**SSN COLLEGE OF ENGINEERING**

**DEPARTMENT OF COMPUTER SCIENCE**

**UCS1602 – COMPILER DESIGN**

DATE: 22-02-2021

NAME: KEERTHANA T

REGISTER NUMBER: 185001074

CLASS AND SEC : CSE-B

**ASSIGNMENT - 3: IMPLEMENTATION OF LEFT RECURSION ELIMINATION**

PROGRAM:

#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;

printf("Enter Number of Production : ");

scanf("%d",&num);

printf("Enter the grammar :\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

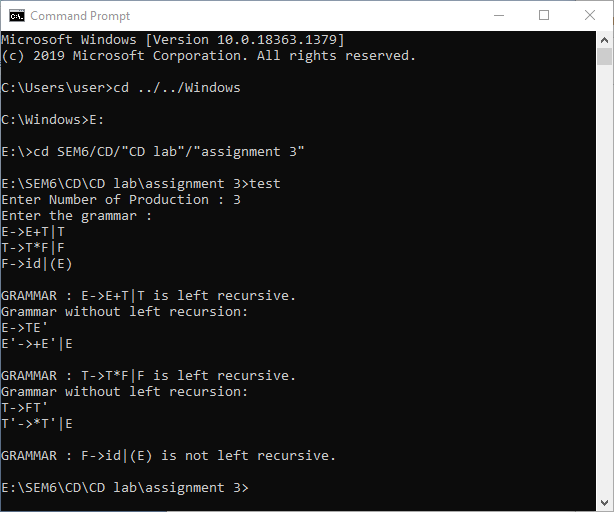
printf(" is not left recursive.\n");

index=3;

}

}

OUTPUT:

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