

Practical-5

Write a program to remove the Left Recursion from a given grammar.

```
#include<stdio.h>
#include<conio.h>
#define SIZE 10
void main()
{
    char non_terminal;
    char beta,alpha;
    char production[SIZE];
    int index=3;
    clrscr();
    printf(" Enter the grammar:\n");
    scanf("%s",production);
    non_terminal=production[0];
    if(non_terminal==production[index])
    {
        alpha=production[index+1];
        printf("Grammar is left recursive \n");
        while(production[index]!=0 && production[index]!='|')
            index++;
        if(production[index]!=0)
        {
            beta=production[index+1];
            printf("Grammar without left resursion: \n");
            printf("%c->%c%c",non_terminal,beta,non_terminal);
            printf("\n%c\'->%c%c\'| E\n",non_terminal,alpha,non_terminal);
        }
        else
```

```
        printf("Grammar cant be reduced\n");
    }
    else
        printf("Gramaar is not left recursive\n");
    getch();
}
```

OUTPUT:

Enter the grammar:

S->SA|BD

Grammar is left recursive

Grammar without left resursion:

S->BS

S'->AS'|E