

CSE420

Assignment-2

- a. **Design** an equivalent Left-recursion free and left factored grammar of the following grammar G. The set of non-terminals is { **E**, **P** } and the set of terminals is { '**a**', '(', ',', ')', '}' }.

Context-free Grammar *G*:

$$\mathbf{P} \rightarrow (\mathbf{E}) \mid \mathbf{a}$$
$$\mathbf{E} \rightarrow \mathbf{E}, \mathbf{P} \mid \mathbf{P}$$

- b. **Construct** FIRST and FOLLOW sets for the non-terminals of the resulting grammar.
- c. **Construct** LL(1) parse table for the resulting grammar.
- d. **Validate** the following syntax through predictive parsing using the constructed parse table.
(a , (a , (a , a)))