

Practical-4

Write a program to left factor the given grammar

```
#include<stdio.h>
#include<conio.h>
#include<string.h>
void main()
{
    char a[10],a1[10],a2[10],a3[10],a4[10],a5[10];
    int i,j=0,k,l;
    clrscr();
    printf(" Enter any productions A->");
    gets(a);
    for(i=0;a[i]!='/';i++,j++)
        a1[j]=a[i];
    a1[j]='\0';
    for(j=++i,i=0;a[j]!='\0';j++,i++)
        a2[i]=a[j];
    a2[i]='\0';
    k=0;
    i=0;
    for(i=0;i<strlen(a1)||i<strlen(a2);i++)
    {
        if(a1[i]==a2[i])
        {
            a3[k]=a1[i];
            k++;
        }
    }
```

```
        else
        {
            a4[l]=a1[i];
            a5[l]=a2[i];
            i++;
        }
    }
    a3[k]='X';
    a3[++k]='\0';
    a4[l]='/';
    a5[l]='\0';
    a4[++l]='\0';
    strcat(a4,a5);
    printf("\n A->%s",a3);
    printf("\n X->%s",a4);
    getch();
}
```

OUTPUT:

Enter any productions A->bcd/bcf

A->bcX

X->d/f