }

Next → Thu 3rd Period

Class Regular Exp