# 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("Grammaar 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