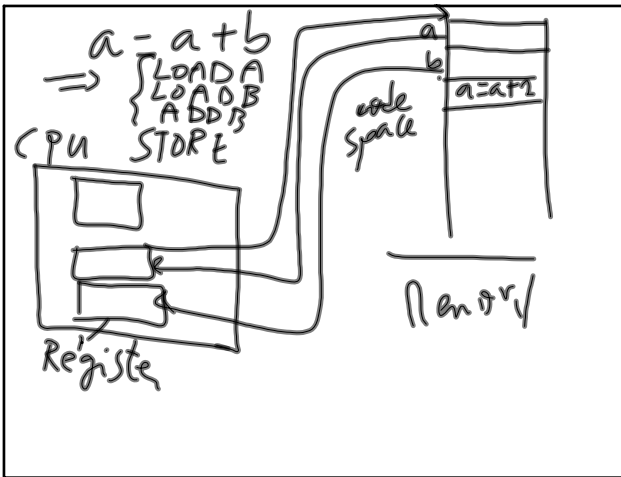


- principles of programming
 - compiler construction
 1 - lexical analysis
 [lab
 2 - syntactical analysis
 $a = a + b$
 $ta = b$

Jun 23-4:06 PM

3. semantic analysis
 $char\ a;$
 $int\ b;$
 $a = a + b;$
 a / b
 4 - intermediate code generation

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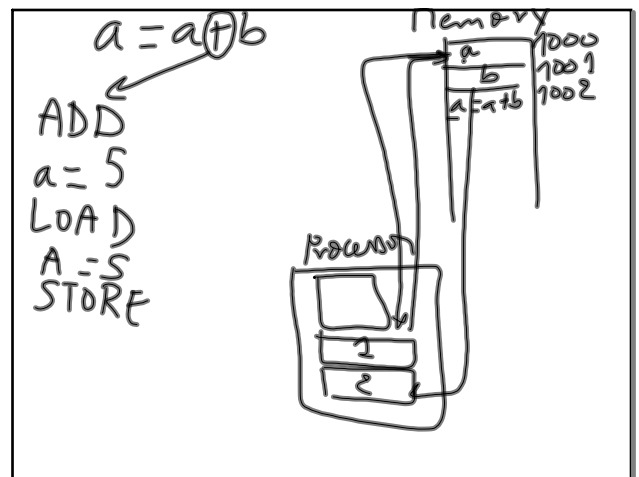
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$a = a + b;$ integer
 variable: letter (letter/digit)
 constant: 94, 6, 5
 separators:
 operators: +, -, *, /
 keywords:
 ab , a , a
 $1ab$

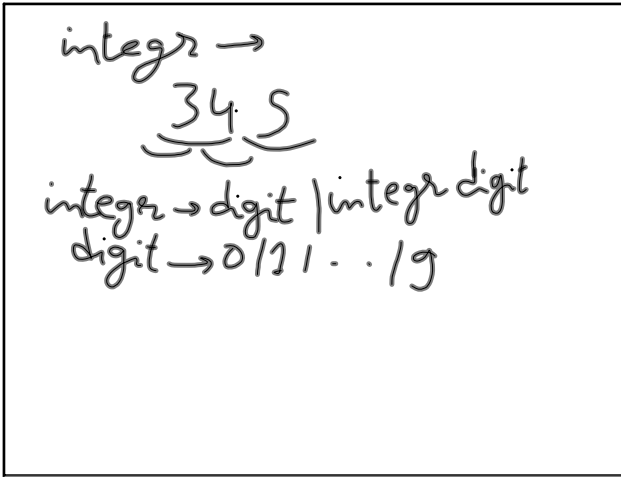
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- inst \rightarrow $ident = ident + ident;$
 - semantic:
 Types verification

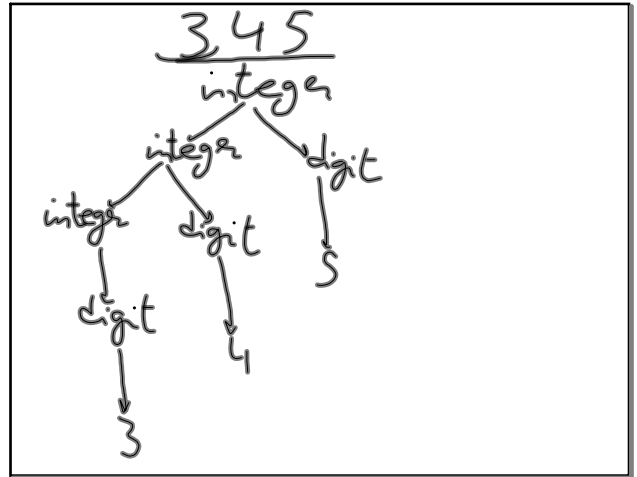
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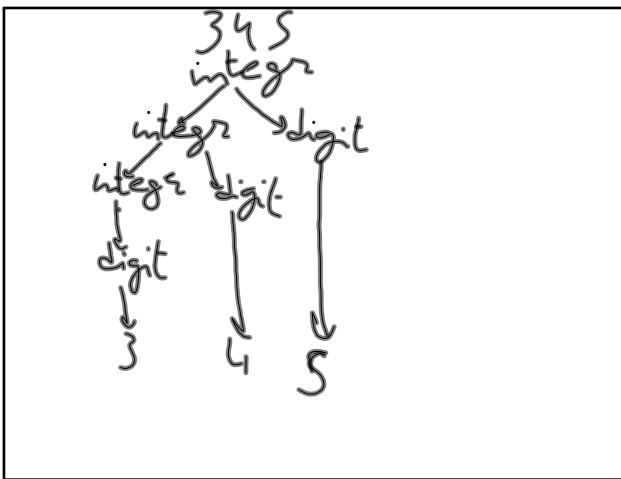
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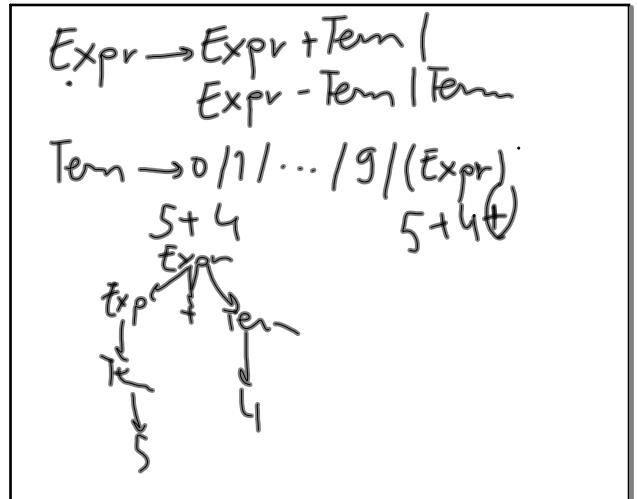
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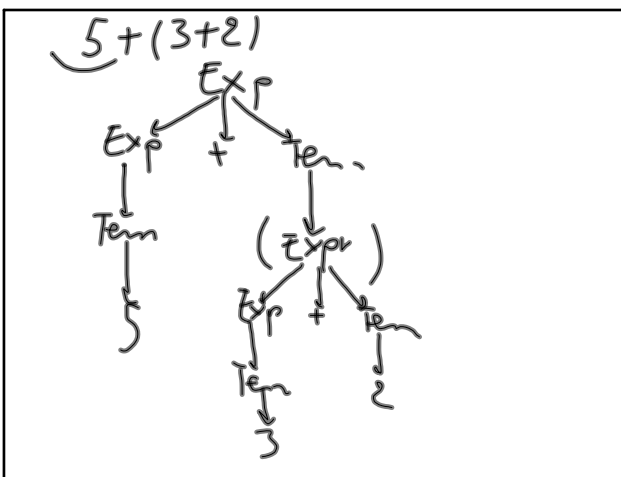
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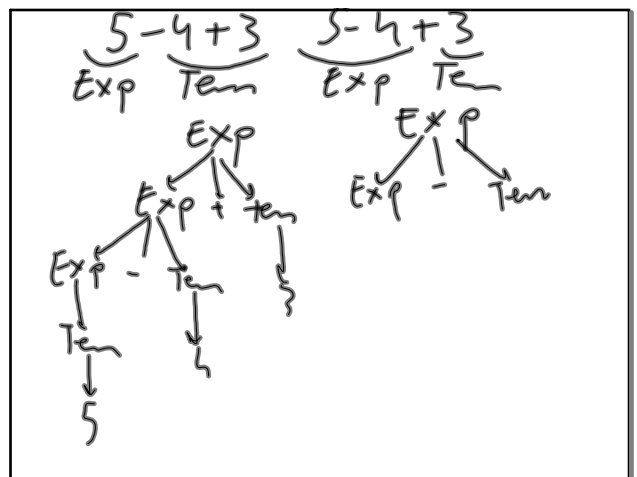
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Jun 23-4:57 PM



Jun 23-5:01 PM



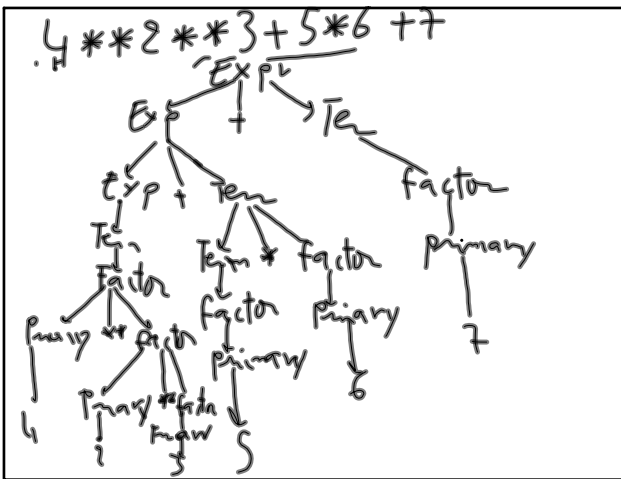
Jun 23-5:03 PM

$5 - 4 + 3$
 $(5 - 1) + 3 = 4$
 $5 - (4 + 3) = -2$
 $5 - (4 \times 3)$

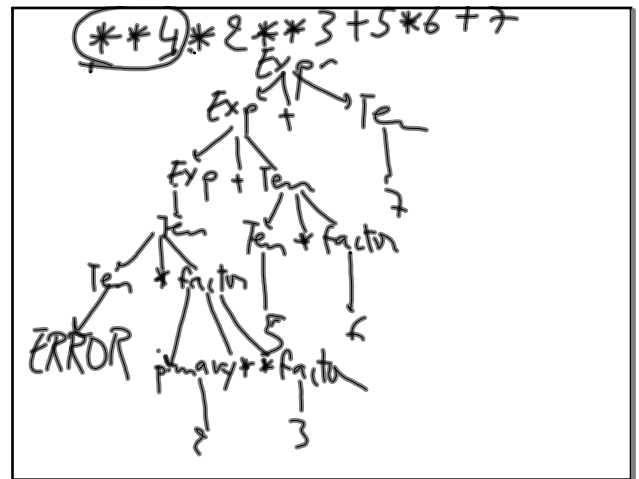
Jun 23-5:06 PM

$Expr \rightarrow Expr + Term \mid Expr - Term \mid Term$
 $Term \rightarrow Term * Factor \mid Term / factor \mid factor$
 $factor \rightarrow Primary ** factor \mid Primary$
 $Primary \rightarrow 0 \mid 1 \mid \dots \mid 9 \mid (Expr)$

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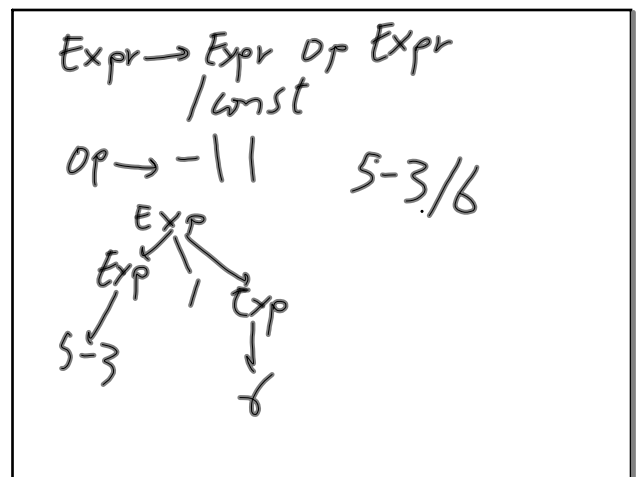
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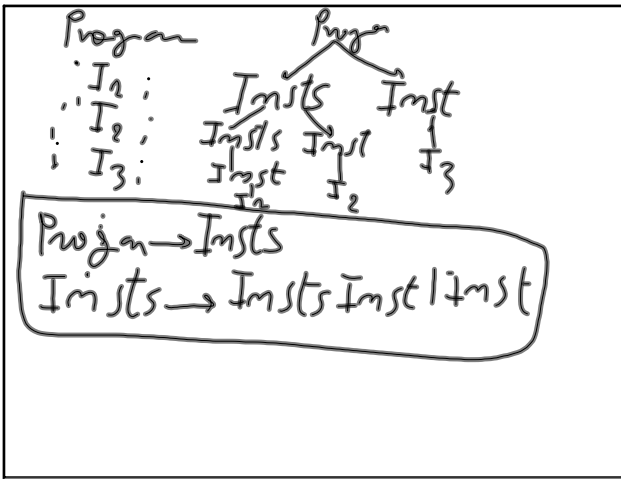
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$Expr \rightarrow Expr \text{ Op } Expr$
 $\mid (Expr) \mid Integer$
 $Op \rightarrow + \mid - \mid * \mid / \mid \dots$

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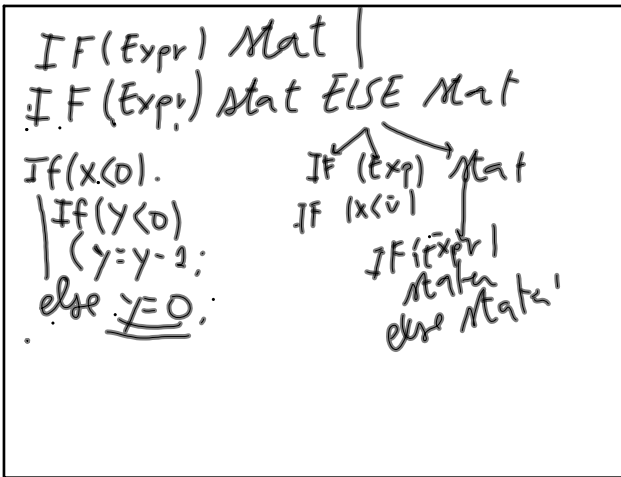


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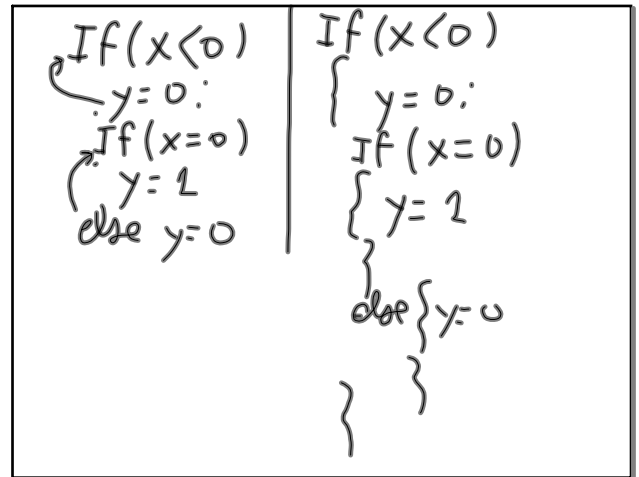
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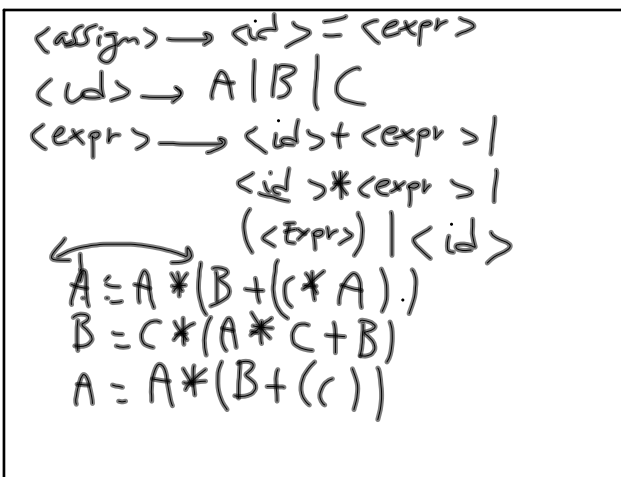
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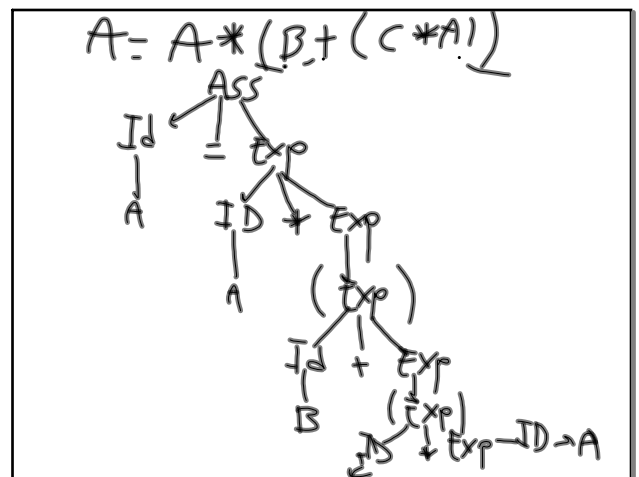
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Jun 23-5:57 PM



Jun 23-6:10 PM



Jun 23-6:29 PM