

Laboratorio F Documentación

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(1)

- Tabla SLR 3 según “lab-f.ans”

| (1) | | | | | | | | |
|---------------------------------------|--------|--------|--------|------|-------|--------|---|---|
| SLR 3: | | | | | | | | |
| /* E → T + E T */ | | | | | | | | |
| /* T → number * T number (E) */ | | | | | | | | |
| | NUMBER | LPAREN | RPAREN | PLUS | TIMES | DOLLAR | E | T |
| 0 | S3 | S4 | | | | | 1 | 2 |
| 1 | | | | | | ACCEPT | | |
| 2 | | | R2 | S5 | | R2 | | |
| 3 | | | R4 | R4 | S6 | R4 | | |
| 4 | S3 | S4 | | | | | 9 | 2 |
| 5 | S3 | S4 | | | | | 7 | 2 |
| 6 | S3 | S4 | | | | | | 8 |
| 7 | | | R1 | | | R1 | | |
| 8 | | | R3 | R3 | | R3 | | |
| 9 | | | S10 | | | | | |
| 10 | | | R5 | R5 | | R5 | | |
| 32 items = 10 points | | | | | | | | |

- Tabla SLR 3 obtenida del proyecto

| Tabla SLR | | | | | | | | |
|-----------|--------|--------|--------|--------|--------|---------|------------|-------|
| Estado | LPAREN | NUMBER | PLUS | RPAREN | TIMES | \$ | expression | term |
| 0 | ['S2'] | ['S3'] | [] | [] | [] | [] | ['4'] | ['1'] |
| 1 | [] | [] | ['S9'] | ['R3'] | [] | ['R3'] | [] | [] |
| 2 | ['S2'] | ['S3'] | [] | [] | [] | [] | ['7'] | ['1'] |
| 3 | [] | [] | ['R5'] | ['R5'] | ['S5'] | ['R5'] | [] | [] |
| 4 | [] | [] | [] | [] | [] | ['ACC'] | [] | [] |
| 5 | ['S2'] | ['S3'] | [] | [] | [] | [] | [] | ['6'] |
| 6 | [] | [] | ['R4'] | ['R4'] | [] | ['R4'] | [] | [] |
| 7 | [] | [] | [] | ['S8'] | [] | [] | [] | [] |
| 8 | [] | [] | ['R6'] | ['R6'] | [] | ['R6'] | [] | [] |
| 9 | ['S2'] | ['S3'] | [] | [] | [] | [] | ['10'] | ['1'] |
| 10 | [] | [] | [] | ['R2'] | [] | ['R2'] | [] | [] |

- Estados del SLR 3

Nomenclatura para Reducción (Numeración de gramática)

| Estados | |
|--|--|
| Estado: 0 | Estado: 4 |
| - ['expression', '-->', '.', 'expression'] | - ['expression', '-->', 'expression', '.'] |
| Estado: 1 | Estado: 5 |
| - ['expression', '-->', '.', 'term', 'PLUS', 'expression'] | - ['term', '-->', 'NUMBER', 'TIMES', '.', 'term'] |
| - ['expression', '-->', '.', 'term'] | - ['term', '-->', '.', 'NUMBER', 'TIMES', 'term'] |
| - ['term', '-->', '.', 'NUMBER', 'TIMES', 'term'] | - ['term', '-->', '.', 'NUMBER'] |
| - ['term', '-->', '.', 'NUMBER'] | - ['term', '-->', '.', 'LPAREN', 'expression', 'RPAREN'] |
| - ['term', '-->', '.', 'LPAREN', 'expression', 'RPAREN'] | Estado: 6 |
| Estado: 2 | - ['term', '-->', 'NUMBER', 'TIMES', 'term', '.'] |
| - ['term', '-->', 'LPAREN', '.', 'expression', 'RPAREN'] | Estado: 7 |
| - ['expression', '-->', '.', 'term', 'PLUS', 'expression'] | - ['term', '-->', 'LPAREN', 'expression', '.', 'RPAREN'] |
| - ['expression', '-->', '.', 'term'] | Estado: 8 |
| - ['term', '-->', '.', 'NUMBER', 'TIMES', 'term'] | - ['term', '-->', 'LPAREN', 'expression', 'RPAREN', '.'] |
| - ['term', '-->', '.', 'NUMBER'] | Estado: 9 |
| - ['term', '-->', '.', 'LPAREN', 'expression', 'RPAREN'] | - ['expression', '-->', 'term', 'PLUS', '.', 'expression'] |
| Estado: 3 | - ['expression', '-->', '.', 'term', 'PLUS', 'expression'] |
| - ['term', '-->', 'NUMBER', '.'] | - ['expression', '-->', '.', 'term'] |
| - ['term', '-->', 'NUMBER', '.', 'TIMES', 'term'] | - ['expression', '-->', '.', 'term', 'PLUS', 'expression'] |
| | - ['term', '-->', '.', 'NUMBER', 'TIMES', 'term'] |
| | - ['term', '-->', '.', 'NUMBER'] |
| | - ['term', '-->', '.', 'LPAREN', 'expression', 'RPAREN'] |
| | Estado: 10 |
| | - ['expression', '-->', 'term', 'PLUS', 'expression', '.'] |

| Indice | Produccion |
|--------|-------------------------------------|
| 1 | expression --> expression |
| 2 | expression --> term PLUS expression |
| 3 | expression --> term |
| 4 | term --> NUMBER TIMES term |
| 5 | term --> NUMBER |
| 6 | term --> LPAREN expression RPAREN |

(2)

• SLR 1:

/* E → E + T | T */
/* T → T * F | F */
/* F → (E) | id */

• Tabla obtenida para SLR 1

| Tabla SLR | | | | | | | | | |
|-----------|--------|--------|--------|---------|--------|---------|------------|--------|-------|
| Estado | ID | LPAREN | PLUS | RPAREN | TIMES | \$ | expression | factor | term |
| 0 | ['S3'] | ['S1'] | [] | [] | [] | [] | ['4'] | ['5'] | ['2'] |
| 1 | ['S3'] | ['S1'] | [] | [] | [] | [] | ['10'] | ['5'] | ['2'] |
| 2 | [] | [] | ['R3'] | ['R3'] | ['S8'] | ['R3'] | [] | [] | [] |
| 3 | [] | [] | ['R7'] | ['R7'] | ['R7'] | ['R7'] | [] | [] | [] |
| 4 | [] | [] | ['S6'] | [] | [] | ['ACC'] | [] | [] | [] |
| 5 | [] | [] | ['R5'] | ['R5'] | ['R5'] | ['R5'] | [] | [] | [] |
| 6 | ['S3'] | ['S1'] | [] | [] | [] | [] | [] | ['5'] | ['7'] |
| 7 | [] | [] | ['R2'] | ['R2'] | ['S8'] | ['R2'] | [] | [] | [] |
| 8 | ['S3'] | ['S1'] | [] | [] | [] | [] | [] | ['9'] | [] |
| 9 | [] | [] | ['R4'] | ['R4'] | ['R4'] | ['R4'] | [] | [] | [] |
| 10 | [] | [] | ['S6'] | ['S11'] | [] | [] | [] | [] | [] |
| 11 | [] | [] | ['R6'] | ['R6'] | ['R6'] | ['R6'] | [] | [] | [] |

Numeración para gramática (REDUCE)

| Indice | Produccion |
|--------|-------------------------------------|
| 1 | expression` --> expression |
| 2 | expression --> expression PLUS term |
| 3 | expression --> term |
| 4 | term --> term TIMES factor |
| 5 | term --> factor |
| 6 | factor --> LPAREN expression RPAREN |
| 7 | factor --> ID |

• Estados

| | |
|--|--|
| Estado: 0 - ['expression`, '-->', '.', 'expression'] - ['expression', '-->', '.', 'expression', 'PLUS', 'term'] - ['expression', '-->', '.', 'term'] - ['term', '-->', '.', 'term', 'TIMES', 'factor'] - ['term', '-->', '.', 'factor'] - ['factor', '-->', '.', 'LPAREN', 'expression', 'RPAREN'] - ['factor', '-->', '.', 'ID'] | Estado: 4 - ['expression', '-->', 'expression', '.', 'PLUS', 'term'] - ['expression', '-->', 'expression', '.'] |
| Estado: 1 - ['factor', '-->', 'LPAREN', '.', 'expression', 'RPAREN'] - ['expression', '-->', '.', 'expression', 'PLUS', 'term'] - ['expression', '-->', '.', 'term'] - ['term', '-->', '.', 'term', 'TIMES', 'factor'] - ['term', '-->', '.', 'factor'] - ['factor', '-->', '.', 'LPAREN', 'expression', 'RPAREN'] - ['factor', '-->', '.', 'ID'] | Estado: 5 - ['term', '-->', 'factor', '.'] |
| Estado: 2 - ['term', '-->', 'term', '.', 'TIMES', 'factor'] - ['expression', '-->', 'term', '.'] | Estado: 6 - ['expression', '-->', 'expression', 'PLUS', '.', 'term'] - ['term', '-->', '.', 'term', 'TIMES', 'factor'] - ['term', '-->', '.', 'factor'] - ['factor', '-->', '.', 'LPAREN', 'expression', 'RPAREN'] - ['factor', '-->', '.', 'ID'] |
| Estado: 3 - ['factor', '-->', 'ID', '.'] | Estado: 7 - ['term', '-->', 'term', '.', 'TIMES', 'factor'] - ['expression', '-->', 'expression', 'PLUS', 'term', '.'] |
| | Estado: 8 - ['term', '-->', 'term', 'TIMES', '.', 'factor'] - ['factor', '-->', '.', 'LPAREN', 'expression', 'RPAREN'] - ['factor', '-->', '.', 'ID'] |
| | Estado: 9 - ['term', '-->', 'term', 'TIMES', 'factor', '.'] |
| | Estado: 10 - ['expression', '-->', 'expression', '.', 'PLUS', 'term'] - ['factor', '-->', 'LPAREN', 'expression', '.', 'RPAREN'] |
| | Estado: 11 - ['factor', '-->', 'LPAREN', 'expression', 'RPAREN', '.'] |

• Simulación para $\text{var1} + \text{var2} * (\text{var1} * \text{var2})$

| Línea | Pila | Símbolos | Entrada | Acción |
|-------|-------------------|---|---|--|
| 1 | 0 | | ID PLUS ID TIMES LPAREN ID TIMES ID RPAREN \$ | SHIFT TO 3 |
| 2 | 0 3 | ID | PLUS ID TIMES LPAREN ID TIMES ID RPAREN \$ | REDUCED BY factor --> ID |
| 3 | 0 5 | factor | PLUS ID TIMES LPAREN ID TIMES ID RPAREN \$ | REDUCED BY term --> factor |
| 4 | 0 2 | term | PLUS ID TIMES LPAREN ID TIMES ID RPAREN \$ | REDUCED BY expression --> term |
| 5 | 0 4 | expression | PLUS ID TIMES LPAREN ID TIMES ID RPAREN \$ | SHIFT TO 6 |
| 6 | 0 4 6 | expression PLUS | ID TIMES LPAREN ID TIMES ID RPAREN \$ | SHIFT TO 3 |
| 7 | 0 4 6 3 | expression PLUS ID | TIMES LPAREN ID TIMES ID RPAREN \$ | REDUCED BY factor --> ID |
| 8 | 0 4 6 5 | expression PLUS factor | TIMES LPAREN ID TIMES ID RPAREN \$ | REDUCED BY term --> factor |
| 9 | 0 4 6 7 | expression PLUS term | TIMES LPAREN ID TIMES ID RPAREN \$ | SHIFT TO 8 |
| 10 | 0 4 6 7 8 | expression PLUS term TIMES | LPAREN ID TIMES ID RPAREN \$ | SHIFT TO 1 |
| 11 | 0 4 6 7 8 1 | expression PLUS term TIMES LPAREN | ID TIMES ID RPAREN \$ | SHIFT TO 3 |
| 12 | 0 4 6 7 8 1 3 | expression PLUS term TIMES LPAREN ID | TIMES ID RPAREN \$ | REDUCED BY factor --> ID |
| 13 | 0 4 6 7 8 1 5 | expression PLUS term TIMES LPAREN factor | TIMES ID RPAREN \$ | REDUCED BY term --> factor |
| 14 | 0 4 6 7 8 1 2 | expression PLUS term TIMES LPAREN term | TIMES ID RPAREN \$ | SHIFT TO 8 |
| 15 | 0 4 6 7 8 1 2 8 | expression PLUS term TIMES LPAREN term TIMES | ID RPAREN \$ | SHIFT TO 3 |
| 16 | 0 4 6 7 8 1 2 8 3 | expression PLUS term TIMES LPAREN term TIMES ID | RPAREN \$ | REDUCED BY factor --> ID |
| 17 | 0 4 6 7 8 1 2 8 9 | expression PLUS term TIMES LPAREN term TIMES factor | RPAREN \$ | REDUCED BY term --> term TIMES factor |
| 18 | 0 4 6 7 8 1 2 | expression PLUS term TIMES LPAREN term | RPAREN \$ | REDUCED BY expression --> term |
| 19 | 0 4 6 7 8 1 10 | expression PLUS term TIMES LPAREN expression | RPAREN \$ | SHIFT TO 11 |
| 20 | 0 4 6 7 8 1 10 11 | expression PLUS term TIMES LPAREN expression RPAREN | \$ | REDUCED BY factor --> LPAREN expression RPAREN |
| 21 | 0 4 6 7 8 9 | expression PLUS term TIMES factor | \$ | REDUCED BY term --> term TIMES factor |
| 22 | 0 4 6 7 | expression PLUS term | \$ | REDUCED BY expression --> expression PLUS term |
| 23 | 0 4 | expression | \$ | ACC |

¿Se acepta según la simulación? YES

• Simulación para $(\text{id1} + \text{id4}) * \text{id3}$

| Línea | Pila | Símbolos | Entrada | Acción |
|-------|------------|-------------------------------|--------------------------------------|--|
| 1 | 0 | | LPAREN ID PLUS ID RPAREN TIMES ID \$ | SHIFT TO 1 |
| 2 | 0 1 | LPAREN | ID PLUS ID RPAREN TIMES ID \$ | SHIFT TO 3 |
| 3 | 0 1 3 | LPAREN ID | PLUS ID RPAREN TIMES ID \$ | REDUCED BY factor --> ID |
| 4 | 0 1 5 | LPAREN factor | PLUS ID RPAREN TIMES ID \$ | REDUCED BY term --> factor |
| 5 | 0 1 2 | LPAREN term | PLUS ID RPAREN TIMES ID \$ | REDUCED BY expression --> term |
| 6 | 0 1 10 | LPAREN expression | PLUS ID RPAREN TIMES ID \$ | SHIFT TO 6 |
| 7 | 0 1 10 6 | LPAREN expression PLUS | ID RPAREN TIMES ID \$ | SHIFT TO 3 |
| 8 | 0 1 10 6 3 | LPAREN expression PLUS ID | RPAREN TIMES ID \$ | REDUCED BY factor --> ID |
| 9 | 0 1 10 6 5 | LPAREN expression PLUS factor | RPAREN TIMES ID \$ | REDUCED BY term --> factor |
| 10 | 0 1 10 6 7 | LPAREN expression PLUS term | RPAREN TIMES ID \$ | REDUCED BY expression --> expression PLUS term |
| 11 | 0 1 10 | LPAREN expression | RPAREN TIMES ID \$ | SHIFT TO 11 |
| 12 | 0 1 10 11 | LPAREN expression RPAREN | TIMES ID \$ | REDUCED BY factor --> LPAREN expression RPAREN |
| 13 | 0 5 | factor | TIMES ID \$ | REDUCED BY term --> factor |
| 14 | 0 2 | term | TIMES ID \$ | SHIFT TO 8 |
| 15 | 0 2 8 | term TIMES | ID \$ | SHIFT TO 3 |
| 16 | 0 2 8 3 | term TIMES ID | \$ | REDUCED BY factor --> ID |
| 17 | 0 2 8 9 | term TIMES factor | \$ | REDUCED BY term --> term TIMES factor |
| 18 | 0 2 | term | \$ | REDUCED BY expression --> term |
| 19 | 0 4 | expression | \$ | ACC |

¿Se acepta según la simulación? YES

• Simulación para (id2 * (id1 + id5))

| Línea | Pila | Símbolos | Entrada | Acción |
|-------|------------------|---|--|--|
| 1 | 0 | | LPAREN ID TIMES LPAREN ID PLUS ID RPAREN RPAREN \$ | SHIFT TO 1 |
| 2 | 0 1 | LPAREN | ID TIMES LPAREN ID PLUS ID RPAREN RPAREN \$ | SHIFT TO 3 |
| 3 | 0 1 3 | LPAREN ID | TIMES LPAREN ID PLUS ID RPAREN RPAREN \$ | REDUCED BY factor --> ID |
| 4 | 0 1 5 | LPAREN factor | TIMES LPAREN ID PLUS ID RPAREN RPAREN \$ | REDUCED BY term --> factor |
| 5 | 0 1 2 | LPAREN term | TIMES LPAREN ID PLUS ID RPAREN RPAREN \$ | SHIFT TO 8 |
| 6 | 0 1 2 8 | LPAREN term TIMES | LPAREN ID PLUS ID RPAREN RPAREN \$ | SHIFT TO 1 |
| 7 | 0 1 2 8 1 | LPAREN term TIMES LPAREN | ID PLUS ID RPAREN RPAREN \$ | SHIFT TO 3 |
| 8 | 0 1 2 8 1 3 | LPAREN term TIMES LPAREN ID | PLUS ID RPAREN RPAREN \$ | REDUCED BY factor --> ID |
| 9 | 0 1 2 8 1 5 | LPAREN term TIMES LPAREN factor | PLUS ID RPAREN RPAREN \$ | REDUCED BY term --> factor |
| 10 | 0 1 2 8 1 2 | LPAREN term TIMES LPAREN term | PLUS ID RPAREN RPAREN \$ | REDUCED BY expression --> term |
| 11 | 0 1 2 8 1 10 | LPAREN term TIMES LPAREN expression | PLUS ID RPAREN RPAREN \$ | SHIFT TO 6 |
| 12 | 0 1 2 8 1 10 6 | LPAREN term TIMES LPAREN expression PLUS | ID RPAREN RPAREN \$ | SHIFT TO 3 |
| 13 | 0 1 2 8 1 10 6 3 | LPAREN term TIMES LPAREN expression PLUS ID | RPAREN RPAREN \$ | REDUCED BY factor --> ID |
| 14 | 0 1 2 8 1 10 6 5 | LPAREN term TIMES LPAREN expression PLUS factor | RPAREN RPAREN \$ | REDUCED BY term --> factor |
| 15 | 0 1 2 8 1 10 6 7 | LPAREN term TIMES LPAREN expression PLUS term | RPAREN RPAREN \$ | REDUCED BY expression --> expression PLUS term |
| 16 | 0 1 2 8 1 10 | LPAREN term TIMES LPAREN expression | RPAREN RPAREN \$ | SHIFT TO 11 |
| 17 | 0 1 2 8 1 10 11 | LPAREN term TIMES LPAREN expression RPAREN | RPAREN \$ | REDUCED BY factor --> LPAREN expression RPAREN |
| 18 | 0 1 2 8 9 | LPAREN term TIMES factor | RPAREN \$ | REDUCED BY term --> term TIMES factor |
| 19 | 0 1 2 | LPAREN term | RPAREN \$ | REDUCED BY expression --> term |
| 20 | 0 1 10 | LPAREN expression | RPAREN \$ | SHIFT TO 11 |
| 21 | 0 1 10 11 | LPAREN expression RPAREN | \$ | REDUCED BY factor --> LPAREN expression RPAREN |
| 22 | 0 5 | factor | \$ | REDUCED BY term --> factor |
| 23 | 0 2 | term | \$ | REDUCED BY expression --> term |
| 24 | 0 4 | expression | \$ | ACC |

¿Se acepta según la simulación? YES

- **Simulación para $\text{var1} + (\text{var2} + (\text{var3} + (\text{var4} * \text{var1})) * \text{var2}) + (\text{var3} + \text{var4} * (\text{var1} * \text{var2})) * \text{var3}$**

[illegible]

```
[70, '0 4 6 7', 'expression PLUS term', 'TIMES ID $', 'SHIFT TO 8']
[71, '0 4 6 7 8', 'expression PLUS term TIMES', 'ID $', 'SHIFT TO 3']
[72, '0 4 6 7 8 3', 'expression PLUS term TIMES ID', '$', 'REDUCED BY factor --> ID']
[73, '0 4 6 7 8 9', 'expression PLUS term TIMES factor', '$', 'REDUCED BY term --> term TIMES factor']
[74, '0 4 6 7', 'expression PLUS term', '$', 'REDUCED BY expression --> expression PLUS term']
[75, '0 4', 'expression', '$', 'ACC']
```

¿Se acepta segun la simulacion? YES

• Simulación para bigIdentifierInCamelCase

| Línea | Pila | Simbolos | Entrada | Accion |
|-------|------|------------|---------|--------------------------------|
| 1 | 0 | | ID \$ | SHIFT TO 3 |
| 2 | 0 3 | ID | \$ | REDUCED BY factor --> ID |
| 3 | 0 5 | factor | \$ | REDUCED BY term --> factor |
| 4 | 0 2 | term | \$ | REDUCED BY expression --> term |
| 5 | 0 4 | expression | \$ | ACC |

¿Se acepta segun la simulacion? YES

(3)

- Simulación para $\text{var1} + (\text{var2} + * \text{var3})$

| Línea | Pila | Símbolos | Entrada | Accion |
|-------|------------|-----------------------------------|---|--------------------------------|
| 1 | 0 | | ID PLUS LPAREN ID PLUS TIMES ID RPAREN \$ | SHIFT TO 3 |
| 2 | 0 3 | ID | PLUS LPAREN ID PLUS TIMES ID RPAREN \$ | REDUCED BY factor --> ID |
| 3 | 0 5 | factor | PLUS LPAREN ID PLUS TIMES ID RPAREN \$ | REDUCED BY term --> factor |
| 4 | 0 2 | term | PLUS LPAREN ID PLUS TIMES ID RPAREN \$ | REDUCED BY expression --> term |
| 5 | 0 4 | expression | PLUS LPAREN ID PLUS TIMES ID RPAREN \$ | SHIFT TO 6 |
| 6 | 0 4 6 | expression PLUS | LPAREN ID PLUS TIMES ID RPAREN \$ | SHIFT TO 1 |
| 7 | 0 4 6 1 | expression PLUS LPAREN | ID PLUS TIMES ID RPAREN \$ | SHIFT TO 3 |
| 8 | 0 4 6 1 3 | expression PLUS LPAREN ID | PLUS TIMES ID RPAREN \$ | REDUCED BY factor --> ID |
| 9 | 0 4 6 1 5 | expression PLUS LPAREN factor | PLUS TIMES ID RPAREN \$ | REDUCED BY term --> factor |
| 10 | 0 4 6 1 2 | expression PLUS LPAREN term | PLUS TIMES ID RPAREN \$ | REDUCED BY expression --> term |
| 11 | 0 4 6 1 10 | expression PLUS LPAREN expression | PLUS TIMES ID RPAREN \$ | SHIFT TO 6 |

¿Se acepta segun la simulacion? NO

- Simulación para $(+ \text{id1 id2} * \text{id3})$

| Línea | Pila | Símbolos | Entrada | Accion |
|-------|------|----------|--------------------------------------|------------|
| 1 | 0 | | LPAREN PLUS ID ID TIMES ID RPAREN \$ | SHIFT TO 1 |

¿Se acepta segun la simulacion? NO

- Simulación para $* \text{var}$ (Se puede apreciar que para 0 y TIMES hay un espacio en blanco por lo que la simulación no conlleva a ninguna acción de SHIFT o REDUCE)

Tabla SLR

| Estado | ID | LPAREN | PLUS | RPAREN | TIMES | \$ | expression | factor | term |
|--------|--------|--------|--------|---------|--------|---------|------------|--------|-------|
| 0 | ['S3'] | ['S1'] | [] | [] | [] | [] | ['4'] | ['5'] | ['2'] |
| 1 | ['S3'] | ['S1'] | [] | [] | [] | [] | ['10'] | ['5'] | ['2'] |
| 2 | [] | [] | ['R3'] | ['R3'] | ['S8'] | ['R3'] | [] | [] | [] |
| 3 | [] | [] | ['R7'] | ['R7'] | ['R7'] | ['R7'] | [] | [] | [] |
| 4 | [] | [] | ['S6'] | [] | [] | ['ACC'] | [] | [] | [] |
| 5 | [] | [] | ['R5'] | ['R5'] | ['R5'] | ['R5'] | [] | [] | [] |
| 6 | ['S3'] | ['S1'] | [] | [] | [] | [] | [] | ['5'] | ['7'] |
| 7 | [] | [] | ['R2'] | ['R2'] | ['S8'] | ['R2'] | [] | [] | [] |
| 8 | ['S3'] | ['S1'] | [] | [] | [] | [] | [] | ['9'] | [] |
| 9 | [] | [] | ['R4'] | ['R4'] | ['R4'] | ['R4'] | [] | [] | [] |
| 10 | [] | [] | ['S6'] | ['S11'] | [] | [] | [] | [] | [] |
| 11 | [] | [] | ['R6'] | ['R6'] | ['R6'] | ['R6'] | [] | [] | [] |

| Línea | Pila | Símbolos | Entrada | Accion |
|-------|------|----------|---------|--------|
| | | | | |

¿Se acepta segun la simulacion? NO

| Estado | ID | LPAREN | PLUS | RPAREN |
|--------|--------|--------|--------|--------|
| 0 | ['S3'] | ['S1'] | [] | [] |
| 1 | ['S3'] | ['S1'] | [] | [] |
| 2 | [] | [] | ['R3'] | ['R3'] |
| 3 | [] | [] | ['R7'] | ['R7'] |
| 4 | [] | [] | ['S6'] | [] |

NON SLR:

`/* S -> L = R */`

`/* S -> R */`

`/* L -> *R */`

`/* L -> id */`

`/* R -> L */`

- Resultado de haber intentando crear slr para esta gramatica (lab-f.yalp y lab-f.yal)

```
Estado: 0
- ['s', '-->', '.', 's']
- ['s', '-->', '.', 'l', 'EQUALS', 'r']
- ['s', '-->', '.', 'r']
- ['r', '-->', '.', 'l']
- ['l', '-->', '.', 'TIMES', 'r']
- ['l', '-->', '.', 'ID']

Estado: 1
- ['l', '-->', 'ID', '.']

Estado: 2
- ['r', '-->', 'l', '.']
- ['s', '-->', 'l', '.', 'EQUALS', 'r']

Estado: 3
- ['s', '-->', 's', '.']

Estado: 4
- ['s', '-->', 'r', '.']

Estado: 5
- ['l', '-->', 'TIMES', '.', 'r']
- ['r', '-->', '.', 'l']
- ['l', '-->', '.', 'TIMES', 'r']
- ['l', '-->', '.', 'ID']

Estado: 6
- ['r', '-->', 'l', '.']

Estado: 7
- ['l', '-->', 'TIMES', 'r', '.']

Estado: 8
- ['s', '-->', 'l', 'EQUALS', '.', 'r']
- ['r', '-->', '.', 'l']
- ['l', '-->', '.', 'TIMES', 'r']
- ['l', '-->', '.', 'ID']

Estado: 9
- ['s', '-->', 'l', 'EQUALS', 'r', '.']
```

CONFLICT in [2,EQUALS] = (S8,R6)

(EXTRAS)

- Tabla SLR2

Tabla SLR

| Estado | DIV | ID | LPAREN | MINUS | NUMBER | PLUS | RPAREN | TIMES | \$ | expression | factor | term |
|--------|---------|--------|--------|---------|--------|---------|---------|---------|---------|------------|--------|--------|
| 0 | [] | ['S5'] | ['S1'] | [] | ['S4'] | [] | [] | [] | [] | ['6'] | ['3'] | ['2'] |
| 1 | [] | ['S5'] | ['S1'] | [] | ['S4'] | [] | [] | [] | [] | ['15'] | ['3'] | ['2'] |
| 2 | ['S10'] | [] | [] | ['R4'] | [] | ['R4'] | ['R4'] | ['S11'] | ['R4'] | [] | [] | [] |
| 3 | ['R7'] | [] | [] | ['R7'] | [] | ['R7'] | ['R7'] | ['R7'] | ['R7'] | [] | [] | [] |
| 4 | ['R10'] | [] | [] | ['R10'] | [] | ['R10'] | ['R10'] | ['R10'] | ['R10'] | [] | [] | [] |
| 5 | ['R9'] | [] | [] | ['R9'] | [] | ['R9'] | ['R9'] | ['R9'] | ['R9'] | [] | [] | [] |
| 6 | [] | [] | [] | ['S8'] | [] | ['S7'] | [] | [] | ['ACC'] | [] | [] | [] |
| 7 | [] | ['S5'] | ['S1'] | [] | ['S4'] | [] | [] | [] | [] | [] | ['3'] | ['14'] |
| 8 | [] | ['S5'] | ['S1'] | [] | ['S4'] | [] | [] | [] | [] | [] | ['3'] | ['9'] |
| 9 | ['S10'] | [] | [] | ['R3'] | [] | ['R3'] | ['R3'] | ['S11'] | ['R3'] | [] | [] | [] |
| 10 | [] | ['S5'] | ['S1'] | [] | ['S4'] | [] | [] | [] | [] | [] | ['13'] | [] |
| 11 | [] | ['S5'] | ['S1'] | [] | ['S4'] | [] | [] | [] | [] | [] | ['12'] | [] |
| 12 | ['R5'] | [] | [] | ['R5'] | [] | ['R5'] | ['R5'] | ['R5'] | ['R5'] | [] | [] | [] |
| 13 | ['R6'] | [] | [] | ['R6'] | [] | ['R6'] | ['R6'] | ['R6'] | ['R6'] | [] | [] | [] |
| 14 | ['S10'] | [] | [] | ['R2'] | [] | ['R2'] | ['R2'] | ['S11'] | ['R2'] | [] | [] | [] |
| 15 | [] | [] | [] | ['S8'] | [] | ['S7'] | ['S16'] | [] | [] | [] | [] | [] |
| 16 | ['R8'] | [] | [] | ['R8'] | [] | ['R8'] | ['R8'] | ['R8'] | ['R8'] | [] | [] | [] |

Estados

Estado: 0

- ['expression', '-->', '.', 'expression']
- ['expression', '-->', '.', 'expression', 'PLUS', 'term']
- ['expression', '-->', '.', 'expression', 'MINUS', 'term']
- ['expression', '-->', '.', 'term']
- ['term', '-->', '.', 'term', 'TIMES', 'factor']
- ['term', '-->', '.', 'term', 'DIV', 'factor']
- ['term', '-->', '.', 'factor']
- ['factor', '-->', '.', 'LPAREN', 'expression', 'RPAREN']
- ['factor', '-->', '.', 'ID']
- ['factor', '-->', '.', 'NUMBER']

Estado: 1

- ['factor', '-->', 'LPAREN', '.', 'expression', 'RPAREN']
- ['expression', '-->', '.', 'expression', 'PLUS', 'term']
- ['expression', '-->', '.', 'expression', 'MINUS', 'term']
- ['expression', '-->', '.', 'term']
- ['term', '-->', '.', 'term', 'TIMES', 'factor']
- ['term', '-->', '.', 'term', 'DIV', 'factor']
- ['term', '-->', '.', 'factor']
- ['factor', '-->', '.', 'LPAREN', 'expression', 'RPAREN']
- ['factor', '-->', '.', 'ID']
- ['factor', '-->', '.', 'NUMBER']

Estado: 2

- ['term', '-->', 'term', '.', 'DIV', 'factor']
- ['term', '-->', 'term', '.', 'TIMES', 'factor']
- ['expression', '-->', 'term', '.']

Estado: 3

- ['term', '-->', 'factor', '.']

Estado: 4

- ['factor', '-->', 'NUMBER', '.']

Estado: 5

- ['factor', '-->', 'ID', '.']

Estado: 6

- ['expression', '-->', 'expression', '.', 'MINUS', 'term']
- ['expression', '-->', 'expression', '.', 'PLUS', 'term']
- ['expression', '-->', 'expression', '.']

Estado: 7

- ['expression', '-->', 'expression', 'PLUS', '.', 'term']
- ['term', '-->', '.', 'term', 'TIMES', 'factor']
- ['term', '-->', '.', 'term', 'DIV', 'factor']
- ['term', '-->', '.', 'factor']
- ['factor', '-->', '.', 'LPAREN', 'expression', 'RPAREN']
- ['factor', '-->', '.', 'ID']
- ['factor', '-->', '.', 'NUMBER']

Estado: 8

- ['expression', '-->', 'expression', 'MINUS', '.', 'term']
- ['term', '-->', '.', 'term', 'TIMES', 'factor']
- ['term', '-->', '.', 'term', 'DIV', 'factor']
- ['term', '-->', '.', 'factor']
- ['factor', '-->', '.', 'LPAREN', 'expression', 'RPAREN']
- ['factor', '-->', '.', 'ID']
- ['factor', '-->', '.', 'NUMBER']

Estado: 9

- ['term', '-->', 'term', '.', 'DIV', 'factor']
- ['term', '-->', 'term', '.', 'TIMES', 'factor']
- ['expression', '-->', 'expression', 'MINUS', 'term', '.']

Estado: 10

- ['term', '-->', 'term', 'DIV', '.', 'factor']
- ['factor', '-->', '.', 'LPAREN', 'expression', 'RPAREN']
- ['factor', '-->', '.', 'ID']
- ['factor', '-->', '.', 'NUMBER']

Estado: 11

- ['term', '-->', 'term', 'TIMES', '.', 'factor']
- ['factor', '-->', '.', 'LPAREN', 'expression', 'RPAREN']
- ['factor', '-->', '.', 'ID']
- ['factor', '-->', '.', 'NUMBER']

Estado: 12

- ['term', '-->', 'term', 'TIMES', 'factor', '.']

Estado: 13

- ['term', '-->', 'term', 'DIV', 'factor', '.']

Estado: 14

- ['term', '-->', 'term', '.', 'DIV', 'factor']
- ['term', '-->', 'term', '.', 'TIMES', 'factor']
- ['expression', '-->', 'expression', 'PLUS', 'term', '.']

Estado: 15

- ['expression', '-->', 'expression', '.', 'MINUS', 'term']
- ['expression', '-->', 'expression', '.', 'PLUS', 'term']
- ['factor', '-->', 'LPAREN', 'expression', '.', 'RPAREN']

Estado: 16

- ['factor', '-->', 'LPAREN', 'expression', 'RPAREN', '.']

Numeración REDUC SLR2

| Indice | Produccion |
|--------|--------------------------------------|
| 1 | expression` --> expression |
| 2 | expression --> expression PLUS term |
| 3 | expression --> expression MINUS term |
| 4 | expression --> term |
| 5 | term --> term TIMES factor |
| 6 | term --> term DIV factor |
| 7 | term --> factor |
| 8 | factor --> LPAREN expression RPAREN |
| 9 | factor --> ID |
| 10 | factor --> NUMBER |

- **Tabla SLR4 Debido a la complejidad de la tabla se agregó como diccionario**

[illegible]

Numeracion producciones

| Indice | Produccion |
|--------|--|
| 1 | $p' \rightarrow p$ |
| 2 | $p \rightarrow t$ |
| 3 | $t \rightarrow m \ q$ |
| 4 | $t \rightarrow m$ |
| 5 | $q \rightarrow \text{SEMICOLON } m \ q$ |
| 6 | $q \rightarrow \text{SEMICOLON } m$ |
| 7 | $m \rightarrow a$ |
| 8 | $a \rightarrow \text{ID ASSIGNOP } e$ |
| 9 | $e \rightarrow x \ z$ |
| 10 | $e \rightarrow x$ |
| 11 | $z \rightarrow \text{LT } x$ |
| 12 | $z \rightarrow \text{EQ } x$ |
| 13 | $x \rightarrow r \ w$ |
| 14 | $x \rightarrow r$ |
| 15 | $w \rightarrow y \ w$ |
| 16 | $w \rightarrow y$ |
| 17 | $y \rightarrow \text{PLUS } r$ |
| 18 | $y \rightarrow \text{MINUS } r$ |
| 19 | $r \rightarrow f \ v$ |
| 20 | $r \rightarrow f$ |
| 21 | $v \rightarrow j \ v$ |
| 22 | $v \rightarrow j$ |
| 23 | $j \rightarrow \text{TIMES } f$ |
| 24 | $j \rightarrow \text{DIV } f$ |
| 25 | $f \rightarrow \text{LPAREN } e \ \text{RPAREN}$ |
| 26 | $f \rightarrow \text{NUMBER}$ |
| 27 | $f \rightarrow \text{ID}$ |

Estados

| | | |
|--|--|---|
| <div>Estado: 0</div> <div><div>- ['p', '-->', '.', 'p']</div><div>- ['p', '-->', '.', 't']</div><div>- ['t', '-->', '.', 'm', 'q']</div><div>- ['t', '-->', '.', 'm']</div><div>- ['m', '-->', '.', 'a']</div><div>- ['a', '-->', '.', 'ID', 'ASSIGNOP', 'e']</div></div> | <div>Estado: 15</div> <div><div>- ['e', '-->', 'x', '.']</div><div>- ['e', '-->', 'x', '.', 'z']</div><div>- ['z', '-->', '.', 'LT', 'x']</div><div>- ['z', '-->', '.', 'EQ', 'x']</div></div> | <div>Estado: 28</div> <div><div>- ['j', '-->', 'TIMES', '.', 'f']</div><div>- ['f', '-->', '.', 'LPAREN', 'e', 'RPAREN']</div><div>- ['f', '-->', '.', 'NUMBER']</div><div>- ['f', '-->', '.', 'ID']</div></div> |
| <div>Estado: 1</div> <div><div>- ['m', '-->', 'a', '.']</div></div> | <div>Estado: 16</div> <div><div>- ['r', '-->', 'f', '.']</div><div>- ['r', '-->', 'f', '.', 'v']</div><div>- ['v', '-->', '.', 'j', 'v']</div><div>- ['v', '-->', '.', 'j']</div><div>- ['j', '-->', '.', 'TIMES', 'f']</div><div>- ['j', '-->', '.', 'DIV', 'f']</div></div> | <div>Estado: 29</div> <div><div>- ['j', '-->', 'TIMES', 'f', '.']</div></div> |
| <div>Estado: 2</div> <div><div>- ['p', '-->', 't', '.']</div></div> | <div>Estado: 17</div> <div><div>- ['x', '-->', 'r', '.']</div><div>- ['x', '-->', 'r', '.', 'w']</div><div>- ['w', '-->', '.', 'y', 'w']</div><div>- ['w', '-->', '.', 'y']</div><div>- ['y', '-->', '.', 'PLUS', 'r']</div><div>- ['y', '-->', '.', 'MINUS', 'r']</div></div> | <div>Estado: 30</div> <div><div>- ['j', '-->', 'DIV', 'f', '.']</div></div> |
| <div>Estado: 3</div> <div><div>- ['p', '-->', 'p', '.']</div></div> | <div>Estado: 18</div> <div><div>- ['w', '-->', 'y', '.']</div><div>- ['w', '-->', 'y', '.', 'w']</div><div>- ['w', '-->', '.', 'y', 'w']</div><div>- ['w', '-->', '.', 'y']</div><div>- ['y', '-->', '.', 'PLUS', 'r']</div><div>- ['y', '-->', '.', 'MINUS', 'r']</div></div> | <div>Estado: 31</div> <div><div>- ['v', '-->', 'j', 'v', '.']</div></div> |
| <div>Estado: 4</div> <div><div>- ['a', '-->', 'ID', '.', 'ASSIGNOP', 'e']</div></div> | <div>Estado: 19</div> <div><div>- ['x', '-->', 'r', 'w', '.']</div></div> | <div>Estado: 32</div> <div><div>- ['z', '-->', 'LT', '.', 'x']</div><div>- ['x', '-->', '.', 'r', 'w']</div><div>- ['x', '-->', '.', 'r']</div><div>- ['r', '-->', '.', 'f', 'v']</div><div>- ['r', '-->', '.', 'f']</div><div>- ['f', '-->', '.', 'LPAREN', 'e', 'RPAREN']</div><div>- ['f', '-->', '.', 'NUMBER']</div><div>- ['f', '-->', '.', 'ID']</div></div> |
| <div>Estado: 5</div> <div><div>- ['t', '-->', 'm', '.']</div><div>- ['t', '-->', 'm', '.', 'q']</div><div>- ['q', '-->', '.', 'SEMICOLON', 'm', 'q']</div><div>- ['q', '-->', '.', 'SEMICOLON', 'm']</div></div> | <div>Estado: 20</div> <div><div>- ['y', '-->', 'PLUS', '.', 'r']</div><div>- ['r', '-->', '.', 'f', 'v']</div><div>- ['r', '-->', '.', 'f']</div><div>- ['f', '-->', '.', 'LPAREN', 'e', 'RPAREN']</div><div>- ['f', '-->', '.', 'NUMBER']</div><div>- ['f', '-->', '.', 'ID']</div></div> | <div>Estado: 33</div> <div><div>- ['e', '-->', 'x', 'z', '.']</div></div> |
| <div>Estado: 6</div> <div><div>- ['t', '-->', 'm', 'q', '.']</div></div> | <div>Estado: 21</div> <div><div>- ['y', '-->', 'MINUS', '.', 'r']</div><div>- ['r', '-->', '.', 'f', 'v']</div><div>- ['r', '-->', '.', 'f']</div><div>- ['f', '-->', '.', 'LPAREN', 'e', 'RPAREN']</div><div>- ['f', '-->', '.', 'ID']</div></div> | <div>Estado: 34</div> <div><div>- ['z', '-->', 'EQ', '.', 'x']</div><div>- ['x', '-->', '.', 'r', 'w']</div><div>- ['x', '-->', '.', 'r']</div><div>- ['r', '-->', '.', 'f', 'v']</div><div>- ['r', '-->', '.', 'f']</div><div>- ['f', '-->', '.', 'LPAREN', 'e', 'RPAREN']</div><div>- ['f', '-->', '.', 'NUMBER']</div><div>- ['f', '-->', '.', 'ID']</div></div> |
| <div>Estado: 7</div> <div><div>- ['q', '-->', 'SEMICOLON', '.', 'm']</div><div>- ['q', '-->', 'SEMICOLON', '.', 'm', 'q']</div><div>- ['m', '-->', '.', 'a']</div><div>- ['a', '-->', '.', 'ID', 'ASSIGNOP', 'e']</div></div> | <div>Estado: 22</div> <div><div>- ['y', '-->', 'MINUS', 'r', '.']</div></div> | <div>Estado: 35</div> <div><div>- ['z', '-->', 'EQ', 'x', '.']</div></div> |
| <div>Estado: 8</div> <div><div>- ['q', '-->', 'SEMICOLON', 'm', '.', 'q']</div><div>- ['q', '-->', 'SEMICOLON', 'm', '.']</div><div>- ['q', '-->', '.', 'SEMICOLON', 'm', 'q']</div><div>- ['q', '-->', '.', 'SEMICOLON', 'm']</div></div> | <div>Estado: 23</div> <div><div>- ['y', '-->', 'PLUS', 'r', '.']</div></div> | <div>Estado: 36</div> <div><div>- ['z', '-->', 'LT', 'x', '.']</div></div> |
| <div>Estado: 9</div> <div><div>- ['q', '-->', 'SEMICOLON', 'm', 'q', '.']</div></div> | <div>Estado: 24</div> <div><div>- ['w', '-->', 'y', 'w', '.']</div></div> | <div>Estado: 37</div> <div><div>- ['f', '-->', 'LPAREN', 'e', '.', 'RPAREN']</div></div> |
| <div>Estado: 10</div> <div><div>- ['a', '-->', 'ID', 'ASSIGNOP', '.', 'e']</div><div>- ['e', '-->', '.', 'x', 'z']</div><div>- ['e', '-->', '.', 'x']</div><div>- ['x', '-->', '.', 'r', 'w']</div><div>- ['x', '-->', '.', 'r']</div><div>- ['r', '-->', '.', 'f', 'v']</div><div>- ['r', '-->', '.', 'f']</div><div>- ['f', '-->', '.', 'LPAREN', 'e', 'RPAREN']</div><div>- ['f', '-->', '.', 'NUMBER']</div><div>- ['f', '-->', '.', 'ID']</div></div> | <div>Estado: 25</div> <div><div>- ['v', '-->', 'j', '.']</div><div>- ['v', '-->', 'j', '.', 'v']</div><div>- ['v', '-->', '.', 'j', 'v']</div><div>- ['v', '-->', '.', 'j']</div><div>- ['j', '-->', '.', 'TIMES', 'f']</div><div>- ['j', '-->', '.', 'DIV', 'f']</div></div> | <div>Estado: 38</div> <div><div>- ['f', '-->', 'LPAREN', 'e', 'RPAREN', '.']</div></div> |
| <div>Estado: 11</div> <div><div>- ['a', '-->', 'ID', 'ASSIGNOP', 'e', '.']</div></div> | <div>Estado: 26</div> <div><div>- ['j', '-->', 'DIV', '.', 'f']</div><div>- ['f', '-->', '.', 'LPAREN', 'e', 'RPAREN']</div><div>- ['f', '-->', '.', 'NUMBER']</div><div>- ['f', '-->', '.', 'ID']</div></div> | |
| <div>Estado: 12</div> <div><div>- ['f', '-->', 'ID', '.']</div></div> | <div>Estado: 27</div> <div><div>- ['r', '-->', 'f', 'v', '.']</div></div> | |
| <div>Estado: 13</div> <div><div>- ['f', '-->', 'NUMBER', '.']</div></div> | | |
| <div>Estado: 14</div> <div><div>- ['f', '-->', 'LPAREN', '.', 'e', 'RPAREN']</div><div>- ['e', '-->', '.', 'x', 'z']</div><div>- ['e', '-->', '.', 'x']</div><div>- ['x', '-->', '.', 'r', 'w']</div><div>- ['x', '-->', '.', 'r']</div><div>- ['r', '-->', '.', 'f', 'v']</div><div>- ['r', '-->', '.', 'f']</div><div>- ['f', '-->', '.', 'LPAREN', 'e', 'RPAREN']</div><div>- ['f', '-->', '.', 'NUMBER']</div><div>- ['f', '-->', '.', 'ID']</div></div> | | |