**/\* Program No.:**

**Aim: WAP to perform left factoring on a given grammer.**

**\*/**

#include<stdio.h>

#include<conio.h>

#include<string.h>

void main()

{clrscr();

char gram[50],temp[2][25],sym;

int i,j,k,flag=0,pos;

printf("\n\n\tEnter the production: ");

scanf("%s",&gram);

sym=gram[0];

for(i=3,j=0,k=0;i<strlen(gram);i++)

{if(gram[i]=='|')

flag=1;

else if(flag==0)

temp[0][j++]=gram[i];

else

temp[1][k++]=gram[i];

}

temp[0][j]='\0';

temp[1][k]='\0';

for(i=0,j=0;i<strlen(temp[0])&&j<strlen(temp[1]);i++,j++)

{if(temp[0][i]!=temp[1][j])

{pos=i;

break;

}

}

if(i==strlen(temp[0]))

pos=i;

if(j==strlen(temp[1]))

pos=j;

printf("\n\n\tProduction after left factoring:");

printf("\n\n\t\t%c->",sym);

for(i=0;i<pos;i++)

printf("%c",temp[0][i]);

printf("%c'\n\t\t%c'->",sym,sym);

for(i=pos;i<strlen(temp[0]);i++)

printf("%c",temp[0][i]);

printf("|");

for(i=pos;i<strlen(temp[1]);i++)

printf("%c",temp[1][i]);

getch();

}

**/\***

**Name - Rohit Aggarwal**

**Roll No. - 7CS-097**

**\*/**