# Moves of an SLR(1) parser on id \* id E->E+T E->T

1. E->E+1
2. E->T
3. T->T\*F
4. T->F
5. F->(E)

Symbol

\$

F -> id

**Stack** 

0

Input

id \* id\$

**Action** 

0
1
2
3
4
5
6
7
8
9
10

11

State

id

**S5** 

**S5** 

**S5** 

S5

**Action** 

**S4** 

**S4** 

**S4** 

**S4** 

R2

R4

R6

**S11** 

R1

R3

R5

\*

**S7** 

R4

R6

**S7** 

R3

R5

+

**S6** 

R2

R4

R6

**S6** 

R1

R3

R5

Go To

Т

2

2

9

F

3

3

3

10

Ε

1

8

\$

Accept

R2

R4

R6

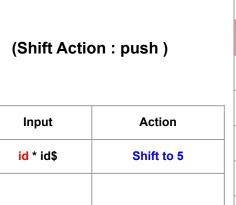
R1

R3

R5

## Moves of an SLR(1) parser on id \* id

- E -> E + T E -> T
- T -> T \* F
- T -> F
- F->(E)
  - F -> id



Stack	Symbol	Input	Action
0	\$	id * id\$	Shift to 5

0
1
2
3
4
5
6
7
8
9
10
11

State

id

**S5** 

S5

**S5** 

**S5** 

+	*
S6	
R2	S7
R4	R4
R6	R6
S6	
R1	<b>S7</b>
R3	R3
R5	R5

**Action** 

**S4** 

**S4** 

**S4** 

**S4** 

R2

R4

R6

**S11** 

R1

R3

R5

Go To

Т

2

2

9

F

3

3

3

10

Ε

1

8

\$

Accept

R2

R4

R6

R1

R3

R5

## Moves of an SLR(1) parser on id \* id State **Action** Go To Ε Т F id \$ \* + E -> E + T E -> T T -> T \* F **S5 S4** 2 3 0 1 (Shift Action : push 5 T -> F and id in the stack **S6** F->(E) 1 Accept and Symbol) F -> id R2 **S7** R2 R2 2 Symbol Action Stack Input R4 R4 R4 R4 3 0 \$ id \* id\$ Shift to 5 **S5 S4** 2 3 4 8 0 5 \$ id \* id\$ 5 R6 R6 R6 R6 **S4** 9 6 **S5** 3 7 **S5 S4** 10 **S6 S11** 8 9 R1 **S7** R1 R1 10 R3 R3 R3 R3 11 R5 R5 R5 R5

## Moves of an SLR(1) parser on id \* id State **Action** Go To Ε Т F \$ id + E->E+T (Reduce Action : pop and push) E -> T T -> T \* F **S5 S4** 2 3 0 1 T -> F **S6** F->(E) 1 Accept F -> id R2 **S7** R2 R2 2 Symbol Action Stack Input R4 R4 R4 R4 3 0 \$ id \* id\$ Shift to 5 **S5 S4** 2 3 4 8 0 5 \$ id \* id\$ Reduce by F -> id 5 R6 R6 R6 R6 **S5 S4** 9 6 3 7 **S5 S4** 10 **S6 S11** 8 9 R1 **S7** R1 R1 10 R3 R3 R3 R3 11 R5 R5 R5 R5

## Moves of an SLR(1) parser on id \* id **State Action** Go To Ε Т F \$ id \* + E->E+T (Reduce Action: id is in the 2. E -> T production body, pop id from the 3. T -> T \* F 0 **S5 S4** 2 3 1 Symbol and 5 from the Stack) T -> F F->(E) 1 S6 Accept F -> id R2 **S7** R2 R2 2 **Symbol** Action Stack Input R4 R4 R4 R4 3 0 \$ id \* id\$ Shift to 5 **S5 S4** 2 3 4 8 0 5 \$ id \* id\$ Reduce by F -> id 5 R6 R6 R6 R6 0 \$ \* id \$ **S5** 9 6 **S4** 3 7 **S5 S4** 10 **S6 S11** 8 9 R1 **S7** R1 R1 10 R3 R3 R3 R3

11

R5

R5

R5

R5

### Moves of an SLR(1) parser on id \* id **State Action** Go To Ε Т F \$ id \* + E->E+T (Reduce Action: push Production 2. E -> T head F on the Symbol) T -> T \* F **S5 S4** 2 3 0 1 T -> F F->(E) 1 S6 Accept F -> id R2 **S7** R2 R2 2 Symbol Action Stack Input R4 R4 R4 R4 3 0 \$ id \* id\$ Shift to 5 **S5 S4** 2 3 4 8 0 5 \$ id \* id\$ Reduce by F -> id 5 R6 R6 R6 R6 \$ F 0 \* id\$ **S4** 9 6 **S5** 3 7 **S5 S4** 10 **S6 S11** 8 9 R1 **S7** R1 R1 10 R3 R3 R3 R3 11 R5 R5 R5 R5

## Moves of an SLR(1) parser on id \* id

Symbol

\$

\$ id

\$ F

- E -> E + T E -> T
- T -> T \* F
- T -> F F->(E)

**Stack** 

0

0 5

03

F -> id

te

(R	educe Action : Find the go to sta
fro	om the perspective of Stack and
sy	mbol and push it on the stack)
_	•

Input

id \* id\$

\* id\$

\* id\$

# 0

1

2

3

4

5

6

7

8

9

10

11

id

**S5** 

**S5** 

**S5** 

**S5** 

State

**Action** 

**S4** 

**S4** 

**S4** 

**S4** 

R2

R4

R6

**S11** 

\*

**S7** 

R4

R6

**S7** 

R3

R5

+

**S6** 

R2

R4

R6

**S6** 

R1

R3

R5

Action

Shift to 5

Reduce by F -> id

			9	3
				10
S11				
R1	R1			
R3	R3			
R5	R5			
Prepared By: Sukarna Sarker				

Go To

Т

2

2

F

3

3

Ε

1

8

\$

Accept

R2

R4

R6

## Moves of an SLR(1) parser on id \* id State **Action** Go To Ε Т F \$ id \* + E->E+T (Reduce Action: Pop and Push) E -> T T -> T \* F **S5 S4** 2 3 0 1 T -> F **S6** F->(E) 1 Accept F -> id R2 **S7** R2 R2 2 Symbol Action Stack Input R4 R4 R4 R4 3 0 \$ id \* id\$ Shift to 5 **S5 S4** 2 3 4 8 0 5 \$ id \* id\$ Reduce by F -> id 5 R6 R6 R6 R6 03 \$ F Reduce by T -> F \* id\$ **S4** 9 6 **S5** 3 7 **S5 S4** 10 **S6 S11** 8 9 R1 **S7** R1 R1 10 R3 R3 R3 R3 11 R5 R5 R5 R5

### Moves of an SLR(1) parser on id \* id State **Action** Go To Ε Т F \$ id \* + E -> E + T (Reduce Action: F is in the production E -> T body, pop F from the Symbol and 3 T -> T \* F 0 **S5 S4** 2 3 1 from the Stack) T -> F F->(E) 1 S6 Accept F -> id R2 **S7** R2 R2 2 **Symbol** Action Stack Input R4 R4 R4 R4 3 0 \$ id \* id\$ Shift to 5 **S5 S4** 2 3 4 8 0 5 \$ id \* id\$ Reduce by F -> id 5 R6 R6 R6 R6 \$ F 03 \* id\$ Reduce by T -> F **S5** 9 6 **S4** 3 0 \$ \* id\$ 7 **S5 S4** 10 **S6 S11** 8 9 R1 **S7** R1 R1 10 R3 R3 R3 R3 11 R5 R5 R5 R5

### Moves of an SLR(1) parser on id \* id State **Action** Go To Ε Т F \$ id \* + E->E+T (Reduce Action: push Production 2. E -> T head T on the Symbol) T -> T \* F **S5 S4** 2 3 0 1 T -> F F->(E) 1 S6 Accept F -> id R2 **S7** R2 R2 2 **Symbol** Action Stack Input R4 R4 R4 R4 3 0 \$ id \* id\$ Shift to 5 **S5 S4** 2 3 4 8 0 5 \$ id \* id\$ Reduce by F -> id 5 R6 R6 R6 R6 \$ F Reduce by T -> F 03 \* id\$ **S4** 9 6 **S5** 3 \$ T 0 \* id\$ 7 **S5 S4** 10 **S6 S11** 8 9 R1 **S7** R1 R1 10 R3 R3 R3 R3 11 R5 R5 R5 R5

# Moves of an SLR(1) parser on id \* id

1. E -> E + 2. E -> T 3. T -> T *   4. T -> F 5. F -> (E) 6. F -> id	(Reduce F from the symbol	(Reduce Action : Find the go to state from the perspective of Stack and symbol and push it on the stack)		
Stack	Symbol	Input	Action	
0	\$	id * id\$	Shift to 5	
0 5	\$ id	* id\$	Reduce by F -> id	
0 3	\$ F	* id\$	Reduce by T -> F	
0 2	\$ T	* id\$		

	State
	0
	1
	2
	3
d	4
•	5
	6
	7
	8
	9
	10
	11

id	+
S5	
	S
	R
	R
S5	
	R
S5	
S5	
	S
	R
	R
	R

(	
S4	
<b>S4</b>	
<b>S4</b>	
<b>S4</b>	

**Action** 

\*

**S7** 

R4

R6

**S7** 

R3

R5

# Prepared By: Sukarna Sarker

Go To

2

2

9

F

3

3

3

10

Ε

8

\$

Accept

R2

R4

R6

R1

R3

R5

R2

R4

R6

**S11** 

R1

R3

R5

### Moves of an SLR(1) parser on id \* id State **Action** Go To Ε Т F \$ id + E->E+T (Shift Action: Push) E -> T T -> T \* F **S5 S4** 2 3 0 1 T -> F **S6** F->(E) 1 Accept F -> id R2 R2 R2 **S7** 2 Symbol Action Stack Input R4 R4 R4 R4 3 0 \$ id \* id\$ Shift to 5 **S5 S4** 2 3 4 8 0 5 \$ id \* id\$ Reduce by F -> id 5 R6 R6 R6 R6 03 \$ F Reduce by T -> F \* id\$ **S4** 9 6 **S5** 3 0 2 \$ T \* id\$ Shift to 7 7 **S5 S4** 10 **S6 S11** 8 9 R1 **S7** R1 R1 10 R3 R3 R3 R3

11

R5

R5

R5

R5

### Moves of an SLR(1) parser on id \* id State **Action** Go To Ε Т F \$ id \* + E->E+T (Shift Action: Push 7 and \* in the 2. E -> T Stack and Symbol) T -> T \* F **S5 S4** 2 3 0 1 T -> F F->(E) 1 S6 Accept F -> id R2 **S7** R2 R2 2 **Symbol** Action Stack Input R4 R4 R4 R4 3 0 \$ id \* id\$ Shift to 5 **S5 S4** 2 3 4 8 0 5 \$ id \* id\$ Reduce by F -> id 5 R6 R6 R6 R6 03 \$ F \* id\$ Reduce by T -> F **S4** 9 6 **S5** 3 0 2 \$ T \* id\$ Shift to 7 7 **S5 S4** 10 027 \$ T \* id\$ **S6 S11** 8 9 R1 **S7** R1 R1 10 R3 R3 R3 R3 11 R5 R5 R5 R5

Prepared By: Sukarna Sarker

## Moves of an SLR(1) parser on id \* id E -> E + T (Shift Action : Push) E -> T T -> T \* F

Input

id \* id\$

\* id\$

\* id\$

\* id\$

id\$

Symbol

\$

\$ id

\$ F

\$ T

\$ T \*

T -> F F->(E) F -> id

Stack

0

0 5

03

0 2

027

Action	
Shift to 5	
Reduce by F -> id	
Reduce by T -> F	
Shift to 7	
Shift to 5	

· id	
• F	
	-

State	Action						
	id	+	*	(	)	\$	Е
0	S5			<b>S4</b>			1
1		S6				Accept	
2		R2	S7		R2	R2	
3		R4	R4		R4	R4	
4	S5			<b>S4</b>			8
5		R6	R6		R6	R6	
6	S5			<b>S4</b>			
7	S5			<b>S4</b>			
8		S6			S11		
9		R1	<b>S</b> 7		R1	R1	
10		R3	R3		R3	R3	
11		R5	R5		R5	R5	
					Pre	nared By	Su

Go To

Т

2

9

F

3

3

3

10

### Moves of an SLR(1) parser on id \* id State **Action** Go To Ε Т F \$ id \* + E->E+T (Shift Action: Push 5 and id in the 2. E -> T Stack and Symbol) T -> T \* F **S5 S4** 2 3 0 1 T -> F F->(E) 1 **S6** Accept F -> id R2 **S7** R2 R2 2 **Symbol** Action Stack Input R4 R4 R4 R4 3 0 \$ id \* id\$ Shift to 5 **S5 S4** 2 3 4 8 0 5 \$ id \* id\$ Reduce by F -> id 5 R6 R6 R6 R6 03 \$ F \* id\$ Reduce by T -> F 9 6 **S5 S4** 3 0 2 \$ T \* id\$ Shift to 7 7 **S5 S4** 10 027 \$ T \* id\$ Shift to 5 **S6 S11** 8 0275 \$ T \* id \$ 9 R1 **S7** R1 R1 10 R3 R3 R3 R3 11 R5 R5 R5 R5

### Moves of an SLR(1) parser on id \* id State **Action** Go To Ε Т F \$ id \* + E->E+T (Reduce Action: Pop and Push) 2. E -> T T -> T \* F **S5 S4** 2 3 0 1 T -> F F->(E) 1 **S6** Accept F -> id R2 **S7** R2 R2 2 **Symbol** Action Stack Input R4 R4 R4 R4 3 0 \$ id \* id\$ Shift to 5 **S5 S4** 8 2 3 4 0 5 \$ id \* id\$ Reduce by F -> id 5 R6 R6 R6 R6 03 \$ F Reduce by T -> F \* id\$ **S5 S4** 9 6 3 0 2 \$ T \* id\$ Shift to 7 7 **S5 S4** 10 027 \$ T \* id\$ Shift to 5 **S6 S11** 8 0275 \$ T \* id \$ Reduce by F -> id 9 R1 **S7** R1 R1 10 R3 R3 R3 R3 11 R5 R5 R5 R5

### Moves of an SLR(1) parser on id \* id **State Action** Go To Ε Т F \$ id \* + $E \rightarrow E + T$ (Reduce Action: id is in the 2. E -> T production body, pop id from the 3. T -> T \* F 0 **S5 S4** 2 3 1 Symbol and 5 from the Stack) T -> F 1 **S6** Accept $F \rightarrow (E)$ F -> id R2 **S7** R2 R2 2 Action Stack Symbol Input R4 R4 R4 R4 3 0 \$ id \* id\$ Shift to 5 **S5 S4** 8 2 3 4 0 5 \$ id \* id\$ Reduce by F -> id 5 R6 R6 R6 R6 \$ F 03 \* id\$ Reduce by T -> F **S5 S4** 9 6 3 0 2 \$ T \* id\$ Shift to 7 7 **S5 S4** 10 027 \$ T \* id\$ Shift to 5 **S6 S11** 8 0275 \$ T \* id \$ Reduce by F -> id 9 R1 **S7** R1 R1 \$ T \* 027 \$ 10 R3 R3 R3 R3

11

R5

R5

R5

R5

### Moves of an SLR(1) parser on id \* id State **Action** Go To Ε Т F \$ id \* + E->E+T (Reduce Action: Push Production 2. E -> T head F on the Symbol) 3. T -> T \* F 0 **S5 S4** 2 3 1 T -> F F->(E) 1 **S6** Accept F -> id R2 **S7** R2 R2 2 **Symbol** Action Stack Input R4 R4 R4 R4 3 0 \$ id \* id\$ Shift to 5 **S5 S4** 2 3 4 8 0 5 \$ id \* id\$ Reduce by F -> id 5 R6 R6 R6 R6 03 \$ F \* id\$ Reduce by T -> F 9 6 **S5 S4** 3 0 2 \$ T \* id\$ Shift to 7 7 **S5 S4** 10 027 \$ T \* id\$ Shift to 5 **S6 S11** 8 0275 \$ T \* id \$ Reduce by F -> id 9 R1 **S7** R1 R1 027 \$ T \* F \$ 10 R3 R3 R3 R3 11 R5 R5 R5 R5

## Moves of an SLR(1) parser on id \* id State Action E -> E + T + (Reduce Action: Find the go to state E -> T from the perspective of Stack and T -> T \* F symbol and push it on the stack) T -> F **S6** F->(E) F -> id R2 Action Stack Symbol Input R4 0 \$ id \* id\$ Shift to 5 0 5 \$ id \* id\$ Reduce by F -> id

\* id\$

\* id\$

id\$

\$

\$

\$ F

\$ T

\$ T \*

\$ T \* id

\$ T \* F

03

0 2

027

0275

02710

Stack and he stack)		
,		
Action		
Shift to 5		
Reduce by F -> id		
Reduce by T -> F		
Shift to 7		
Shift to 5		
Reduce by F -> id		

	id
0	S5
1	
2	
3	
4	S5
5	
6	S5
7	S5
8	
9	
10	
11	
	1 2 3 4 5 6 7 8 9 10

R6

**S6** 

R1

R3

R5

Action					
*	(	)	\$		
	S4				
			Accept		
<b>S</b> 7		R2	R2		
R4		R4	R4		
	<b>S4</b>				
R6		R6	R6		
	<b>S</b> 4				
	S4				
		S11			
<b>S</b> 7		R1	R1		
R3		R3	R3		
R5		R5	R5		
Draward By					

Go To

Т

2

2

9

Ε

1

8

F

3

3

3

10

### Moves of an SLR(1) parser on id \* id State **Action** Go To Ε Т F \$ id \* + E->E+T (Reduce Action: Pop and Push) 2. E -> T T -> T \* F **S5 S4** 2 3 0 1 T -> F 1 **S6** Accept F->(E) F -> id R2 **S7** R2 R2 2 **Symbol** Action Stack Input R4 R4 R4 R4 3 0 \$ id \* id\$ Shift to 5 **S5 S4** 8 2 3 4 0 5 \$ id \* id\$ Reduce by F -> id 5 R6 R6 R6 R6 03 \$ F \* id\$ Reduce by T -> F **S4** 9 6 **S5** 3 0 2 \$ T \* id\$ Shift to 7 7 **S5 S4** 10 027 \$ T \* id\$ Shift to 5 **S6 S11** 8 0275 \$ T \* id \$ Reduce by F -> id 9 R1 **S7** R1 R1 02710 \$ T \* F Reduce by T -> T \* F \$ 10 R3 R3 R3 R3

11

R5

R5

R5

R5

### Moves of an SLR(1) parser on id \* id State **Action** Go To Ε Т F \$ id \* + $E \rightarrow E + T$ (Reduce Action: T \* F is in the 2. E -> T production body, pop T \* F from the 3. T -> T \* F 0 **S5 S4** 2 3 1 Symbol and 10, 7, 2 from the Stack) T -> F 1 **S6** Accept $F \rightarrow (E)$ F -> id R2 **S7** R2 R2 2 Stack Symbol Input Action R4 R4 R4 R4 3 0 \$ id \* id\$ Shift to 5 **S5 S4** 2 3 4 8 0 5 \$ id \* id\$ Reduce by F -> id 5 R6 R6 R6 R6 \$ F 03 \* id\$ Reduce by T -> F 9 6 **S5 S4** 3 0 2 \$ T \* id\$ Shift to 7 7 **S5 S4** 10 027 \$ T \* id\$ Shift to 5 **S6 S11** 8 0275 \$ T \* id \$ Reduce by F -> id 9 R1 **S7** R1 R1 02710 \$ T \* F Reduce by T -> T \* F \$ 10 R3 R3 R3 R3 \$ \$ 0 11 R5 R5 R5 R5

### Moves of an SLR(1) parser on id \* id **State Action** Go To Ε Т F \$ id \* + E -> E + T (Reduce Action: push Production 2. E -> T head T on the Symbol) T -> T \* F **S5 S4** 2 3 0 1 T -> F 1 **S6** Accept $F \rightarrow (E)$ F -> id R2 **S7** R2 R2 2 Action Stack Symbol Input R4 R4 R4 R4 3 0 \$ id \* id\$ Shift to 5 **S5 S4** 2 3 4 8 0 5 \$ id \* id\$ Reduce by F -> id 5 R6 R6 R6 R6 \$ F 03 \* id\$ Reduce by T -> F 9 6 **S5 S4** 3 0 2 \$ T \* id\$ Shift to 7 7 **S5 S4** 10 027 \$ T \* id\$ Shift to 5 **S6 S11** 8 0275 \$ T \* id \$ Reduce by F -> id 9 R1 **S7** R1 R1 02710 \$ T \* F Reduce by T -> T \* F \$ 10 R3 R3 R3 R3 \$ T \$ 0 11 R5 R5 R5 R5

## Moves of an SLR(1) parser on id \* id

 $E \rightarrow E + T$ 

Symbol

\$

\$ id

\$ F

\$ T

\$ T \*

\$ T \* id

\$ T \* F

\$ T

- 2. E -> T
- T -> T \* F
- T -> F

Stack

0

0 5

03

0 2

027

0275

02710

02

- $F \rightarrow (E)$ F -> id
- - (Reduce Action: Find the go to state from the perspective of Stack and
- symbol and push it on the stack)

Input

id \* id\$

\* id\$

\* id\$

\* id\$

id\$

\$

\$

\$

0

1

2

3

4

5

6

7

8

9

10

11

Action

Shift to 5

Reduce by F -> id

Reduce by T -> F

Shift to 7

Shift to 5

Reduce by F -> id

Reduce by T -> T \* F

**State** 

id \* +

**S6** 

R2

R4

R6

**S6** 

R1

R3

R5

**S7** 

R4

R6

**S7** 

R3

R5

**S5** 

**S5** 

**S5** 

**S5** 

**Action** 

**S4** 

**S4** 

**S4** 

**S4** 

R2

R4

R6

**S11** 

R1

R3

R5

Go To

2

2

9

F

3

3

3

10

Ε

1

8

\$

Accept

R2

R4

R6

R1

R3

R5

### Moves of an SLR(1) parser on id \* id State **Action** Go To Ε Т F \$ id \* + E->E+T (Reduce Action :Pop and push) E -> T T -> T \* F **S5 S4** 2 3 0 1 T -> F 1 S6 Accept $F \rightarrow (E)$ F -> id R2 **S7** R2 R2 2 **Symbol** Action Stack Input R4 R4 R4 R4 3 0 \$ id \* id\$ Shift to 5 **S5 S4** 2 3 4 8 0 5 \$ id \* id\$ Reduce by F -> id 5 R6 R6 R6 R6 03 \$ F \* id\$ Reduce by T -> F **S4** 9 6 **S5** 3 0 2 \$ T \* id\$ Shift to 7 7 **S5 S4** 10 027 \$ T \* id\$ Shift to 5 **S6 S11** 8 0275 \$ T \* id \$ Reduce by F -> id 9 R1 **S7** R1 R1 02710 \$ T \* F Reduce by T -> T \* F \$ 10 R3 R3 R3 R3 0 2 \$ T \$ Reduce by E -> T

11

R5

R5

R5

R5

### Moves of an SLR(1) parser on id \* id State **Action** Go To Ε Т F \$ id \* + $E \rightarrow E + T$ (Reduce Action: T is in the production 2. E -> T body, pop T from the Symbol and 2 T -> T \* F 0 **S5 S4** 2 3 1 from the Stack) T -> F 1 **S6** Accept $F \rightarrow (E)$ F -> id R2 **S7** R2 R2 2 Action Stack Symbol Input R4 R4 R4 R4 3 0 \$ id \* id\$ Shift to 5 **S5 S4** 2 3 4 8 0 5 \$ id \* id\$ Reduce by F -> id 5 R6 R6 R6 R6 \$ F 03 \* id\$ Reduce by T -> F 6 **S5 S4** 9 3 0 2 \$ T \* id\$ Shift to 7 7 **S5 S4** 10 027 \$ T \* id\$ Shift to 5 **S6 S11** 8 0275 \$ T \* id \$ Reduce by F -> id 9 R1 **S7** R1 R1 Reduce by T -> T \* F 02710 \$ T \* F \$ 10 R3 R3 R3 R3 0 2 \$ T \$ Reduce by E -> T 11 R5 R5 R5 R5 0 \$ \$

### Moves of an SLR(1) parser on id \* id State **Action** Go To Ε Т F \$ id \* + E -> E + T (Reduce Action: push Production 2. E -> T head E on the Symbol) T -> T \* F **S5 S4** 2 3 0 1 T -> F 1 **S6** Accept $F \rightarrow (E)$ F -> id R2 **S7** R2 R2 2 Action Stack Symbol Input R4 R4 R4 R4 3 0 \$ id \* id\$ Shift to 5 **S5 S4** 2 3 4 8 0 5 \$ id \* id\$ Reduce by F -> id 5 R6 R6 R6 R6 \$ F 03 \* id\$ Reduce by T -> F 9 6 **S5 S4** 3 0 2 \$ T \* id\$ Shift to 7 7 **S5 S4** 10 027 \$ T \* id\$ Shift to 5 **S6 S11** 8 0275 \$ T \* id \$ Reduce by F -> id 9 R1 **S7** R1 R1 02710 \$ T \* F Reduce by T -> T \* F \$ 10 R3 R3 R3 R3 0 2 \$ T \$ Reduce by E -> T 11 R5 R5 R5 R5 \$E 0 \$

## Moves of an SLR(1) parser on id \* id E -> E + T E -> T T -> T T -> F F -> (

Stack

027

0275

0 2 7 10

0 2

0 1

\$ T \* F

\$ T

\$E

E->E+ E->T T->T*F T->F F->(E)	(Reduce from the symbol	(Reduce Action : Find the go to state from the perspective of Stack and symbol and push it on the stack)			
Stack	Symbol	Input	Action		
0	\$	id * id\$	Shift to 5		
0 5	\$ id	* id\$	Reduce by F -> id		
0 3	\$ F	* id\$	Reduce by T -> F		
0 2	\$ T	* id\$	Shift to 7		
0 2 7	\$ T *	id\$	Shift to 5		
275	\$ T * id	\$	Reduce by F -> id		

\$

\$

on id * id	S
ne go to state	
Stack and the stack)	
Action	
Shift to 5	
Shift to 5	
Reduce by F -> id	
Reduce by T -> F	
Shift to 7	
Shift to 5	
Reduce by F -> id	
Reduce by T -> T * F	
Reduce by E -> T	

Reduce by T -> T

	State
<b>)</b>	
	0
	1
	2
	3
d	4
-	5
	6
	7
d	8
F	9
•	10
	11

id	+
S5	
	S6
	R2
	R4
S5	
	R6
S5	
S5	
	S6
	R1
	R3
	R5

(	)	
<b>S4</b>		
		Ac
	R2	F
	R4	F
<b>S4</b>		
	R6	F
<b>S4</b>		
<b>S4</b>		
	S11	
	R1	F
	R3	F
	R5	F
	Pre	oare

**Action** 

\*

**S7** 

R4

R6

**S7** 

R3

R5

\$	E	Т	F
	1	2	3
ccept			
R2			
R4			
	8	2	3
R6			
		9	3
			10
R1			
R3			
R5			
ed By: Sukarna Sarke			

Go To

### Moves of an SLR(1) parser on id \* id State **Action** Go To Ε Т F \$ id \* + E->E+T (Accept Action) E -> T T -> T \* F **S5 S4** 2 3 0 1 T -> F 1 **S6** Accept $F \rightarrow (E)$ F -> id R2 **S7** R2 R2 2 **Symbol** Action Stack Input R4 R4 R4 R4 3 0 \$ id \* id\$ Shift to 5 **S5 S4** 8 2 3 4 0 5 \$ id \* id\$ Reduce by F -> id 5 R6 R6 R6 R6 03 \$ F \* id\$ Reduce by T -> F **S4** 9 6 **S5** 3 0 2 \$ T \* id\$ Shift to 7 7 **S5 S4** 10 027 \$ T \* id\$ Shift to 5 **S6 S11** 8 0275 \$ T \* id \$ Reduce by F -> id 9 R1 **S7** R1 R1 02710 \$ T \* F Reduce by T -> T \* F \$ 10 R3 R3 R3 R3 0 2 \$ T \$ Reduce by E -> T 11 R5 R5 R5 R5 0 1 \$E Accept

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