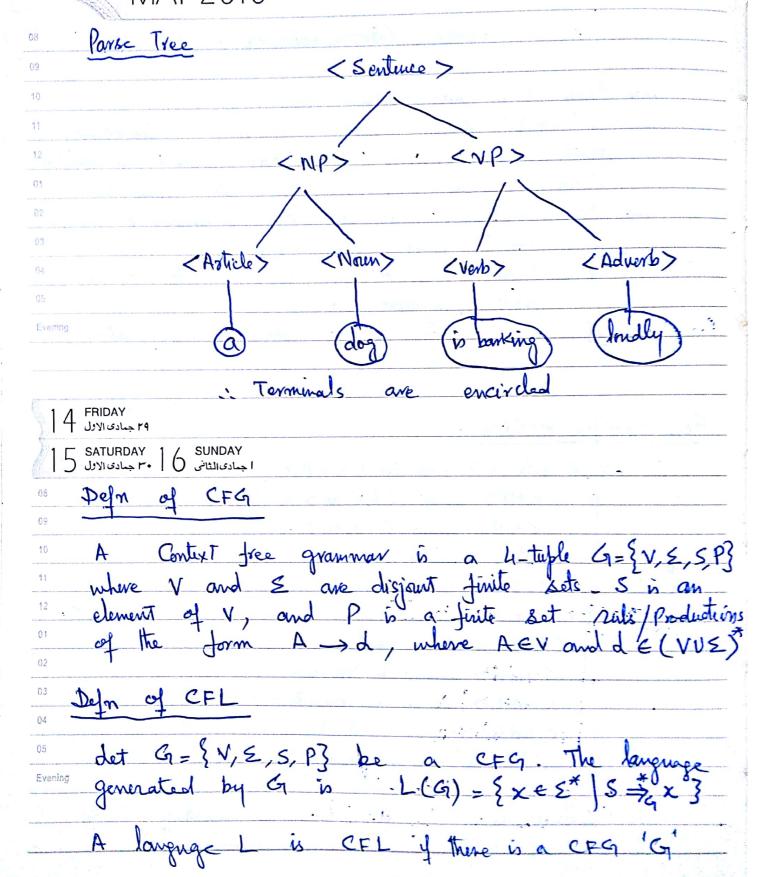
MAY M T W T F S S 31 4 5 6 7 8 9 3 4 5 6 7 8 9	
3 4 1 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	2)
Context Free Grammers	08
	09
-> Every CFL has CFG	10
A Context free grammer is simple recursive	/12
-> A Context free grammer is simple returnive method of speifying grammar rules by which strings in a language Com be generated.	01
Stories in a larguage Com be generated. To demonstrate that a CFG generates a large we must show two things	wäge
0 - Every sing in the language can be even	iced 05
from grammar. 1 No other string Can be generated for grammar.	
grammar.	
9en. Example of CFG Sentence > <np> < VP> WEDNESDAY 12 THURSDAY 13</np>	- 4
<np> -> < Article > < Noven> < verb> < Adverb></np>	09
set (< Article 7 -> a	10
of rules & Article> am	12
/ Productions / Norms - dog	01
<pre></pre>	02
< Verb> — is banking	03
(Advorb) -> politely	04
(<adverto> -> 'loudly'</adverto>	05
The state of the s	ening

جمادی الاول-جمادی المثانی ۱۳۳۱ MAY 2010 MAY

M T W T F S S S 1 2 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30



MAY M T W T F S S S S S S S S S	جدادی الثانی ۱۳۳۱ MAY 2010
So that L = L(G)	
Example (The language of	Algebraic Expressions) 10
$S \rightarrow S+S S-S S$	*S S S S S S S S S S S S S S S S S S S
the storing a+ (a*a)/a the derivation as	1-9 Can be obtained from 02
$\Rightarrow a + (s)/s - s \Rightarrow$	$\Rightarrow a+S-S \Rightarrow a+S/S-S$ $a+(S*S)/S-S$ Evening
$\Rightarrow \alpha + (\alpha * s)/s - s$	$\Rightarrow a + (a * a)/S - S$
$\Rightarrow a + (a * s)/s - s$ $\Rightarrow a + (a * a)/a - s$	$\Rightarrow a + (a * a)/a - a$ MONDAY 17 A reliability
$\Rightarrow a + (a \times a)/a - s$ Example	=> a + (a * a)/q - a MONDAY 1 7 TUESDAY 1 8 T = بادی الثانی
$\Rightarrow a + (a \times a)/a - s$	=> a + (a * a)/q - a MONDAY 1 7 TUESDAY 1 8 T = بادی الثانی
$\Rightarrow a + (a \times a)/a - s$ Example	=> a + (a * a)/q - a MONDAY 1 7 TUESDAY 1 8 8 1 ٣ جمادی الثانی
$\Rightarrow a + (a * a)/a - s$ $= \sum_{k=1}^{\infty} \sum_{k=1}^{\infty} a * s = a^{k}$ $= \sum_{k=1}^{\infty} a * s = a^{k}$	= \ a + (a x a)/q - q MONDAY 7 TUESDAY 8 Tuesday 8 Monday 7 Mond
$\Rightarrow a + (a \times a)/a - s$ $= \sum_{k=0}^{\infty} x^{k} + (a \times a)/a - s$ $= \sum_{k=0}^{\infty} x^{k} + (a \times a)/a - s$ $= \sum_{k=0}^{\infty} x^{k} + (a \times a)/a - s$	= \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
$\frac{\Rightarrow a + (a \times a)/a - s}{\text{Example}}$ $\frac{\text{Example}}{s \rightarrow a s \mid \Lambda}$ $\frac{\text{Example}}{s \rightarrow a s \mid \Lambda}$	= \ a + (a x a)/q - q MONDAY 7 TUESDAY 8 Tuesday 8 Monday 7 Mond
$\Rightarrow a + (a \times a)/a - s$ $= \sum_{x=0}^{\infty} a \times b \times a = a \times b \times $	= \ a + (a * a)/q - q MONDAY 1 7 TUESDAY 1 8 TUESDAY 1 8 08 09 10
$\Rightarrow a + (a \times a)/a - s$	=> a + (a * a)/q - q MONDAY 17 TUESDAY 18 TUESDAY 18 08 09 10 11 12
$\Rightarrow a + (a \times a)/a - s$	= \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
$\Rightarrow a + (a \times a)/a - s$	=> a + (a * a) / a - q MONDAY 17 TUESDAY 18 08 09 10 11 12 01 02 03 04 Evening

MAY TIWI 31 3 جمادى الثانى اسنما 10 11 12 13 14 15 17 18 19 20 21 22 24 25 26 27 28 29 16 MAY 2010 23 30 a*bb 09 10 -> aA 11 aaabb 01 B A 9 Evening WEDNESDAY م جمادى الثانى THURSDAY A ۵ جمادی الثانی 9 08 09 10 Stamie Example meluded 11 must be 9 12 abaabb 01 5 -> Xaax 02 03 04 05 Evening

MAY	
المان الثانى المال الما	
10 11 12 13 14 15 17 18 19 20 21 22 23 24 25 26 27 28 29 30 MAY 2010	les de la constante de la cons
Example (even no. of a's and even no. of b's)	08
	09
5 -> SS BS SB A USU	10
B-) aa bb	11
$u \rightarrow ab ba$	12
for string aababbab	01
	03
	04
	05
	Evening
B S N	
FRIDAY	113
	1 1/8
م ۲ جمادی الثانی ۲ جمادی الثانی ۲ جمادی الثانی ۲ جمادی الثانی	21
ر ۲ جمادی الثانی S U S U S T RATURDAY SATURDAY SATURDAY SATURDAY SALES الثانی S ک محمادی الثانی S ک ک محمادی الثانی S ک محمادی الثانی S ک ک ک ک محمادی الثانی S ک ک ک ک محمادی الثانی S ک ک ک ک ک ک ک ک ک ک ک ک ک ک ک ک ک ک	21/22
الم الماني الماني S U S U SUNDAY ¬ SATURDAY ¬ SATURDAY ¬	21
الم المنانى المنانى Sunday كالمنانى Sunday كالمنانى كالمنانى المنانى كالمنانى كالمنازى كالمن	21
ر ۲ جمادی الثانی S U S U S T RATURDAY SATURDAY SATURDAY SATURDAY SALES الثانی S ک محمادی الثانی S ک ک محمادی الثانی S ک محمادی الثانی S ک ک ک ک محمادی الثانی S ک ک ک ک محمادی الثانی S ک ک ک ک ک ک ک ک ک ک ک ک ک ک ک ک ک ک	
Y FAICUILITIES SUNDAY 2 SATURDAY 2 SATURDAY 2 SATURDAY 3 SATURDAY	.10
الم المنانى المنانى Sunday كالمنانى Sunday كالمنانى كالمنانى المنانى كالمنانى كالمنازى كالمن	.10
Sunday 3 Saturday 7 Sunday 23 Saturday 7 B 3 B 3 B 3 Ab $ (H.W) Example $	09 .10 .11 .12
Y FAICUILITIES SUNDAY 2 SATURDAY 2 SATURDAY 2 SATURDAY 3 SATURDAY	09 .10 .11 .12
SUNDAY 23 SATURDAY B S ab SUNDAY 23 SATURDAY CHEVILLED A 25 B S AS CHEVILLED A 25 CHEVIL	09 .10 .11 .12
Sunday 23 Saturday 2 ba B 3 bb A (H.W) Example $S \rightarrow (S) S \supset S P Q$ Derive 13 letter word $(P) P P P$ Example $L = \{x \in \{0,1\}^* \mid N_0(x) = N_1(x)\}$	09 .10 .11 .12 .01 .02 .03
SUNDAY 23 SATURDAY B S ab SUNDAY 23 SATURDAY CHEVILLED A 25 B S AS CHEVILLED A 25 Denine 13 letter word (~~PD(PD~~	09 .10 .11 .12 .01 .03 .03
Sunday 23 Saturday 2 ba B 3 bb A (H.W) Example $S \rightarrow (S) S \supset S P Q$ Derive 13 letter word $(P) P P P$ Example $L = \{x \in \{0,1\}^* \mid N_0(x) = N_1(x)\}$	09 .10 .11 .12 .01 .03 .04 .05

جمادى المثانى اسم MAY 2010 Some steps are skipped here 5 -> 55 -> 558 -> 150 os1 os1 \Rightarrow 1 AO OOSII OSI >> 1000111011 >> 10001101 Theorem L1 and L2 are CFL's, Then the languages L, UZ, L, L, and L* are also CFLs. (A CFG equivalent to R.E) (011+1)*(01)* MONDAY 9 جمادى الثانى } (generates {011, 13}). $A \rightarrow 011 | 1$ 25 TUESDAY ا جمادی الثانی $B \rightarrow AB/\Lambda$ } genrates (011,1)* A -> 011/1 09 C > DC | A } generates (01)* 10 S -> BC B -> AB / N A -> 011 /1

Smilarly CFG'S Can be obtained simply

Evening

C -> DC/A

D -> 01

MAY M T W T F S S S S S S S S S	جمادی الثانی ۱۳۳۱ MAY 2010
	applying simple logic 08
which Can be Seen	iv book So every R.I
is CFL.	10
Denvation & Ambiguity	11
2 7	12
Derivation	02
	03
Lmp	RMD
	05
expanded first	Evening Evening
expanded first	expanded first
S-> S+S S*S S-> 0/1/2/3/ 19	WEDNESDAY 26 ال جمادی الثانی THURSDAY 27 جمادی الثانی ۱۲ 27
<u> </u>	S 09
	. 10
\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	<u>t</u>
S + S	S + S 12
3	02
5 + 5	1 S + S 03
	04
1 2	3 05
LMDT	RMPT Evening

10 11 12 13 14 15 17 18 19 20 21 22 24 25 26 27 28 29 MAY 2010 Example (Ambrigity) 09 5-) as | sa | 9 1 aaa 1 02 S 04 05 9 OR 28 FRIDAY المادي الثاني 18 29 SATURDAY 30 ما جمادی الثانی SUNDAY A CFG is ambiguous if there is at least one string in 1(a) having two or more distinst 10 12 01 Unam biguous CFG (S) C*S (S+S) (S) 02 .03 03 04 05 05 F -> (5)/9 Even Evening

جمادىالثانى١٣٣١