Errata for "Theory of Automata" Lecture Notes

Dear students if you have an older copy of cs402 handouts then there is possibility of below mentioned errors in them please change them accordingly in your printed copy. New copy of handouts is also available on course website. (Changes have been highlighted in bold font)

Lecture No. 1

Page No. 4 Topic: **Introduction to Computer Theory**

Old Text	**Change**
Example: Σ= {B, aB, bab, d} s=BaBbabBd Tokenizing=(B), (aB), (bab), (d) **|s|=4**	Example: Σ= {B, aB, bab, d} s=BaBbab**B**d Tokenizing=(B), (aB), (bab), **(B)**, (d) **|s|=5**

Lecture No. 2

Page No 7 Topic: **Introduction to Computer Theory**

Old Text	**Change**
Example: The language **EQUAL**, of strings with number of a's equal to number of b's, defined over Σ={a,b}, can be written as {Λ ,ab, aabb,abab,baba,abba,...}	Example: The language **EQUAL**, of strings with number of a's equal to number of b's, defined over Σ={a,b}, can be written as {Λ ,ab,**ba,**aabb,abab,baba,abba,...}

Page No 8 Topic: **Introduction to Computer Theory**

Old Text	**Change**
Defining the language L, of strings containing exactly one a, defined over Σ={a, b} Step 1: a is in L Step 2: s(**aa**)s is also in **L,** where s belongs to b^* Step 3: No strings except those constructed in above, are allowed to be in **L**	**Defining the language L, of strings containing exactly one a, defined over Σ={a, b}** Step 1: a is in L Step 2: s(**a**)s is also in **L,** where s belongs to b^* Step 3: No strings except those constructed in above, are allowed to be in **L**

Lecture No. 25

Page No. 68

Topic: **Intersection of two regular languages**

Old Text	**Change**
Now FA accepting $L_1^c \cap L_2^c$, using the method described earlier, may be as follows	Now FA accepting $L_1^c \cup L_2^c$, using the method described earlier, may be as follows

Lecture No. 35

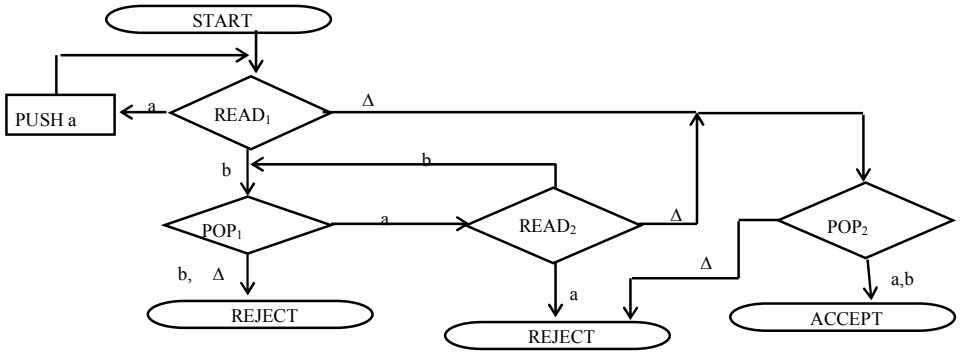
Page No. 100 Topic: **Nullable Production**

Old Text	**Change**
Consider the following CFG S → XaY|YY|aX|ZYX X → Za|bZ|ZZ|Yb Y → Ya|XY| ^ Z → aX|YYY It is to be noted that in the given CFG, the productions S → YY, X → ZZ, Z → YYY are Nullable productions, while Y → ^ is Null production.	Consider the following CFG S → XaY|YY|aX|ZYX X → Za|bZ|ZZ|Yb Y → Ya|XY| ^ Z → aX|YYY It is to be noted that in the given CFG, the productions S → YY, **S → ZYX**, X → ZZ**,** Z → YYY are Nullable productions, while Y → ^ is Null production.
Here the method of removing null productions, as discussed earlier, will be used along with replacing	Here the method of removing null productions, as discussed earlier, will be used along with replacing nonterminals corresponding to nullable productions

nonterminals corresponding to nullable productions like nonterminals for null productions are replaced. Thus the required CFG will be S→XaY|Xa|aY|a|YY|Y|aX|ZYX YX|ZX|ZY X → Za|a|bZ|b|ZZ|Z|Yb Y → Ya|a|XY|X|Y Z → aX|a|YYY|YY|Y,	like nonterminals for null productions are replaced. Thus the required CFG will be S→XaY|Xa|aY|a|YY|Y|aX|ZYX|YX|ZX|ZY|**Z|Y|X** X → Za|a|bZ|b|ZZ|Z|Yb Y → Ya|a|XY|X|Y Z → aX|a|YYY|YY|Y,

Lecture No. 37
Page No. 107
Topic: **POP and STACK**
Change (20-12-2011)

Old Diagram



Corrected