Write a program which takes a string of multiple alternatives and find the terminals and non terminals existing in the production.

Store them separately as terminals and non terminals. Make sure no duplicate items in them.

**PROGRAM**

#include <stdio.h>

#include <string.h>

struct prod

{

char lhs;

char rhs[20][20];

int noa;

}x;

void main()

{

char str[20],a[20],b[20];

int l,i,j=0,k=0,c=0,t=0,u=0,m;

printf("Enter a string:");

scanf("%s",&str);

x.lhs=str[0];

for(i=3;str[i]!='\0';i++)

{

if(str[i]!='/') x.rhs[j][k++]=str[i];

else

{

x.rhs[j][k++]='\0';

j++;

k=0;

}

}

b[0]=x.lhs;

x.noa=j+1;

x.rhs[j][k++]='\0';

for(l=0;l<x.noa;l++)

{

for(i=0;i<2;i++)

{

if((x.rhs[l][i]>='a')&&(x.rhs[l][i]<='z'))

{

printf("%s",x.rhs[l][i]);

for(m=0;a[m]!='\0';m++)

if(a[m]==x.rhs[l][i]) c++;

if(c==0)a[t++]=x.rhs[l][i];

c=0;

}

if((x.rhs[l][i]>='A')&&(x.rhs[l][i]<='Z'))

{

for(m=0;b[m]!='\0';m++)

if(b[m]==x.rhs[l][i]) c++;

if(c==0)b[u++]=x.rhs[l][i];

c=0;

}

}

}

}