

2024 Compiler 隨堂加分小考 (3/22, 3/29)

Consider the following grammar:

Start \rightarrow Value \$

Value \rightarrow num | lparen Expr rparen

Expr \rightarrow plus Value Value | prod Values

Values \rightarrow Value Values | λ

First sets & Follow sets (3/22)

| | First sets | Follow sets |
|--------|---------------------------|---------------------------|
| Start | {num, lparen} | { λ } |
| Value | {num, lparen} | {\$, num, lparen, rparen} |
| Expr | {plus, prod} | {rparen} |
| Values | {num, lparen, λ } | {rparen} |

Parse Table (3/29 此表格對即給分)

| | \$ | num | lparen | rparen | prod | plus |
|--------|----|-----|--------|--------|------|------|
| Start | | ① | ① | | | |
| Value | | ② | ③ | | | |
| Expr | | | | | ⑤ | ④ |
| Values | | ⑥ | ⑥ | ⑦ | | |