Assignment - VI Compiler Design Laboratory (CS3075)
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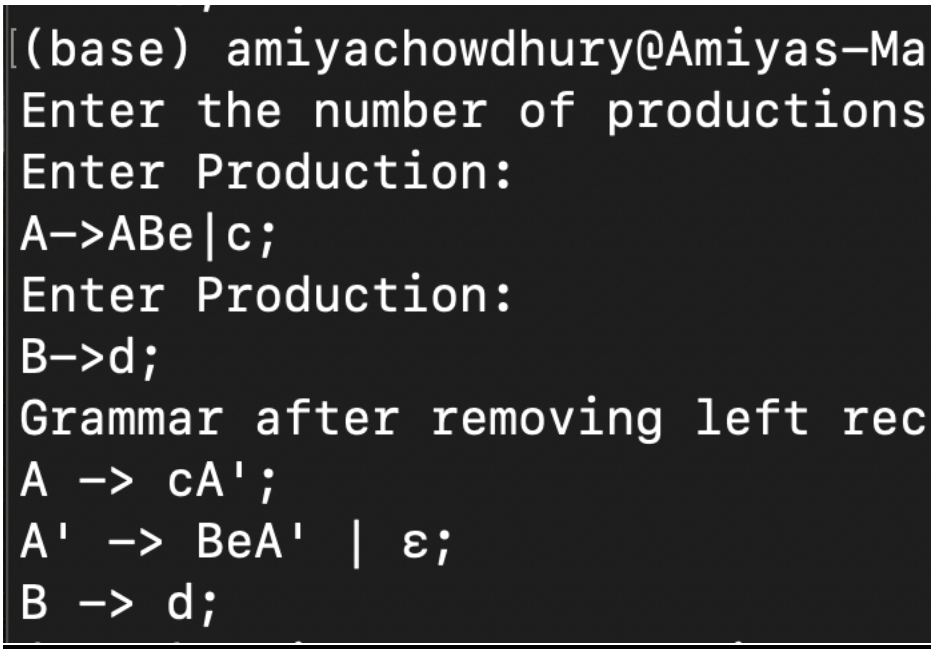
1. Write a program to test whether a given grammar is left recursive and eliminate left recursion if it is.

Solution File: ***lab6_1.cpp***

Working Screenshot:



3. Design a top-down (recursive descent) parser using recursive procedures for the following grammar
rules:
S -> cAd
A -> ab|a
Give a trace for deriving the input strings "cad" and "cat". Display error messages for invalid strings with the positions of the erroneous input.

Solution File: ***lab6_3.cpp***

Working Screenshot:

```
(base) amiyachowdhury@Amiya
Enter the string:cad
S()A()
String is accepted
(base) amiyachowdhury@Amiya
Enter the string:cat
S()A()Error at position:3

String not accepted :(
```

4. Write a program to find FIRST and FOLLOW sets of a given grammar. Check whether the grammar is LL(1).

Solution File: ***lab6_4.cpp***

Working Screenshot:

```
Enter the number of productions: 3
Enter Production:
A->aB;
Enter Production:
B->Ce;
Enter Production:
C->f;
First(A) = { a }
First(B) = { f }
First(C) = { f }
```