

EXPERIMENT 6

```
#include<stdio.h>
#include<string.h>
#define SIZE 10
int main () {
    char non_terminal;
    char beta,alpha;
    int num;
    char production[10][SIZE];
    int index=3; /* starting of the string following "->" */
    printf("Enter Number of Production : ");
    scanf("%d",&num);
    printf("Enter the grammar as E->E-A :\n");
    for(int i=0;i<num;i++){
        scanf("%s",production[i]);
    }
    for(int i=0;i<num;i++){
        printf("\nGRAMMAR : : : %s",production[i]);
        non_terminal=production[i][0];
        if(non_terminal==production[i][index]) {
            alpha=production[i][index+1];
            printf(" is left recursive.\n");
            while(production[i][index]!=0 && production[i][index]!='|')
                index++;
            if(production[i][index]!=0) {
                beta=production[i][index+1];
                printf("Grammar without left recursion:\n");
                printf("%c->%c%c\',"non_terminal,beta,non_terminal);
                printf("\n%c\'->%c%c\'|E\n",non_terminal,alpha,non_terminal);
            }
            else
                printf(" can't be reduced\n");
        }
        else
            printf(" is not left recursive.\n");
        index=3;
    }
}
```

OUTPUT

Enter Number of Production : a+b-c*a/d
Enter the grammar as E->E-A :