

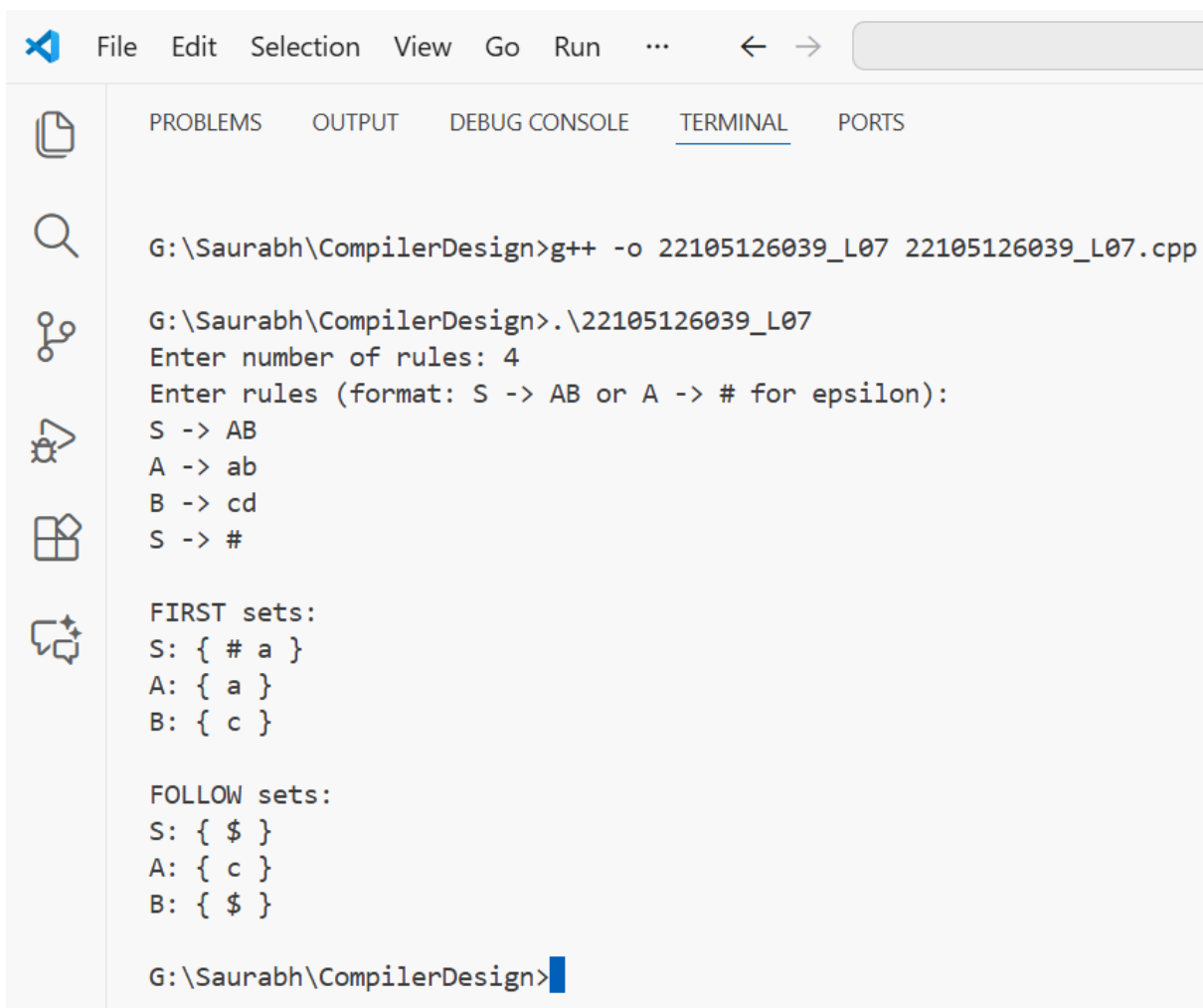
The image shows a screenshot of the Visual Studio Code editor. The top menu bar includes File, Edit, Selection, View, Go, Run, and a search icon. Below the menu bar, the left sidebar contains icons for Explorer, Search, Source Control, Run and Debug, and Extensions. The main editor area has tabs for PROBLEMS, OUTPUT, DEBUG CONSOLE, TERMINAL, and PORTS. The terminal window displays the following text:

```
G:\Saurabh\CompilerDesign>g++ -o 22105126039_L05 22105126039_L05.cpp

G:\Saurabh\CompilerDesign>.\22105126039_L05
Enter number of productions: 4
Enter productions (e.g., E E+T):
A Aa
A b
B Bc
B d

Grammar after removing Left Recursion:
A -> bA'
A' -> aA'
A' -> epsilon
B -> dB'
B' -> cB'
B' -> epsilon

G:\Saurabh\CompilerDesign>
```



The screenshot shows a Visual Studio Code interface with the 'TERMINAL' tab active. The terminal displays the following text:

```
G:\Saurabh\CompilerDesign>g++ -o 22105126039_L07 22105126039_L07.cpp

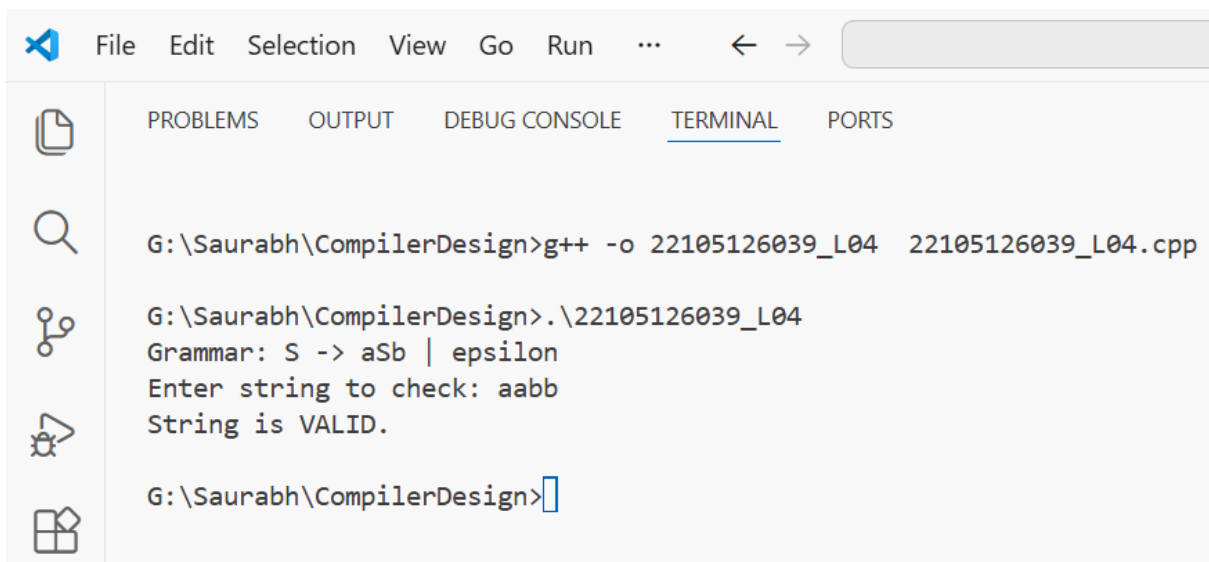
G:\Saurabh\CompilerDesign>.\22105126039_L07
Enter number of rules: 4
Enter rules (format: S -> AB or A -> # for epsilon):
S -> AB
A -> ab
B -> cd
S -> #

FIRST sets:
S: { # a }
A: { a }
B: { c }

FOLLOW sets:
S: { $ }
A: { c }
B: { $ }

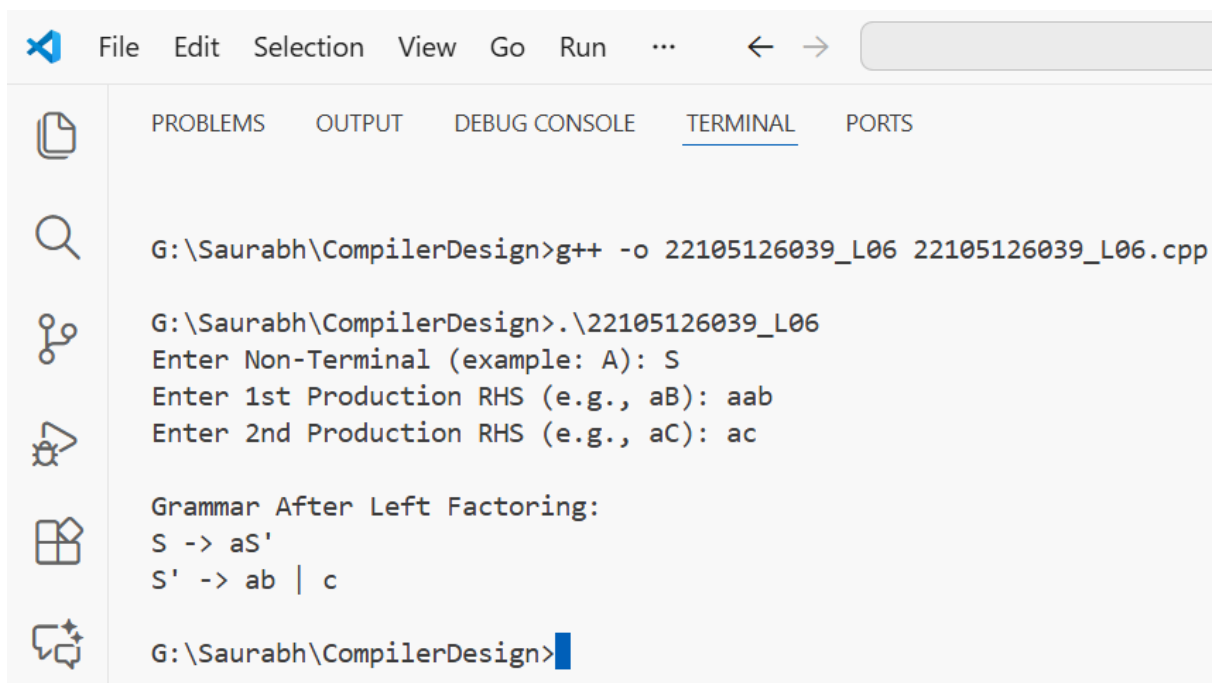
G:\Saurabh\CompilerDesign>
```

The terminal output shows the compilation of a C++ program, followed by its execution. The program prompts for the number of rules (4) and the rules themselves. It then calculates and displays the FIRST and FOLLOW sets for the non-terminals S, A, and B.



The image shows a screenshot of the Visual Studio Code editor. The top menu bar includes File, Edit, Selection, View, Go, Run, and a search icon. Below the menu bar, the left sidebar contains icons for Explorer, Search, Source Control, Run and Debug, and Extensions. The main editor area has tabs for PROBLEMS, OUTPUT, DEBUG CONSOLE, TERMINAL, and PORTS. The terminal window displays the following text:

```
G:\Saurabh\CompilerDesign>g++ -o 22105126039_L04 22105126039_L04.cpp  
  
G:\Saurabh\CompilerDesign>.\22105126039_L04  
Grammar: S -> aSb | epsilon  
Enter string to check: aabb  
String is VALID.  
  
G:\Saurabh\CompilerDesign>
```



The image shows a Visual Studio Code interface with a terminal window open. The terminal displays the following commands and output:

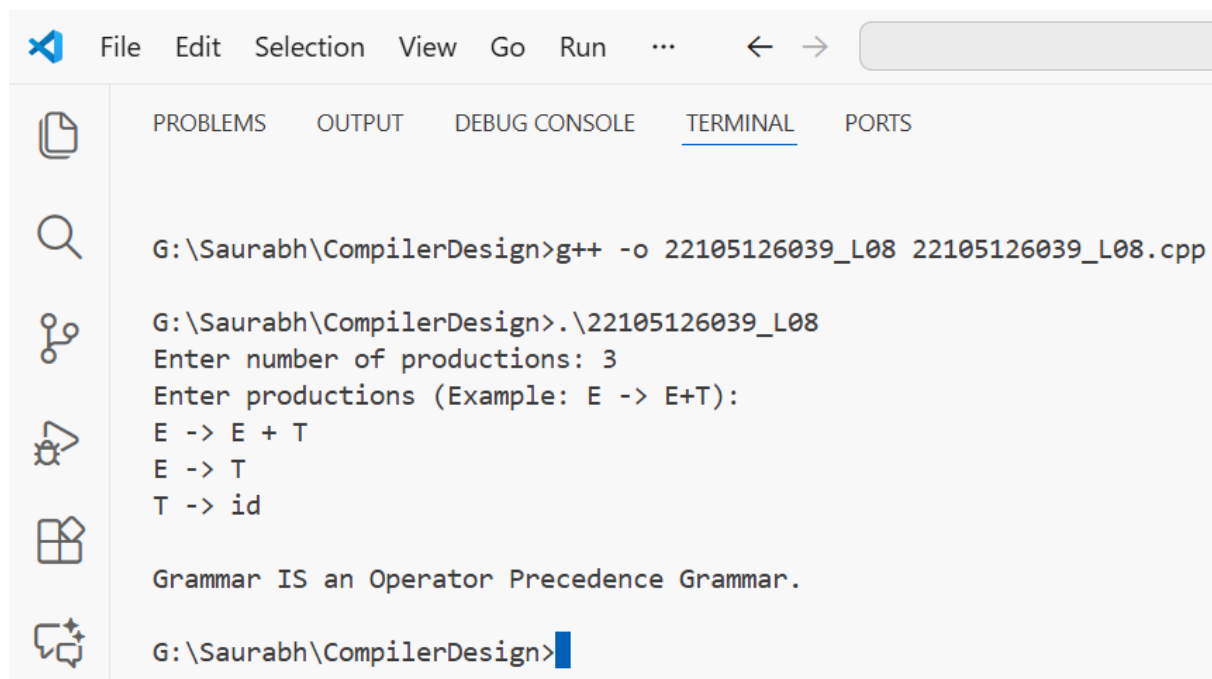
```
G:\Saurabh\CompilerDesign>g++ -o 22105126039_L06 22105126039_L06.cpp

G:\Saurabh\CompilerDesign>.\22105126039_L06
Enter Non-Terminal (example: A): S
Enter 1st Production RHS (e.g., aB): aab
Enter 2nd Production RHS (e.g., aC): ac

Grammar After Left Factoring:
S -> aS'
S' -> ab | c

G:\Saurabh\CompilerDesign>
```

The terminal window has a menu bar with 'File', 'Edit', 'Selection', 'View', 'Go', 'Run', and a search icon. The left sidebar contains icons for Explorer, Search, Source Control, Run and Debug, Extensions, and Testing. The terminal tab is active, showing the command prompt and the execution of the program.



```
File Edit Selection View Go Run ... < >  
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS  
G:\Saurabh\CompilerDesign>g++ -o 22105126039_L08 22105126039_L08.cpp  
G:\Saurabh\CompilerDesign>.\22105126039_L08  
Enter number of productions: 3  
Enter productions (Example: E -> E+T):  
E -> E + T  
E -> T  
T -> id  
Grammar IS an Operator Precedence Grammar.  
G:\Saurabh\CompilerDesign>
```