

Compiler Design

Assignment – 4: First find

CODE:

```
#include<stdio.h>
#include<ctype.h>

int count,n=0;
char prodn[10][10], first[10];

void FIRST(char c)
{
    int j;
    if(!(isupper(c)))first[n++]=c;
    for(j=0;j<count;j++)
    {
        if(prodn[j][0]==c)
        {
            if(prodn[j][2]=='$') first[n++]='$';
            else if(islower(prodn[j][2]))first[n++]=prodn[j][2];
            else FIRST(prodn[j][2]);
        }
    }
}

main()
{
    int i,choice;
    char c,ch;
    printf("How many productions ? :");
```

```

scanf("%d",&count);
printf("Enter %d productions epsilon= $ :\n\n",count);
for(i=0;i<count;i++)
scanf("%s%c",prodn[i],&ch);
do
{
    n=0;
    printf("Element :");
    scanf("%c",&c);

    FIRST(c);
    printf("\n FIRST(%c)= { ",c);
    for(i=0;i<n;i++)
    printf("%c ",first[i]);
    printf("}\n");
    printf("press 1 to continue : ");
    scanf("%d%c",&choice,&ch);
}
while(choice==1);
}

```

Output:

```

C:\Users\Arjun Vankani\Desktop\CE SEM 7\ASS\CD\Lab4\parse.exe
How many productions ? :8
Enter 8 productions epsilon= $ :

E = TD
D = +TD
D = $
T = FS
S = *FS
S = $
Element :F=(E)

FIRST(F)= { }
press 1 to continue : Element :
FIRST(=)= { = }
press 1 to continue : Element :
FIRST(( )= { ( }
press 1 to continue : Element :
FIRST(E)= { }
press 1 to continue : Element :
FIRST())= { ) }
press 1 to continue : 1

```