Week 3 - VBL

- Post it in the forum – Newbinusmaya
- Due: **Tuesday, 8 March 2022, BEFORE mid-day**
- Individual Assignment part 1 and 2

Assignment Part 1

- Let any set of production rules in a CFG be
  $X \rightarrow (X) \mid X+X \mid X*X \mid X-X \mid X \mid a$

- **a*a+(a-a)**

Questions:

1. Show leftmost derivation & draw the parse tree

2. Show rightmost derivation& draw the parse tree

Assignment Part. 2

Consider grammar G

V = { Expr, Term, Factor}
T = { +, -, *, /, 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, ……., (,) }
P = { Expr → Expr + Term,
Expr → Expr – Term,
Expr → Term,
Term → Term * Factor,
Term → Term / Factor,
Term → Factor,
Factor → digit,
Term → (Expr),
Factor → (Expr),
digit → 0 | 1 | 2 | 3 | …..
}
S = Expr

Questions:

1. Show left derivation of "(2+3) * 5+7 / (9-4)"
2. Show right derivation of "(2+3) * 5+7 / (9-4)"
3. Draw parse tree for point (1) above
4. Draw parse tree for point (2) above

Thank you