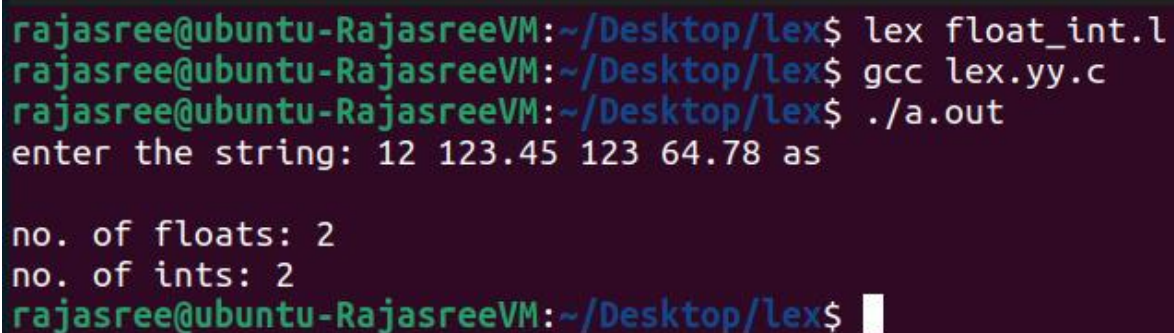# Q.4>> Write a lex codes for followings:

i) count the no. of floating points & integer no.s.

```
%{
int f=0,i=0;
%}
%%
[0-9]+"."[0-9]+ {f++;}
[0-9]+ {i++;}
. ;
%%
int main()
{
        printf("enter the string: ");
        yylex();
        printf("no. of floats: %d\n",f);
        printf("no. of ints: %d\n",i);
        return 0;
}
int yywrap()
{
return 1;
}
```

```
rajasree@ubuntu-RajasreeVM:~/Desktop/lex$ lex float_int.l
rajasree@ubuntu-RajasreeVM:~/Desktop/lex$ gcc lex.yy.c
rajasree@ubuntu-RajasreeVM:~/Desktop/lex$ ./a.out
enter the string: 12 123.45 123 64.78 as

no. of floats: 2
no. of ints: 2
rajasree@ubuntu-RajasreeVM:~/Desktop/lex$ 
```

ii)Exchange the position of float & int's reg ex.

```
%{
int f=0,i=0;
%}
%%
[0-9]+ {i++;}
[0-9]+"."[0-9]+ {f++;}
. ;
%%
int main()
{
        printf("enter the string: ");
        yylex();
        printf("no. of floats: %d\n",f);
        printf("no. of ints: %d\n",i);
        return 0;
}
int yywrap()
{
return 1;
}
```



```
rajasree@ubuntu-RajasreeVM:~/Desktop/lex$ lex float_int_ex_pos.l
rajasree@ubuntu-RajasreeVM:~/Desktop/lex$ gcc lex.yy.c
rajasree@ubuntu-RajasreeVM:~/Desktop/lex$ ./a.out
enter the string: 12 123.45 123 64.78 as

no. of floats: 2
no. of ints: 2
rajasree@ubuntu-RajasreeVM:~/Desktop/lex$
```

iii)give space before int's reg ex & consider it as a reg ex.

```
%{
int i=0;
%}
%%
```

```
[][0-9]+ {i++;}
. ;
%%
int main()
{
        printf("enter the string: ");
        yylex();
        //printf("no. of floats: %d\n",f);
        printf("no. of ints: %d\n",i);
        return 0;
}
int yywrap()
{
return 1;
}
```
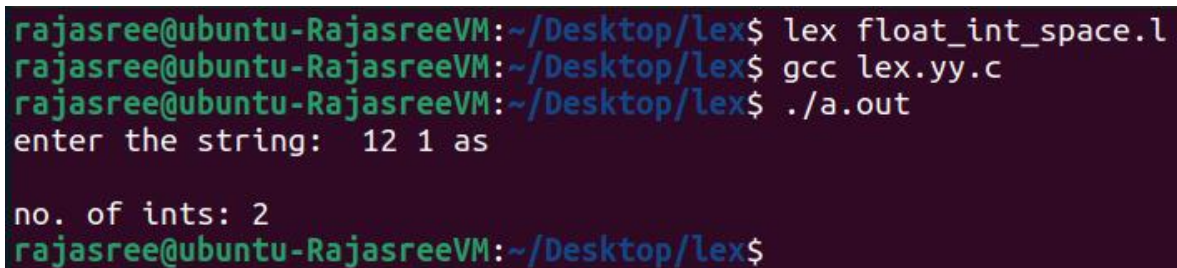
```
rajasree@ubuntu-RajasreeVM:~/Desktop/lex$ lex float_int_space.l
rajasree@ubuntu-RajasreeVM:~/Desktop/lex$ gcc lex.yy.c
rajasree@ubuntu-RajasreeVM:~/Desktop/lex$ ./a.out
enter the string:  12 1 as

no. of ints: 2
rajasree@ubuntu-RajasreeVM:~/Desktop/lex$
```

iv)print details.

```
%{
int f=0,i=0;
%}
%%
[0-9]+"."[0-9]+ {f++; printf("%s is a floating constant\n",yytext);}
[0-9]+ {i++; printf("%s is a int constant\n",yytext);}
. ;
%%
int main()
```

```
{

        printf("enter the string: ");

        yylex();

        printf("no. of floats: %d\n",f);

        printf("no. of ints: %d\n",i);

        return 0;

}

int yywrap()

{

return 1;

}
```


v)actual needed output & representation.(of (iv))

```
%{

%}

%%

[0-9]+"."[0-9]+ {printf("%s is a floating constant\n",yytext);}

[0-9]+ {printf("%s is a int constant\n",yytext);}

. ;

%%

int main()

{

        printf("enter the string: ");

        yylex();
```
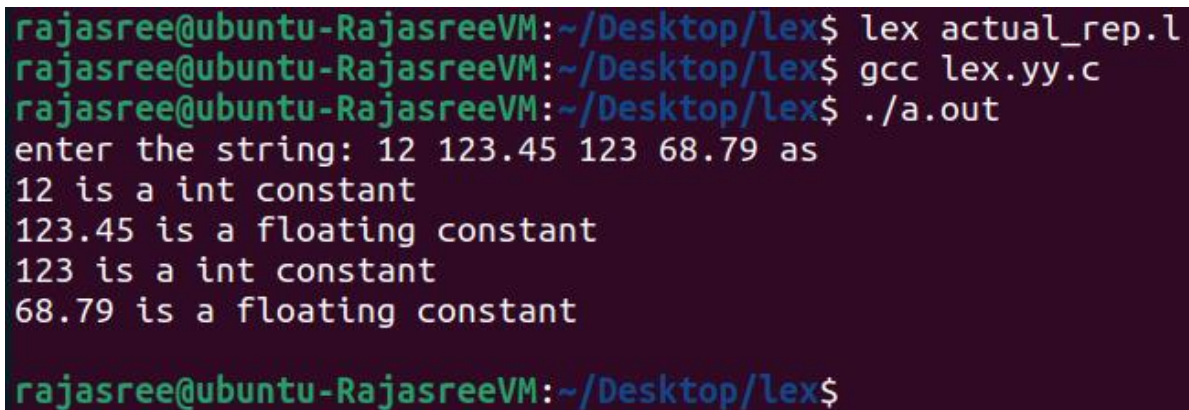
```
        return 0;

}

int yywrap()

{

return 1;

}
```


vi)find the no. of int,float,identifiers & show it.

```
%{

%}

%%

[0-9]+"."[0-9]+ {printf("%s is a floating constant\n",yytext);}

[0-9]+ {printf("%s is a int constant\n",yytext);}

[A-Za-z][A-Za-z0-9_]* {printf("%s is an identifier\n",yytext);}

. ;

%%

int main()

{

        printf("enter the string: ");

        yylex();

        return 0;

}

int yywrap()

{
```

return 1;

}

```
rajasree@ubuntu-RajasreeVM:~/Desktop/lex$ lex int_float_id.l
rajasree@ubuntu-RajasreeVM:~/Desktop/lex$ gcc lex.yy.c
rajasree@ubuntu-RajasreeVM:~/Desktop/lex$ ./a.out
enter the string: 12 123.45 123 as
12 is a int constant
123.45 is a floating constant
123 is a int constant
as is an identifier

rajasree@ubuntu-RajasreeVM:~/Desktop/lex$
```