

LL(1) Parsing Example

Build the First, Follow and First+ Sets and the LL(1) Parse Table for the Following Grammar

1. $S \rightarrow B$
2. $B \rightarrow B1 B2$
3. $B2 \rightarrow \text{OR } B1 B2$
4. $B2 \rightarrow \epsilon$
5. $B1 \rightarrow B3 B4$
6. $B4 \rightarrow \text{AND } B3 B4$
7. $B4 \rightarrow \epsilon$
8. $B3 \rightarrow \text{VAR}$

Build the First, Follow and First+ Sets and the LL(1) Parse Table for the Following Grammar

1. $S \rightarrow B$
2. $B \rightarrow B1 B2$
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4. $B2 \rightarrow \epsilon$
5. $B1 \rightarrow B3 B4$
6. $B4 \rightarrow AND B3 B4$
7. $B4 \rightarrow \epsilon$
8. $B3 \rightarrow VAR$

$First(S) = First(B)$
 $First(B) = First(B1)$
 $First(B1) = First(B3)$
 $First(B2) = OR, \epsilon$
 $First(B3) = VAR$
 $First(B4) = AND, \epsilon$

Build the First, Follow and First+ Sets and the LL(1) Parse Table for the Following Grammar

1. $S \rightarrow B$
2. $B \rightarrow B1 B2$
3. $B2 \rightarrow OR B1 B2$
4. $B2 \rightarrow \epsilon$
5. $B1 \rightarrow B3 B4$
6. $B4 \rightarrow AND B3 B4$
7. $B4 \rightarrow \epsilon$
8. $B3 \rightarrow VAR$

$First(S) = First(B)$
 $= VAR$
 $First(B) = First(B1)$
 $= VAR$
 $First(B1) = First(B3)$
 $= VAR$
 $First(B2) = OR, \epsilon$
 $First(B3) = VAR$
 $First(B4) = AND, \epsilon$

Build the First, Follow and First+ Sets and the LL(1) Parse Table for the Following Grammar

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6. $B4 \rightarrow \text{AND } B3 B4$
7. $B4 \rightarrow \epsilon$
8. $B3 \rightarrow \text{VAR}$

$\text{Follow}(S) = \text{eof}$

$\text{Follow}(B) = \text{Follow}(S)$

$\text{Follow}(B1) = \text{First}(B2)$

$\text{Follow}(B2) = \text{Follow}(B)$

$\text{Follow}(B3) = \text{First}(B4)$

$\text{Follow}(B4) = \text{Follow}(B1)$

Build the First, Follow and First+ Sets and the LL(1) Parse Table for the Following Grammar

1. $S \rightarrow B$
2. $B \rightarrow B1 B2$
3. $B2 \rightarrow OR B1 B2$
4. $B2 \rightarrow \epsilon$
5. $B1 \rightarrow B3 B4$
6. $B4 \rightarrow AND B3 B4$
7. $B4 \rightarrow \epsilon$
8. $B3 \rightarrow VAR$

$Follow(S) = eof$

$Follow(B) = Follow(S)$
 $= eof$

$Follow(B1) = First(B2)$
 $= OR, Follow(B), Follow(B2)$
 $= OR, eof$

$Follow(B2) = Follow(B)$
 $= eof$

$Follow(B3) = First(B4)$
 $= AND, Follow(B1), Follow(B4)$
 $= AND, OR, eof$

$Follow(B4) = Follow(B1)$
 $= OR, eof$

Build the First, Follow and First+ Sets and the LL(1) Parse Table for the Following Grammar

1. $S \rightarrow B$
2. $B \rightarrow B_1 B_2$
3. $B_2 \rightarrow \text{OR } B_1 B_2$
4. $B_2 \rightarrow \epsilon$
5. $B_1 \rightarrow B_3 B_4$
6. $B_4 \rightarrow \text{AND } B_3 B_4$
7. $B_4 \rightarrow \epsilon$
8. $B_3 \rightarrow \text{VAR}$

$\text{First}^+(S \rightarrow B) = \text{First}(B) = \text{VAR}$
 $\text{First}^+(B \rightarrow B_1 B_2) = \text{First}(B_1) = \text{VAR}$
 $\text{First}^+(B_1 \rightarrow B_3 B_4) = \text{First}(B_3) = \text{VAR}$
 $\text{First}^+(B_2 \rightarrow \text{OR } B_1 B_2) = \text{OR}$
 $\text{First}^+(B_2 \rightarrow \epsilon) = \text{Follow}(B_2) = \text{eof}$
 $\text{First}^+(B_3 \rightarrow \text{VAR}) = \text{VAR}$
 $\text{First}^+(B_4 \rightarrow \text{AND } B_3 B_4) = \text{AND}$
 $\text{First}^+(B_4 \rightarrow \epsilon) = \text{Follow}(B_4) = \text{OR}, \text{eof}$

$\text{First}(S) = \text{VAR}$
 $\text{First}(B) = \text{VAR}$
 $\text{First}(B_1) = \text{VAR}$
 $\text{First}(B_2) = \text{OR}, \epsilon$
 $\text{First}(B_3) = \text{VAR}$
 $\text{First}(B_4) = \text{AND}, \epsilon$

$\text{Follow}(S) = \text{eof}$
 $\text{Follow}(B) = \text{eof}$
 $\text{Follow}(B_1) = \text{OR}, \text{eof}$
 $\text{Follow}(B_2) = \text{eof}$
 $\text{Follow}(B_3) = \text{AND}, \text{OR}, \text{eof}$
 $\text{Follow}(B_4) = \text{OR}, \text{eof}$

Build the First, Follow and First+ Sets and the LL(1) Parse Table for the Following Grammar

1. $S \rightarrow B$

2. $B \rightarrow B1 B2$

3. $B2 \rightarrow OR B1 B2$

4. $B2 \rightarrow \epsilon$

5. $B1 \rightarrow B3 B4$

6. $B4 \rightarrow AND B3 B4$

7. $B4 \rightarrow \epsilon$

8. $B3 \rightarrow VAR$

$First+(S \rightarrow B) = First(B) = VAR$

$First+(B \rightarrow B1 B2) = First(B1) = VAR$

$First+(B1 \rightarrow B3 B4) = First(B3) = VAR$

$First+(B2 \rightarrow OR B1 B2) = OR$

$First+(B2 \rightarrow \epsilon) = Follow(B2) = eof$

$First+(B3 \rightarrow VAR) = VAR$

$First+(B4 \rightarrow AND B3 B4) = AND$

$First+(B4 \rightarrow \epsilon) = Follow(B4) = OR, eof$

	eof	OR	AND	VAR
S				1
B				2
B1				5
B2	4	3		
B3				8
B4	7	7	6	

Use the Following Grammar and LL(1) Parse Table to Parse VAR OR VAR

1. $S \rightarrow B$
2. $B \rightarrow B1 B2$
3. $B2 \rightarrow OR B1 B2$
4. $B2 \rightarrow \epsilon$
5. $B1 \rightarrow B3 B4$
6. $B4 \rightarrow AND B3 B4$
7. $B4 \rightarrow \epsilon$
8. $B3 \rightarrow VAR$

	eof	OR	AND	VAR
S				1
B				2
B1				5
B2	4	3		
B3				8
B4	7	7	6	

S

Use the Following Grammar and LL(1) Parse Table to Parse VAR OR VAR

1. $S \rightarrow B$
2. $B \rightarrow B1 B2$
3. $B2 \rightarrow OR B1 B2$
4. $B2 \rightarrow \epsilon$
5. $B1 \rightarrow B3 B4$
6. $B4 \rightarrow AND B3 B4$
7. $B4 \rightarrow \epsilon$
8. $B3 \rightarrow VAR$

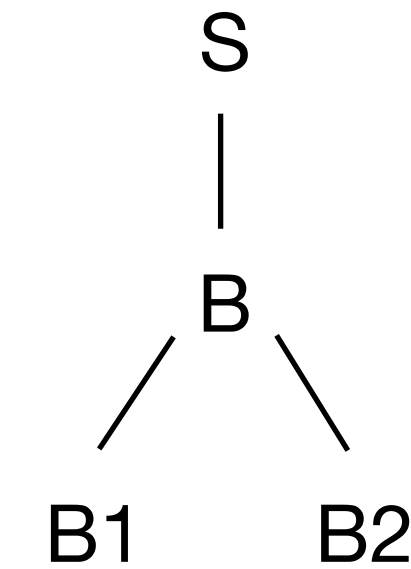
	eof	OR	AND	VAR
S				1
B				2
B1				5
B2	4	3		
B3				8
B4	7	7	6	

S
|
B

Use the Following Grammar and LL(1) Parse Table to Parse VAR OR VAR

1. $S \rightarrow B$
2. $B \rightarrow B1 B2$
3. $B2 \rightarrow OR B1 B2$
4. $B2 \rightarrow \epsilon$
5. $B1 \rightarrow B3 B4$
6. $B4 \rightarrow AND B3 B4$
7. $B4 \rightarrow \epsilon$
8. $B3 \rightarrow VAR$

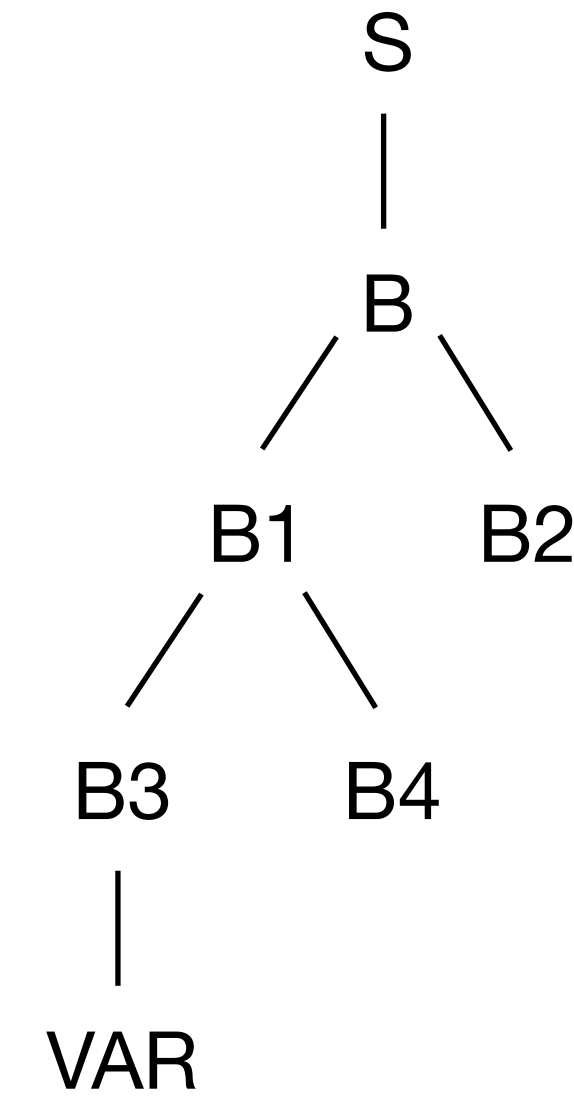
	eof	OR	AND	VAR
S				1
B				2
B1				5
B2	4	3		
B3				8
B4	7	7	6	



Use the Following Grammar and LL(1) Parse Table to Parse VAR OR VAR

1. $S \rightarrow B$
2. $B \rightarrow B1 B2$
3. $B2 \rightarrow OR B1 B2$
4. $B2 \rightarrow \epsilon$
5. $B1 \rightarrow B3 B4$
6. $B4 \rightarrow AND B3 B4$
7. $B4 \rightarrow \epsilon$
8. $B3 \rightarrow VAR$

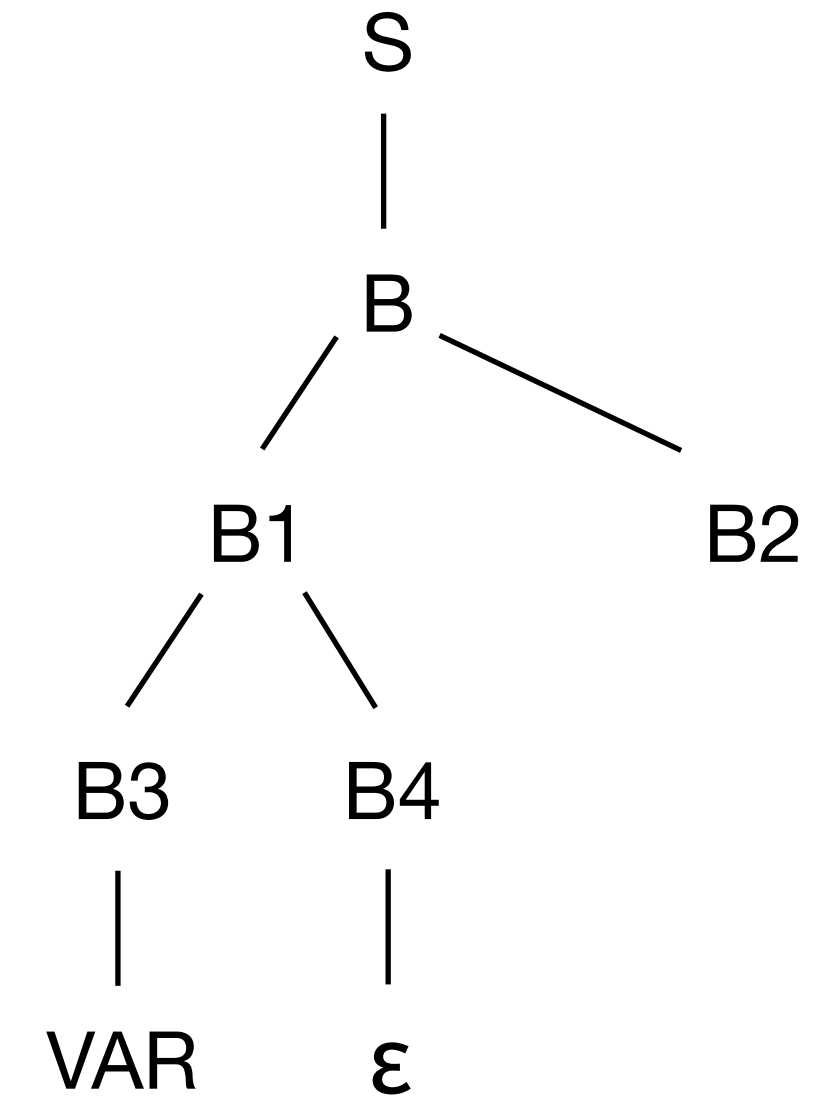
	eof	OR	AND	VAR
S				1
B				2
B1				5
B2	4	3		
B3				8
B4	7	7	6	



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1. $S \rightarrow B$
2. $B \rightarrow B1 B2$
3. $B2 \rightarrow OR B1 B2$
4. $B2 \rightarrow \epsilon$
5. $B1 \rightarrow B3 B4$
6. $B4 \rightarrow AND B3 B4$
7. $B4 \rightarrow \epsilon$
8. $B3 \rightarrow VAR$

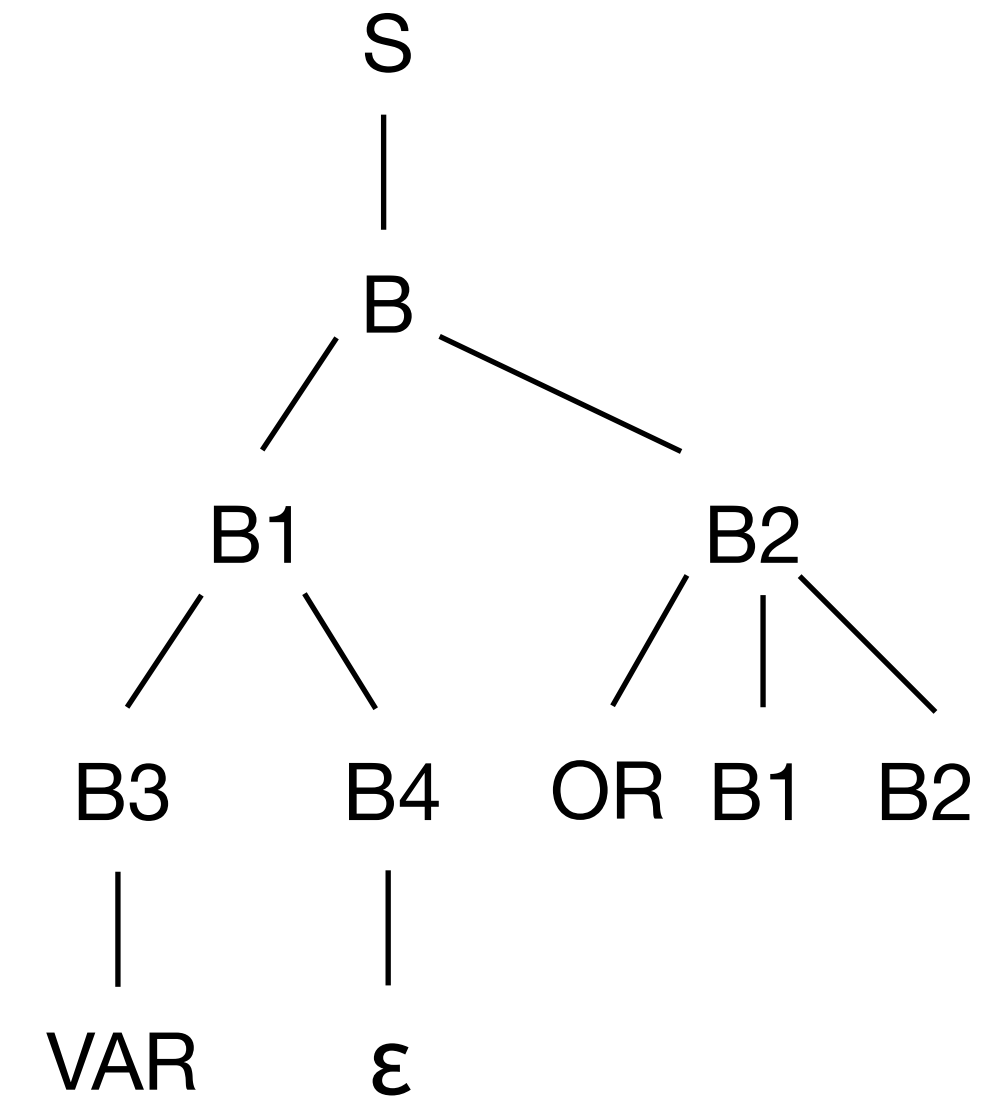
	eof	OR	AND	VAR
S				1
B				2
B1				5
B2	4	3		
B3				8
B4	7	7	6	



Use the Following Grammar and LL(1) Parse Table to Parse VAR OR VAR

1. $S \rightarrow B$
2. $B \rightarrow B1 B2$
3. $B2 \rightarrow OR B1 B2$
4. $B2 \rightarrow \epsilon$
5. $B1 \rightarrow B3 B4$
6. $B4 \rightarrow AND B3 B4$
7. $B4 \rightarrow \epsilon$
8. $B3 \rightarrow VAR$

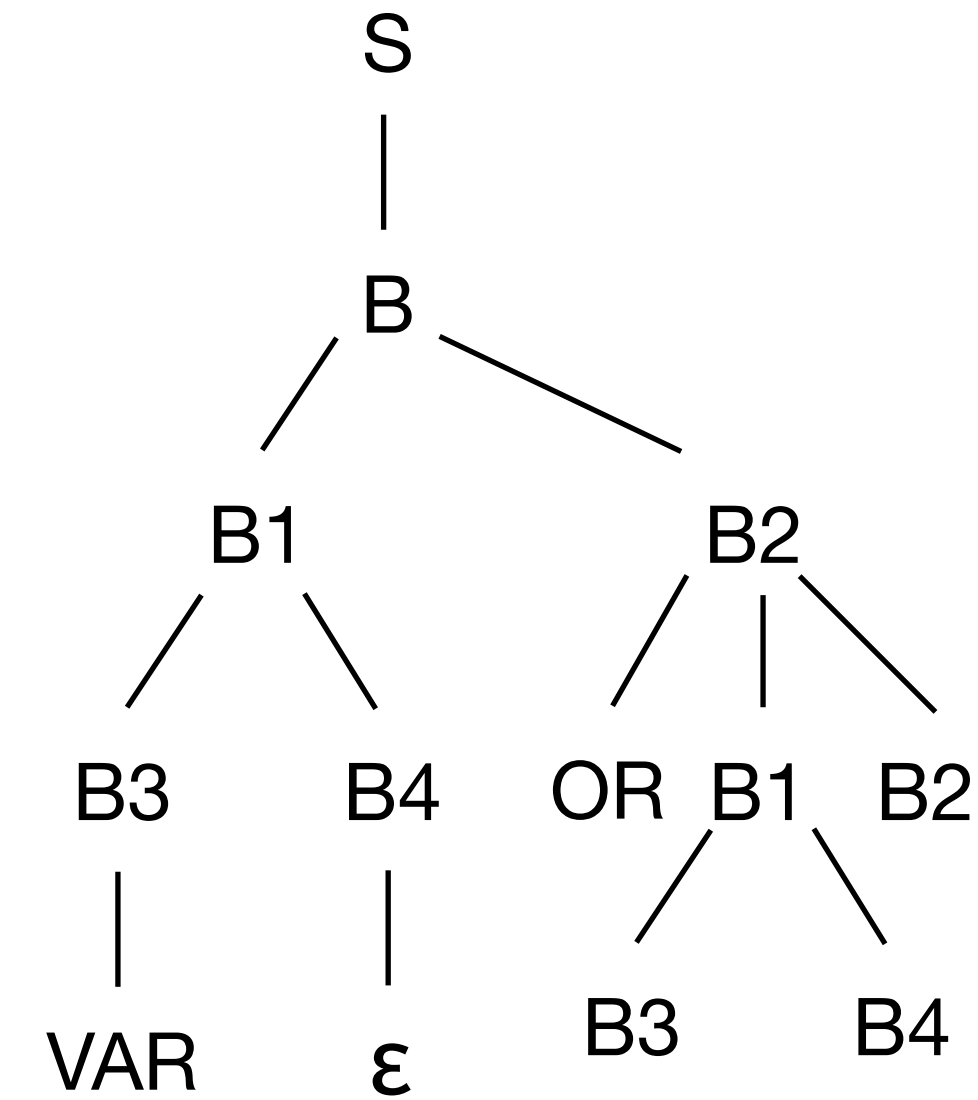
	eof	OR	AND	VAR
S				1
B				2
B1				5
B2	4	3		
B3				8
B4	7	7	6	



Use the Following Grammar and LL(1) Parse Table to Parse VAR OR VAR

1. $S \rightarrow B$
2. $B \rightarrow B1 B2$
3. $B2 \rightarrow OR B1 B2$
4. $B2 \rightarrow \epsilon$
5. $B1 \rightarrow B3 B4$
6. $B4 \rightarrow AND B3 B4$
7. $B4 \rightarrow \epsilon$
8. $B3 \rightarrow VAR$

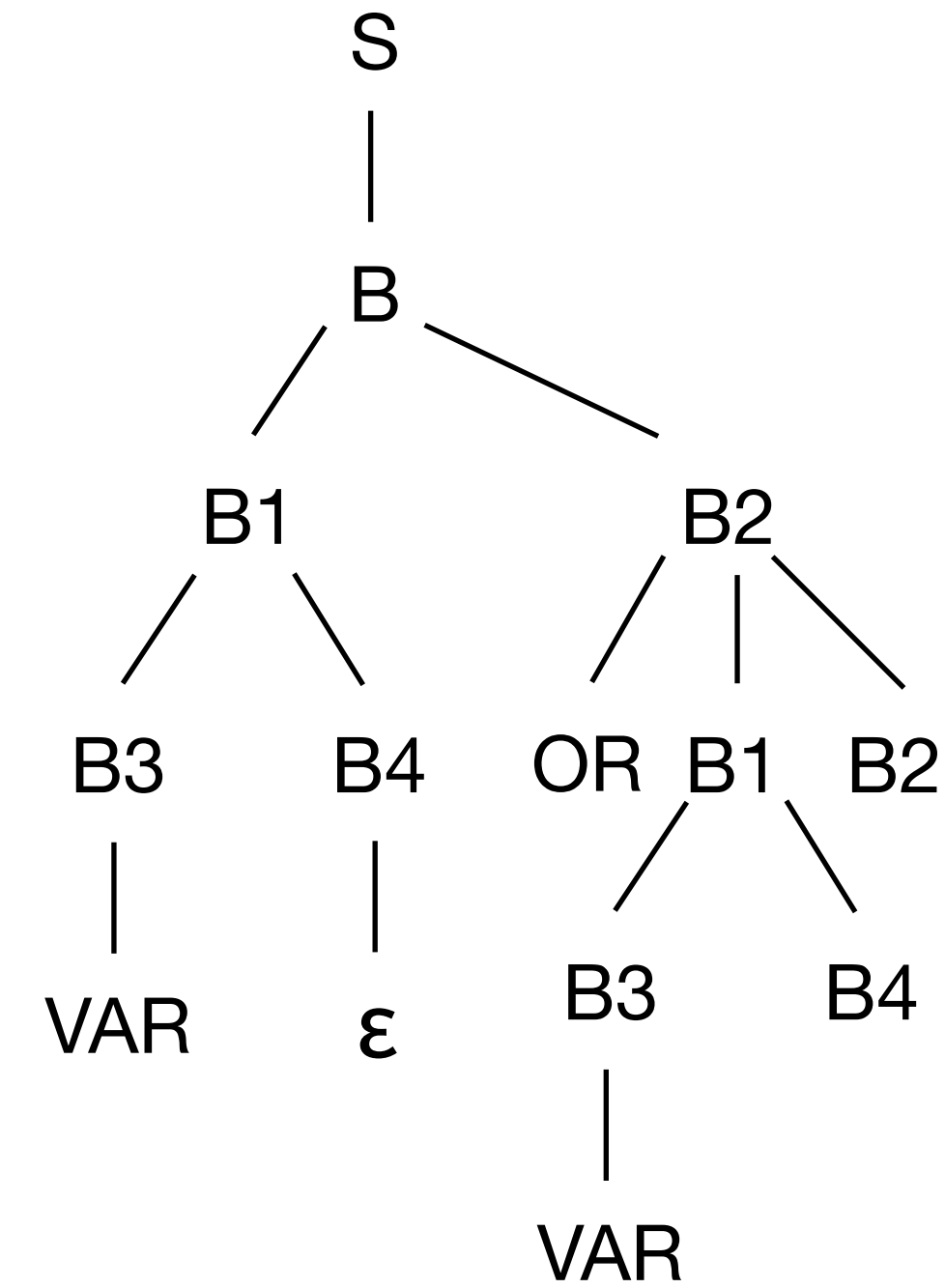
	eof	OR	AND	VAR
S				1
B				2
B1				5
B2	4	3		
B3				8
B4	7	7	6	



Use the Following Grammar and LL(1) Parse Table to Parse VAR OR VAR

1. $S \rightarrow B$
2. $B \rightarrow B1 B2$
3. $B2 \rightarrow OR B1 B2$
4. $B2 \rightarrow \epsilon$
5. $B1 \rightarrow B3 B4$
6. $B4 \rightarrow AND B3 B4$
7. $B4 \rightarrow \epsilon$
8. $B3 \rightarrow VAR$

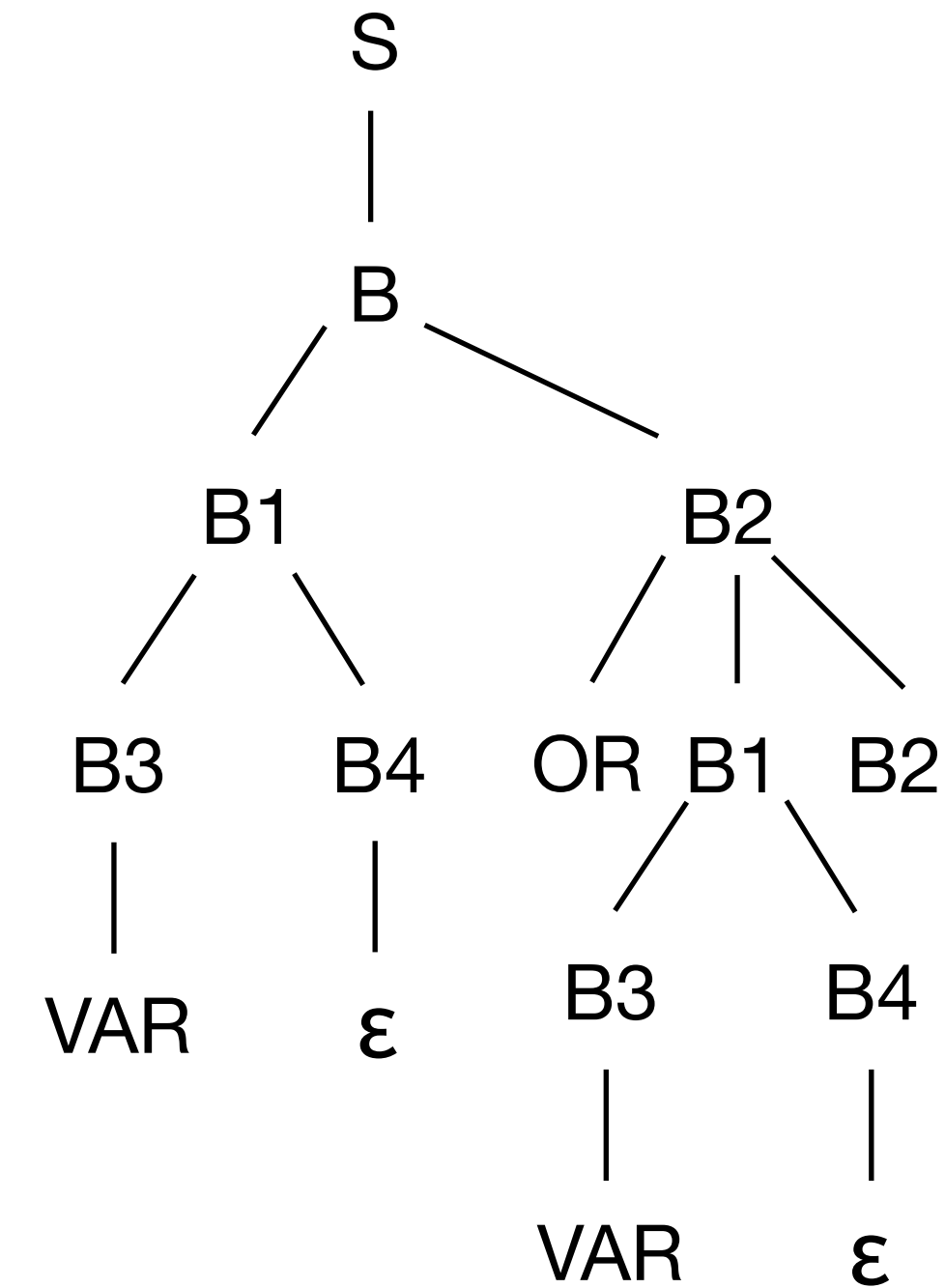
	eof	OR	AND	VAR
S				1
B				2
B1				5
B2	4	3		
B3				8
B4	7	7	6	



Use the Following Grammar and LL(1) Parse Table to Parse VAR OR VAR

1. $S \rightarrow B$
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3. $B2 \rightarrow OR B1 B2$
4. $B2 \rightarrow \epsilon$
5. $B1 \rightarrow B3 B4$
6. $B4 \rightarrow AND B3 B4$
7. $B4 \rightarrow \epsilon$
8. $B3 \rightarrow VAR$

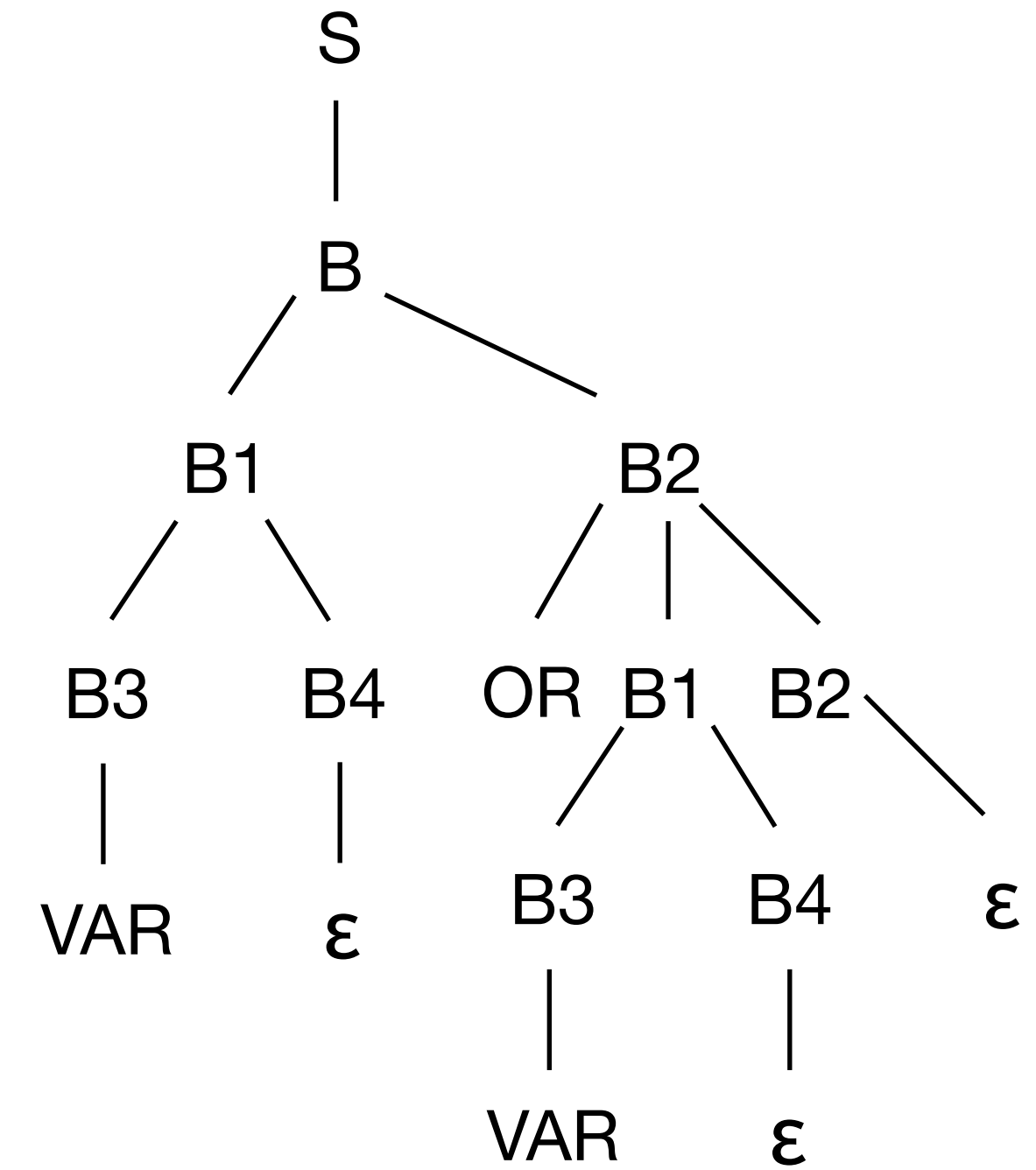
	eof	OR	AND	VAR
S				1
B				2
B1				5
B2	4	3		
B3				8
B4	7	7	6	



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1. $S \rightarrow B$
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3. $B2 \rightarrow OR B1 B2$
4. $B2 \rightarrow \epsilon$
5. $B1 \rightarrow B3 B4$
6. $B4 \rightarrow AND B3 B4$
7. $B4 \rightarrow \epsilon$
8. $B3 \rightarrow VAR$

	eof	OR	AND	VAR
S				1
B				2
B1				5
B2	4	3		
B3				8
B4	7	7	6	



Use the Following Grammar and LL(1) Parse Table to Parse VAR AND VAR

1. $S \rightarrow B$
2. $B \rightarrow B1 B2$
3. $B2 \rightarrow OR B1 B2$
4. $B2 \rightarrow \epsilon$
5. $B1 \rightarrow B3 B4$
6. $B4 \rightarrow AND B3 B4$
7. $B4 \rightarrow \epsilon$
8. $B3 \rightarrow VAR$

	eof	OR	AND	VAR
S				1
B				2
B1				5
B2	4	3		
B3				8
B4	7	7	6	

Use the Following Grammar and LL(1) Parse Table to Parse VAR OR VAR AND VAR

1. $S \rightarrow B$
2. $B \rightarrow B1 B2$
3. $B2 \rightarrow OR B1 B2$
4. $B2 \rightarrow \epsilon$
5. $B1 \rightarrow B3 B4$
6. $B4 \rightarrow AND B3 B4$
7. $B4 \rightarrow \epsilon$
8. $B3 \rightarrow VAR$

	eof	OR	AND	VAR
S				1
B				2
B1				5
B2	4	3		
B3				8
B4	7	7	6	

|