

```
1  #include<stdio.h>
2  #include<ctype.h>
3  void FIRST(char[],char );
4  void addToResultSet(char[],char);
5  int numOfProductions;
6  char productionSet[10][10];
7  int main()
8  {
9      int i;
10     char choice;
11     char c;
12     char result[20];
13     printf("How many number of productions ? :");
14     scanf(" %d",&numOfProductions);
15     for(i=0;i<numOfProductions;i++)
16     {
17         printf("Enter productions Number %d : ",i+1);
18         scanf(" %s",productionSet[i]);
19     }
20     do
21     {
22         printf("\n Find the FIRST of :");
```

Abort Compilation

☐ Shorten compiler paths

```
-----
- Errors: 0
- Warnings: 0
- Output Filename: C:\Users\ranjith kumar\OneDrive\Documents\exp 7.exe
- Output Size: 130.576171875 KiB
- Compilation Time: 0.19s
```



C:\Users\ranjith kumar\OneDrive\Documents\exp 7.cpp - [Executing] - Dev-C++ 5.11

File Edit Search View Project Execute Tools AStyle Window Help

(globals)

Project Classes Debug c.d exp1.cpp exp 2.cpp exp 3.cpp exp 3.cpp ex 4.cpp exp 5.cpp exp 6.cpp exp 7.cpp

```
22     printf("\n Find the FIRST of :");
23     scanf(" %c",&c);
24     FIRST(result,c);
25     printf("\n FIRST(%c)= { ",c);
26     for(i=0;result[i]!='\0';i++)
27         printf(" %c ",result[i]);
28     printf("}\n");
29     printf("press 'y' to continue : ");
30     scanf(" %c",&choice);
31 }
32 while(choice=='y' || choice == 'Y');
33 }
34
35 void FIRST(char* Result,char c)
36 {
37     int i,j,k;
38     char subResult[20];
39     int foundEpsilon;
40     subResult[0]='\0';
41     Result[0]='\0';
42
43     if(!(isupper(c)))
```

Compiler Resources Compile Log Debug Find Results Close

Abort Compilation

Shorten compiler paths

```
-----
- Errors: 0
- Warnings: 0
- Output Filename: C:\Users\ranjith kumar\OneDrive\Documents\exp 7.exe
- Output Size: 130.576171875 KiB
- Compilation Time: 0.19s
```

Line: 15 Col: 36 Sel: 0 Lines: 92 Length: 2163 Insert Done parsing in 0.016 seconds

28°C Mostly cloudy

Search

ENG IN

10:34 03-05-2023

```
43     if(!isupper(c))
44     {
45         addToResultSet(Result,c);
46         return ;
47     }
48
49     for(i=0;i<numOfProductions;i++)
50     {
51
52         if(productionSet[i][0]==c)
53         {
54
55             if(productionSet[i][2]=='$') addToResultSet(Result,'$');
56
57             else
58             {
59                 j=2;
60                 while(productionSet[i][j]!='\0')
61                 {
62                     foundEpsilon=0;
63                     FIRST(subResult,productionSet[i][j]);
64                     for(k=0;subResult[k]!='\0';k++)
65                     {
```

Abort Compilation

```
-----
- Errors: 0
- Warnings: 0
- Output Filename: C:\Users\ranjith kumar\OneDrive\Documents\exp 7.exe
- Output Size: 130.576171875 KiB
- Compilation Time: 0.19s
```

```
64     for(k=0;subResult[k]!='\0';k++)
65         addToResultSet(Result,subResult[k]);
66     for(k=0;subResult[k]!='\0';k++)
67         if(subResult[k]=='$')
68         {
69             foundEpsilon=1;
70             break;
71         }
72
73     if(!foundEpsilon)
74         break;
75     j++;
76 }
77
78 }
79
80 return ;
81
82
83 void addToResultSet(char Result[],char val)
84 {
85     int k;
```

Abort Compilation

☐ Shorten compiler paths

```
-----
- Errors: 0
- Warnings: 0
- Output Filename: C:\Users\ranjith kumar\OneDrive\Documents\exp 7.exe
- Output Size: 130.576171875 KiB
- Compilation Time: 0.19s
```



```
71 |  
72 |  
73 |         if(!foundEpsilon)  
74 |             break;  
75 |         j++;  
76 |     }  
77 |  
78 |     }  
79 | }  
80 |     return ;  
81 | }  
82 |  
83 | void addToResultSet(char Result[],char val)  
84 | {  
85 |     int k;  
86 |     for(k=0 ;Result[k]!='\0';k++)  
87 |         if(Result[k]==val)  
88 |             return;  
89 |     Result[k]=val;  
90 |     Result[k+1]='\0';  
91 | }  
92 |
```

Abort Compilation

```
-----  
- Errors: 0  
- Warnings: 0  
- Output Filename: C:\Users\ranjith kumar\OneDrive\Documents\exp 7.exe  
- Output Size: 130.576171875 KiB  
- Compilation Time: 0.19s
```

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

```
How many number of productions ? :4
Enter productions Number 1 : S=AaAb
Enter productions Number 2 : S=BbBa
Enter productions Number 3 : A=$
Enter productions Number 4 : B=$
```

```
Find the FIRST of :S
```

```
FIRST(S)= { $ a b }
press 'y' to continue : y
```

```
Find the FIRST of :A
```

```
FIRST(A)= { $ }
press 'y' to continue : y
```

```
Find the FIRST of :B
```

```
FIRST(B)= { $ }
press 'y' to continue : y
```

```
Find the FIRST of :
```

