

CD

10-10-22

Class Monday

2020 ১৫

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10

13

16

24

26

27

33

19

~~8~~

a = 0
b = 1

a

$a(b)*c + (a+b)*b$

abbc

abc

ababc

$a(a|b)(a|b)c$ $a(a|b)c$ a

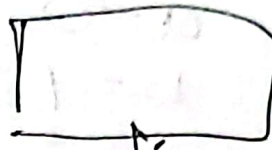
loop এ temporary Variable আনতে হবে,
যে variable অন্য variable এর উপর
dependent এবং iteration এর সাথে
change হবে।

full system টা intermediate code এ generate
হবে।

~~10: 8~~ $a = 0$

~~10: 8~~ $b = 1$

memory location



L: $T_1 = 4 * b$

$T_2 = x[T_1]$

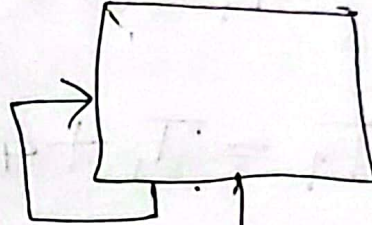
$T_2 = y[T_1]$

$T_4 = T_2 * T_3$

$a = a + T_1$

$b = b + 1$

goto L



exit

কিন্তু b এর মান $0, 1, 2$ করে বারছে ঘটা
fixed, তাই b এর উপর T_1 dependent.
এই dependency এর জন্যে T_1 induction variable
এটাকে remove করতে হবে.

1 \rightarrow 10

$a = 0$
 $b = 1$

$T_1 = 0$

L: $T_1 = T_1 + 4$

$T_2 = X[T_1]$

$T_3 = Y[T_1]$

$T_4 = T_2 * T_3$

$a = a + T_4$

goto L while ($T_1 < 36$)

2019

SDI

7 b)

$S \rightarrow id = E \quad \{ \text{generate } (id.place = E.place) \}$

$E \rightarrow E + T \quad \{ E.place = \text{newTemp};$
 $E \rightarrow T \quad \text{gen}(E.place + T.place)$

$T \rightarrow T * F \quad \text{gen}(E.place = T.place)$
 $T \rightarrow F \quad \text{gen}(E.place = T.place)$
 $F \rightarrow id$

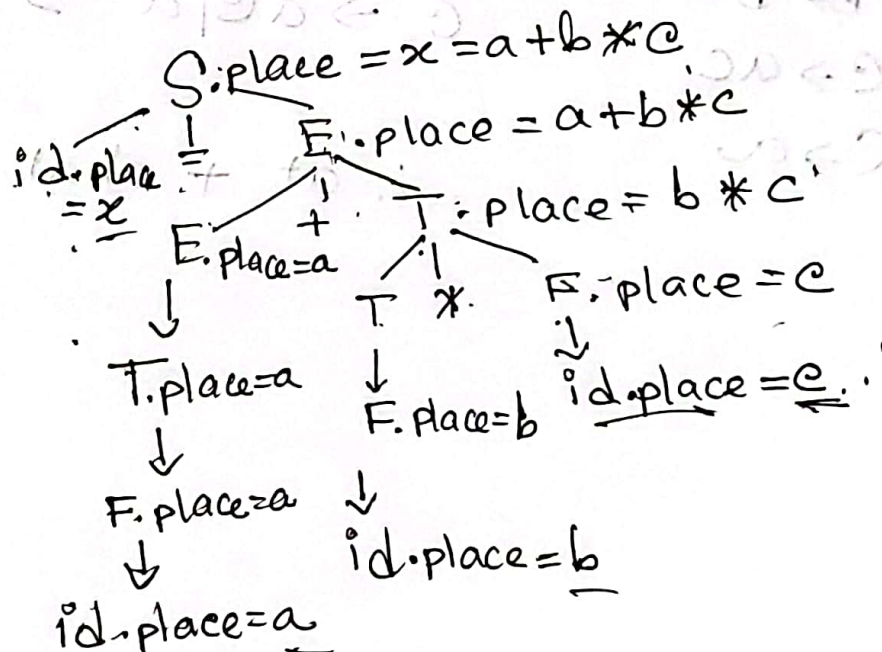
$\{ T.place = \text{newTemp};$

$\text{gen}(T.place * F.place)$

$\text{gen}(T.place = F.place) \}$

$\{ \text{gen}(T.place = id.place) \}$

$id = E$
 $= a + b * c$



RG \rightarrow FA \rightarrow

REP

3-address code

$$t_1 = b * c$$

$$t_2 = a + t_1$$

$$x = t_2$$

2017 - 2b

$$R, E = (a|b)^+ c$$

$$S \rightarrow aS$$

$$S \rightarrow aB$$

$$B \rightarrow bC$$

$$C \rightarrow aC$$

$$C \rightarrow a$$

$$S \rightarrow \boxed{a^+} \boxed{aB}$$

$$a^+ + aba^+$$

$$B \rightarrow bC \rightarrow bat$$

$$C \rightarrow aC|a \rightarrow at$$

$$\therefore at + abat$$