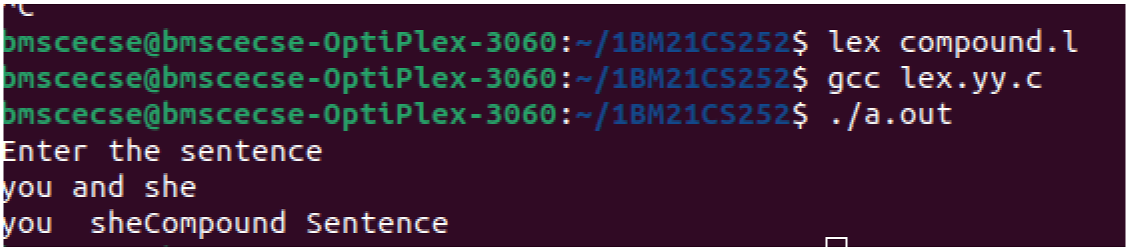
WEEK-3

1. Read and input sentence, and check if it is compound or simple. If a sentence has the word- and , or ,but ,because ,if ,then ,nevertheless then it is compound else it is simple

```
%{
#include<stdio.h>
int flag=0;
%}

%%
and|or|but|because|if|then|nevertheless {flag=1;}
.;
\n {return 0;}
%%
int yywrap()
{
}
int main()
{
printf("Enter the sentence\n");
yylex();
if(flag==0)
  printf("Simple sentence\n");
else
  printf("Compound Sentence\n");
return 0;
}
```

OUTPUT



```
^C
bmscecse@bmscecse-OptiPlex-3060:~/1BM21CS252$ lex compound.l
bmscecse@bmscecse-OptiPlex-3060:~/1BM21CS252$ gcc lex.yy.c
bmscecse@bmscecse-OptiPlex-3060:~/1BM21CS252$ ./a.out
Enter the sentence
you and she
you  sheCompound Sentence
```

2. Write a program to read an input sentence and to check if the sentence begins with English articles (A, a,AN,An,THE and The). If the sentence starts with the article appropriate message should be printed. If the sentence does not start with the article appropriate message should be printed

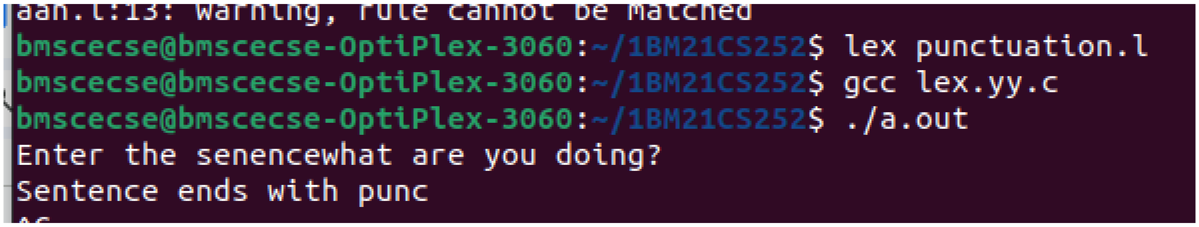
```
%{
```

```
#include<stdio.h>
int cnt=0, flag;
%}
chars [a-z|A-Z|0-9]
check [A|a|AN|An|THE|The]
%%
{check}+{chars}* {flag=1;}

{chars}* {flag=0;}


%%
int yywrap()
{
}
int main()
{
printf("Enter input");
yylex();
if(flag==1)
   printf("Begins wit article");
else if(flag==0)
   printf("Does not begin with article");

return 0;
}
```

3. Write a program to check if the input sentence ends with any of the following punctuation marks (? , fullstop , !)

```
%{
#include<stdio.h>
int cnt=0;
%}
punc [?|,|.|!]
chars [a-z|A-Z|0-9|" "|\t]
%%
{chars}*{punc} {printf("Sentence ends with punc");}
{chars}* {printf("Sentence does not end with punc");}
%%
int yywrap()
{
}
int main()
{
printf("Enter the senence");
yylex();
return 0;
}
```

OUTPUT

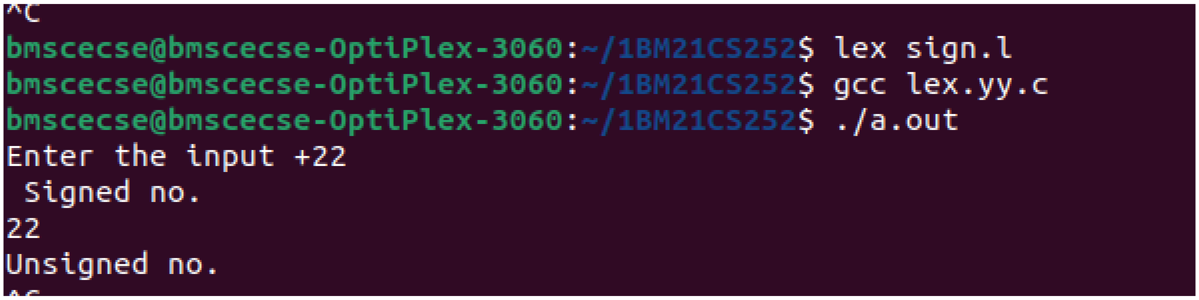


```
aan.l:13: warning, rule cannot be matched
bmscecse@bmscecse-OptiPlex-3060:~/1BM21CS252$ lex punctuation.l
bmscecse@bmscecse-OptiPlex-3060:~/1BM21CS252$ gcc lex.yy.c
bmscecse@bmscecse-OptiPlex-3060:~/1BM21CS252$ ./a.out
Enter the senencewhat are you doing?
Sentence ends with punc
```

4. Write a program to read and check if the user entered number is signed or unsigned using appropriate meta character

```
%{
#include<stdio.h>
int cnt=0;
%}
sign [+|-]
num [0-9]
dot [.]
%%
{sign}{num}*{dot}*{num}* {printf("Signed no.");cnt=1;}
{num}*{dot}*{num}* {printf("Unsigned no.");cnt=1;}
%%
int yywrap()
{
}
int main()
{
printf("Enter the input");
yylex();
if(cnt==0){
printf("Not floating pnt no.");
}
return 0;
}
```

OUTPUT

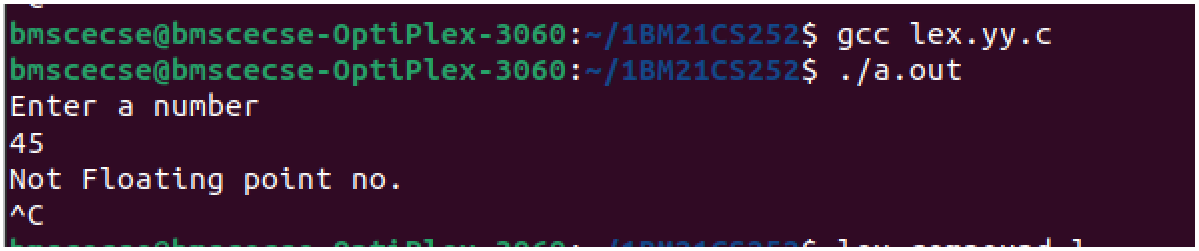


```
^C
bmscecse@bmscecse-OptiPlex-3060:~/1BM21CS252$ lex sign.l
bmscecse@bmscecse-OptiPlex-3060:~/1BM21CS252$ gcc lex.yy.c
bmscecse@bmscecse-OptiPlex-3060:~/1BM21CS252$ ./a.out
Enter the input +22
 Signed no.
22
Unsigned no.
```

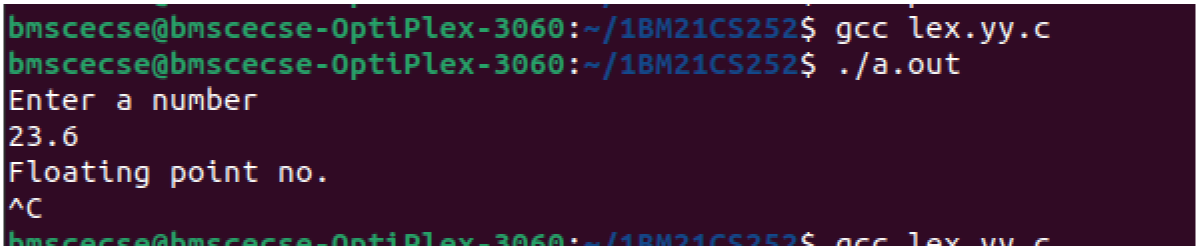
6. Write a program in LEX to recognize Floating Point Numbers. Check for all the following input cases (Lab Program)

```
%{
#include<stdio.h>
int cnt=0;
%}
sign [+|-]
num [0-9]
dot [.]
%%
{sign}?{num}*{dot}{num}* {printf("Floating point no.");cnt=1;}
{sign}?{num}* {printf("Not Floating point no.");cnt=1;}
%%
int yywrap()
{
}
int main()
{
printf("Enter a number\n");
yylex();
if(cnt==0){
printf("Not floating pnt no.");
}
return 0;
}
```

OUTPUT



```
bmscecse@bmscecse-OptiPlex-3060:~/1BM21CS252$ gcc lex.yy.c
bmscecse@bmscecse-OptiPlex-3060:~/1BM21CS252$ ./a.out
Enter a number
45
Not Floating point no.
^C
```



```
bmscecse@bmscecse-OptiPlex-3060:~/1BM21CS252$ gcc lex.yy.c
bmscecse@bmscecse-OptiPlex-3060:~/1BM21CS252$ ./a.out
Enter a number
23.6
Floating point no.
^C
bmscecse@bmscecse-OptiPlex-3060:~/1BM21CS252$ gcc lex.yy.c
```