

Grammar:

$S \rightarrow S + T \mid T$

$T \rightarrow id$

Output:

```
D:\Semester7\CD_Lab\CD_Lab6_17CS01003\Question 2>g++ LL1_Parser.cpp
```

```
D:\Semester7\CD_Lab\CD_Lab6_17CS01003\Question 2>a.exe
```

```
Enter Productions:(Ctrl+D to end):
```

```
S -> S + T | T
```

```
T -> id
```

```
^D
```

```
Incomplete Grammer
```

```
Printing Complete Grammer:
```

```
S -----> T S'
```

```
S' -----> + T S' | e
```

```
T -----> id
```

```
State 1
```

```
S->.TS', $|
```

```
S''->.S, $|
```

```
T->.id, +| $|
```

```
Transitions for state 1:
```

```
To State 2 on encountering S
```

```
To State 3 on encountering T
```

```
To State 4 on encountering id
```

```
State 2
```

```
S''->S., $|
```

```
Transitions for state 2:
```

```
State 3
```

```
S->T.S', $|
```

```
S'->.+TS', $|
```

```
S'->.e, $|
```

```
Transitions for state 3:
```

```
To State 5 on encountering +
```

```
To State 6 on encountering S'
```

```
State 4
```

```
T->id., +| $|
```

```

State 4
T->id.,+|$|

Transitions for state 4:

State 5
S'->+.TS',,$|
T->.id.,+|$|

Transitions for state 5:
To State 4 on encountering id
To State 7 on encountering T

State 6
S->TS'.,,$|

Transitions for state 6:

State 7
S'->+.TS',,$|
S'->+T.S',,$|
S'->.e,$|

Transitions for state 7:
To State 5 on encountering +
To State 8 on encountering S'

State 8
S'->+TS'.,,$|

Transitions for state 8:

```

Table:

State	+	id	\$	S	S'	S''	T
1		4		2			3
2			Accept				
3			r4				
4	r5		r5				
5		4					7
6			r2				
7			r4				
8			r3				