```c
#include<stdio.h>

void main(){
char stack[20],ip[20],opt[10][10][1],ter[10];
int i,j,k,n,top=0,col,row;

for(i=0;i<10;i++)
{
 stack[i]=NULL;
 ip[i]=NULL;
 for(j=0;j<10;j++)
 {
 opt[i][j][1]=NULL;
 }
}
printf("Enter the no.of terminals :\n");
scanf("%d",&n);
printf("\nEnter the terminals :\n");
scanf("%s",&ter);
printf("\nEnter the table values :\n");
for(i=0;i<n;i++)
{
 for(j=0;j<n;j++)
 {
 printf("Enter the value for %c %c:",ter[i],ter[j]);
 scanf("%s",opt[i][j]);
 }
}
printf("\n**** OPERATOR PRECEDENCE TABLE ****\n");
for(i=0;i<n;i++)
{
printf("\t%c",ter[i]);
}
printf("\n");
for(i=0;i<n;i++){printf("\n%c",ter[i]);
for(j=0;j<n;j++){printf("\t%c",opt[i][j][0]);}}
stack[top]='$';
printf("\nEnter the input string:");
scanf("%s",ip);
i=0;
printf("\nSTACK\t\t\tINPUT STRING\t\t\tACTION\n");
printf("\n%s\t\t\t%s\t\t\t",stack,ip);
while(i<=strlen(ip))
{
for(k=0;k<n;k++)
{
if(stack[top]==ter[k])
col=k;
if(ip[i]==ter[k])
row=k;
}
if((stack[top]=='$')&&(ip[i]=='$')){
printf("String is accepted\n");
break;}
else if((opt[col][row][0]=='<') ||(opt[col][row][0]=='='))
{ stack[++top]=opt[col][row][0];
stack[++top]=ip[i];
 printf("Shift %c",ip[i]);
 i++;
  }
else{
 if(opt[col][row][0]=='>')
{
while(stack[top]!='<'){--top;}
top=top-1;
printf("Reduce");
```

```
}
else
{
printf("\nString is not accepted");
break;
}
}
printf("\n");
for(k=0;k<=top;k++)
{
printf("%c",stack[k]);
}
printf("\t\t\t");
for(k=i;k<strlen(ip);k++){
printf("%c",ip[k]);
}
printf("\t\t\t");
}
}
```

```
akhil@Ubuntu:~/Compiler-Lab/7) Operator Precedence Parser$ ./a.out
Enter the no.of terminals :
4

Enter the terminals :
+*i$

Enter the table values :
Enter the value for + +:>
Enter the value for + *:<
Enter the value for + i:<
Enter the value for + $:>
Enter the value for * +:>
Enter the value for * *:>
Enter the value for * i:<
Enter the value for * $:>
Enter the value for i +:>
Enter the value for i *:>
Enter the value for i i:=
Enter the value for i $:>
Enter the value for $ +:<
Enter the value for $ *:<
Enter the value for $ i:<
Enter the value for $ $:A

**** OPERATOR PRECEDENCE TABLE ****
        +       *       i       $

+       >       <       <       >
*       >       >       <       >
i       >       >       =       >
$       <       <       <       A
Enter the input string:i+i*i$

STACK                   INPUT STRING                    ACTION

$                       i+i*i$                  Shift i
$<i                     +i*i$                   Reduce
$                       +i*i$                   Shift +
$<+                     i*i$                    Shift i
$<+<i                   *i$                     Reduce
$<+                     *i$                     Shift *
$<+<*                   i$                      Shift i
$<+<*<i                 $                       Reduce
$<+<*                   $                       Reduce
$<+                     $                       Reduce
$                       $                       String is accepted
akhil@Ubuntu:~/Compiler-Lab/7) Operator Precedence Parser$
```