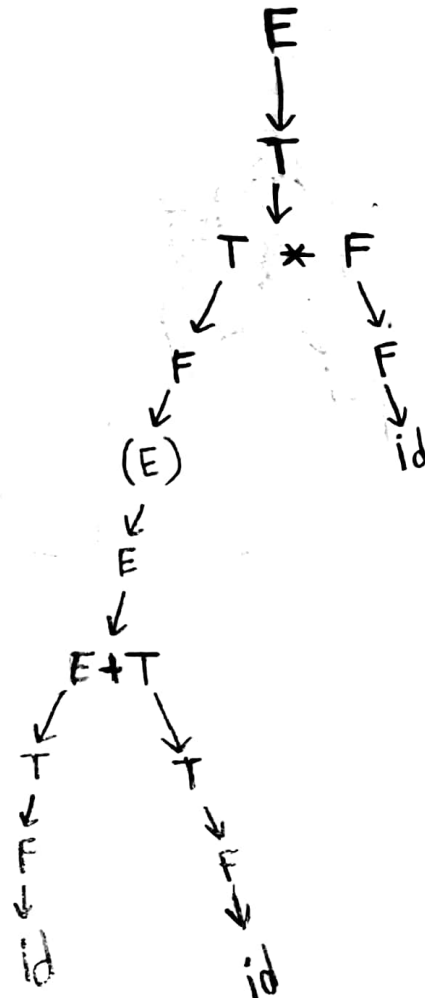


Input String

Prod Rules

- ① $E \rightarrow E+T$
- ② $E \rightarrow T$
- ③ $T \rightarrow T * F$
- ④ $T \rightarrow F$
- ⑤ $F \rightarrow (E)$
- ⑥ $F \rightarrow id$

Parse Tree



| Stack | Input |
|--------------|--------------|
| \$0 | (id+id)*id\$ |
| \$0(4 | id+id)*id\$ |
| \$0(4id5 | +id)*id\$ |
| \$0(4F3 | +id)*id\$ |
| \$0(4T2 | +id)*id\$ |
| \$0(4E8 | +id)*id\$ |
| \$0(4E8+6 | id)*id\$ |
| \$0(4E8+6id5 |)*id\$ |
| \$0(4E8+6F3 |)*id\$ |
| \$0(4E8+6T9 |)*id\$ |
| \$0(4E8 |)*id\$ |
| \$0(4E8)11 | *id\$ |
| \$0F3 | *id\$ |
| \$0T2 | *id\$ |
| \$0T2*7 | id\$ |
| \$0T2*7id5 | \$ |
| \$0T2*7F10 | \$ |
| \$0T2 | \$ |
| \$0E1 | \$ |
| ACC | ✓ |

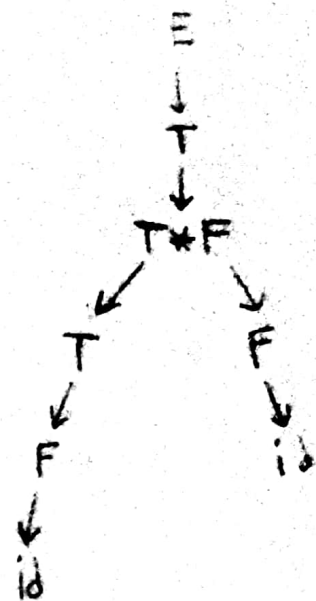
String #1 should Accept

Input string: id id \$

| Stack | Input |
|------------------|------------|
| \$0 | id * id \$ |
| \$0 id 5 | * id \$ |
| \$0 F 3 | * id \$ |
| \$0 T 2 | * id \$ |
| \$0 T 2 * 7 | id \$ |
| \$0 T 2 * 7 id 5 | \$ |
| \$0 T 2 * 7 F 10 | \$ |
| \$0 T 2 | \$ |
| \$0 E 1 | \$ |
| ACC | ✓ |

- ① $E \rightarrow E * T$
- ② $E \rightarrow T$
- ③ $T \rightarrow T * F$
- ④ $T \rightarrow F$
- ⑤ $F \rightarrow (E)$
- ⑥ $F \rightarrow id$

Parse Tree



String #2 should be accepted

Input String: $(id^*)\$$

| Stacks | Input |
|-----------|------------|
| \$0 | $(id^*)\$$ |
| \$0(4 | $id^*)\$$ |
| \$0(4id5 | $*)\$$ |
| \$0(4F3 | $*)\$$ |
| \$0(4T2 | $*)\$$ |
| \$0(4T2*7 | $)\$$ |

Fails, no action for ")" on state 7

- ① $E \rightarrow E+T$
- ② $E \rightarrow T$
- ③ $T \rightarrow T * F$
- ④ $T \rightarrow F$
- ⑤ $F \rightarrow (E)$
- ⑥ $F \rightarrow id$

Parse Tree

