Department of Computer

EngineeringAcademic

Term: Jan-Apr 2022

Class : T.E Computer Sem -VII
Subject: System Programming and Compiler Construction

Practical No:	**6**
Title:	**Design of top Down Parser- Recursive Descent Parser.**
Date of Performance:	11/04/2022
Date of Submission:	11/04/2022
Roll No:	**8940**
Name of the Student:	**Warren Fernandes**

Evaluation:

Sr. No	**Rubric**	**Grade**
1	**On time Completion & Submission (2)**	
2	**Output (3)**	
3	**Code Optimization (3)**	
4	**Knowledge of the topic (2)**	
5	**Total (10)**	

Signature of the Teacher:

CODE

```
#include<stdio.h>
#include<conio.h>
#include<string.h>
char input[100];
int i,l;
void main()
{
printf("\nRecursive descent parsing for the following grammar\n"); printf("\nE->TE'\nE'->+TE'/@\nT->FT'\nT'->*FT'/@\nF->(E)/ID\n"); printf("\nEnter the string to be checked:"); gets(input);
if(E())
{
if(input[i+1]=='\0')
printf("\nString is accepted");
else
printf("\nString is not accepted");
}
else
printf("\nString not accepted");
getch();
```

```
}

E()

{

if(T())

{

if(EP())

return(1);

else

return(0);

}

else

return(0);

}

EP()

{

if(input[i]=='+')

{

i++;

if(T())

{
```

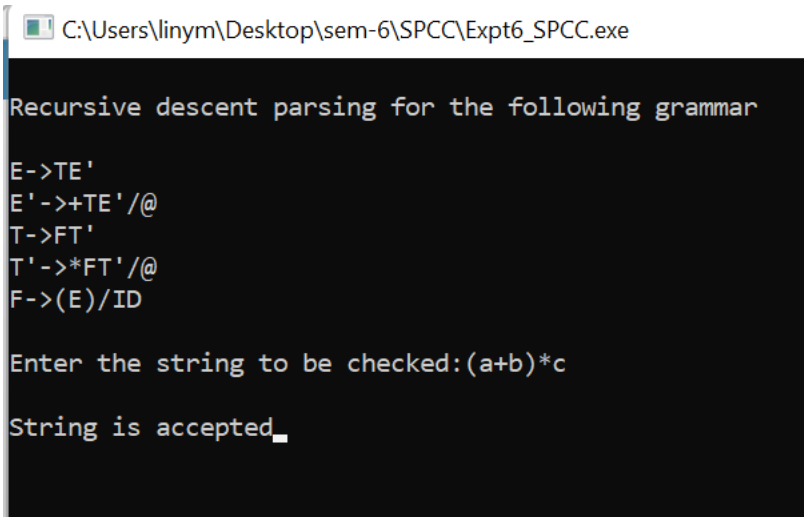
```
if(EP())

return(1);

else

return(0);

}

else

return(0);

}

else

return(1);

}

T()

{

if(F())

{

if(TP())

return(1);

else

return(0);

}
```

```
else

return(0);

}

TP()

{

if(input[i]=='*')

{

i++;

if(F())

{

if(TP())

return(1);

else

return(0);

}

else

return(0);

}

else

return(1);
```

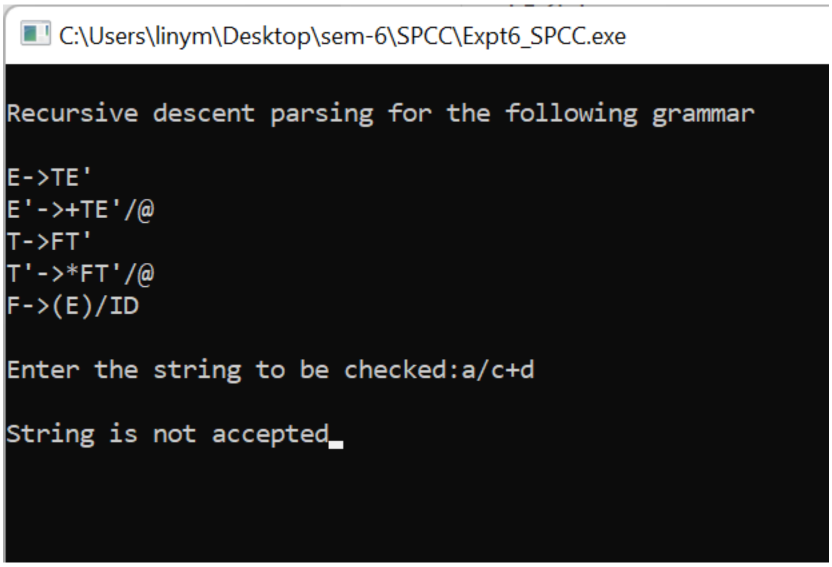
```
}

F()

{

if(input[i]=='(')

{

i++;

if(E())

{

if(input[i]==')')

{

i++;

return(1);

}

else

return(0);

}

else

return(0);

}

else if(input[i]>='a'&&input[i]<='z'||input[i]>='A'&&input[i]<='Z')
```

```
{

i++;

return(1);

}

else

return(0);

}
```

OUTPUT



```
Recursive descent parsing for the following grammar

E->TE'
E'->+TE'/@
T->FT'
T'->*FT'/@
F->(E)/ID

Enter the string to be checked:(a+b)*c

String is accepted
```



```
Recursive descent parsing for the following grammar

E->TE'
E'->+TE'/@
T->FT'
T'->*FT'/@
F->(E)/ID

Enter the string to be checked:a/c+d

String is not accepted
```