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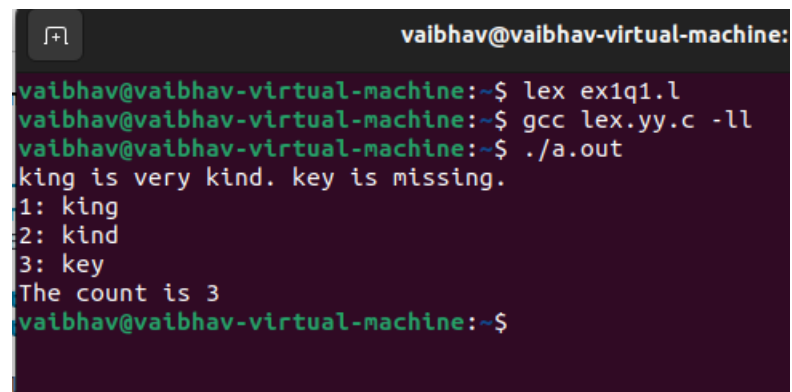
EXERCISE 1

1. To count the number of words starting with k or K

CODE

```
%{  
#include <stdio.h>  
  
int count=0;  
  
%}  
%%  
[a-jl-z]+k+[a-z]* ;  
[kK][a-zA-Z]* {count++;printf("%d: %s\n",count,yytext);}  
[\\n] { printf("The count is %d\n",count);return 0;}  
  
.;  
%%  
  
int yywrap({});  
  
int main()  
{  
    yylex();  
    return 0;  
}
```

OUTPUT



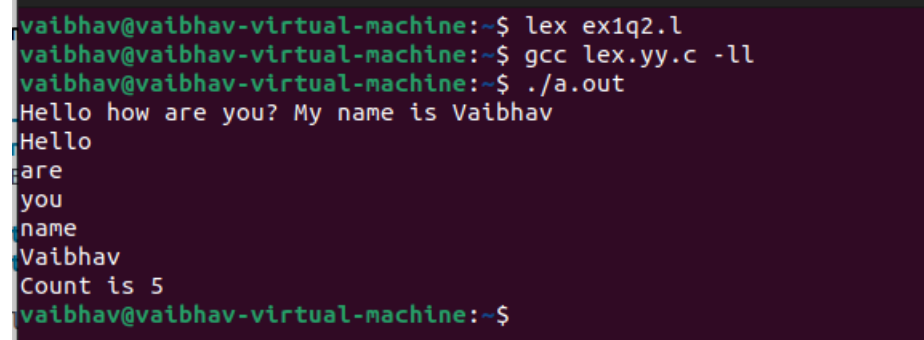
```
vaibhav@vaibhav-virtual-machine:  
vaibhav@vaibhav-virtual-machine:~$ lex ex1q1.l  
vaibhav@vaibhav-virtual-machine:~$ gcc lex.yy.c -ll  
vaibhav@vaibhav-virtual-machine:~$ ./a.out  
king is very kind. key is missing.  
1: king  
2: kind  
3: key  
The count is 3  
vaibhav@vaibhav-virtual-machine:~$
```

2. To count and print the number of words that has at least two vowels

CODE

```
%{  
#include <stdio.h>  
  
int count=0;  
%}  
  
vowel [aeiouAEIOU]  
  
text [a-zA-Z]  
  
%%  
  
{text}*{vowel}{text}*{vowel}{text}* {count++;printf("%s\n",yytext);}   
[\\n] {printf("Count is %d\n",count); return 1;}  
  
.;  
%%  
  
int yywrap({});  
  
int main()  
{  
  
yylex();  
  
return 0;  
}
```

OUTPUT



```
vaibhav@vaibhav-virtual-machine:~$ lex ex1q2.l  
vaibhav@vaibhav-virtual-machine:~$ gcc lex.yy.c -ll  
vaibhav@vaibhav-virtual-machine:~$ ./a.out  
Hello how are you? My name is Vaibhav  
Hello  
are  
you  
name  
Vaibhav  
Count is 5  
vaibhav@vaibhav-virtual-machine:~$
```

3. To count and print the words in mixed case

CODE

```
%{  
  
#include <stdio.h>
```

```

int count=0;

%}

upper [A-Z]

lower [a-z]

text [a-zA-Z]

%%

{upper}+{lower}+{text}* {printf("%s\n",yytext);count++;}

{lower}+{upper}+{text}* {printf("%s\n",yytext);count++;}

[\n] {printf("The count is %d\n",count); return 0;}

. ;

%%

int yywrap({});

int main()

{

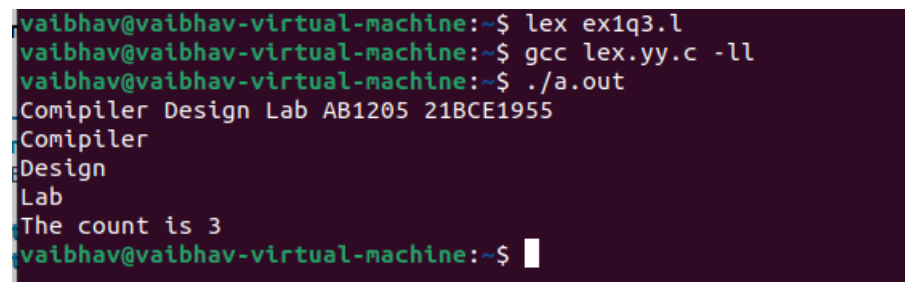
yylex();

return 0;

}

```

OUTPUT



```

vaibhav@vaibhav-virtual-machine:~$ lex ex1q3.l
vaibhav@vaibhav-virtual-machine:~$ gcc lex.yy.c -ll
vaibhav@vaibhav-virtual-machine:~$ ./a.out
Comipiler Design Lab AB1205 21BCE1955
Comipiler
Design
Lab
The count is 3
vaibhav@vaibhav-virtual-machine:~$

```

4. To convert the lowercase sentence to upper case

CODE

```

%{

#include <stdio.h>

%}

%%

[a-z] {printf("%c", yytext[0]-32);}

```

```
[\\n] {printf("\\n");return 0;}
```

```
. ECHO;
```

```
%%
```

```
int yywrap({});
```

```
int main()
```

```
{
```

```
yylex();
```

```
return 0;
```

```
}
```

OUTPUT

```
vaibhav@vaibhav-virtual-machine:~$ lex ex1q4.l
vaibhav@vaibhav-virtual-machine:~$ gcc lex.yy.c -ll
vaibhav@vaibhav-virtual-machine:~$ ./a.out
My name is Vaibhav and reg number is 21bce1955
MY NAME IS VAIBHAV AND REG NUMBER IS 21BCE1955
vaibhav@vaibhav-virtual-machine:~$
```