

EXPERIMENT 9

AIM

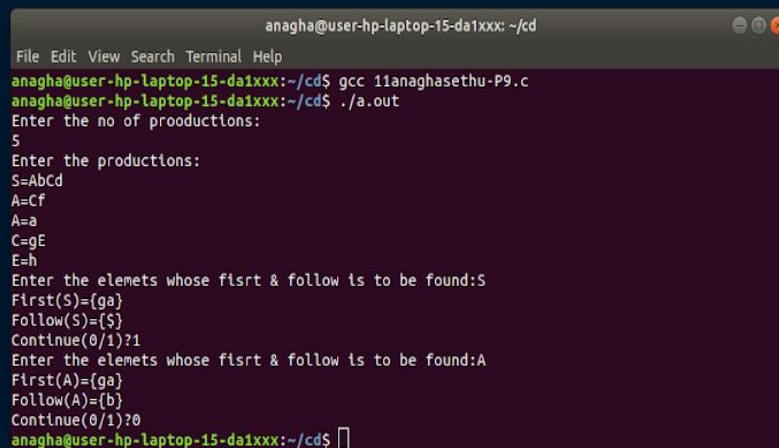
Implement First and Follow program in C

ALGORITHM

1. Start
2. Calculating first, $\alpha \rightarrow t \beta$
3. if α is a terminal, then $FIRST(\alpha) = \{ \alpha \}$.
4. if α is a non-terminal and $\alpha \rightarrow \epsilon$ is a production, then $FIRST(\alpha) = \{ \epsilon \}$.
5. if α is a non-terminal and $\alpha \rightarrow \gamma_1 \gamma_2 \gamma_3 \dots \gamma_n$ and any $FIRST(\gamma_i)$ contains t then t is in $FIRST(\alpha)$.
6. Calculating follow,
7. if α is a start symbol, then $FOLLOW(\alpha) = \$$
8. if α is a non-terminal and has a production $\alpha \rightarrow AB$, then $FOLLOW(\alpha)$ is in $FOLLOW(A)$ except ϵ .
9. if α is a non-terminal and has a production $\alpha \rightarrow AB$, where $B \in \epsilon$, then $FOLLOW(A)$ is in $FOLLOW(\alpha)$.
10. Stop

OUTPUT

```
gcc 11anaghasethu-P9.c
./a.out
```



```
anagha@user-hp-laptop-15-da1xxx: ~/cd
File Edit View Search Terminal Help
anagha@user-hp-laptop-15-da1xxx:~/cd$ gcc 11anaghasethu-P9.c
anagha@user-hp-laptop-15-da1xxx:~/cd$ ./a.out
Enter the no of productions:
5
Enter the productions:
S=AbCd
A=Cf
A=a
C=gE
E=h
Enter the elements whose first & follow is to be found:S
First(S)={ga}
Follow(S)={$}
Continue(0/1)?1
Enter the elements whose first & follow is to be found:A
First(A)={ga}
Follow(A)={b}
Continue(0/1)?0
anagha@user-hp-laptop-15-da1xxx:~/cd$
```