

//Program to find the Follow

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#include<stdio.h>
#include<string.h>
#include<ctype.h>
int n,m=0,p,i=0,j=0;
char a[10][10],followResult[10];
void follow(char c);
void first(char c);
void addToResult(char);
int main()
{
    int i;
    int choice;
    char c,ch;
    printf("Enter the no.of productions: ");
    scanf("%d", &n);
    printf(" Enter %d productions\nProduction with multiple terms should be give as separate productions\n", n);
    for(i=0;i<n;i++)
        scanf("%s%c",a[i],&ch);
    do
    {
        m=0;
        printf("Find FOLLOW of -->");
        scanf(" %c",&c);
        follow(c);
        printf("FOLLOW(%c) = { ",c);
        for(i=0;i<m;i++)
            printf("%c ",followResult[i]);
        printf(" }\n");
        printf("Do you want to continue(Press 1 to continue....)?");
        scanf("%d%c",&choice,&ch);
    }
    while(choice==1);
}

void follow(char c)
{
    if(a[0][0]==c)addToResult('$');
    for(i=0;i<n;i++)
    {
        for(j=2;j<strlen(a[i]);j++)
        {
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    if(a[i][j]==c)
    {
        if(a[i][j+1]!='\0')first(a[i][j+1]);
        if(a[i][j+1]=='\0'&& c!=a[i][0])
            follow(a[i][0]);
    }
}
}
}
void first(char c)
{
    int k;
    if(!(isupper(c)))
        addToResult(c);
    for(k=0;k<n;k++)
    {
        if(a[k][0]==c)
        {
            if(a[k][2]=='$') follow(a[i][0]);
            else if(islower(a[k][2]))
                addToResult(a[k][2]);
            else first(a[k][2]);
        }
    }
}
void addToResult(char c)
{
    int i;
    for( i=0;i<=m;i++)
        if(followResult[i]==c)
            return;
    followResult[m++]=c;
}

```