



VIT[®]

Vellore Institute of Technology

(Deemed to be University under section 3 of UGC Act, 1956)

B.Tech. Winter Semester 2023-24
School Of Computer Science and Engineering
(SCOPE)

Digital Assignment - II

Compiler Design Lab

Apurva Mishra, 22BCE2791

19 August 2024

Problem 0.1.

Write a LEX code to check email id is valid or not.

Code

```
%option noyywrap
%{
#include <stdio.h>
%}
email ([a-zA-Z0-9_])((([a-zA-Z0-9_]|\\.)*)@([a-zA-Z0-9-]+)\\.([a-zA-Z0-9-]+))
invalid .*
%%
{email} {printf("Valid Email");}
{invalid} {printf("Invalid Email");}
%%
int main() {
    yyin = fopen("input.txt", "r");
    yylex();
    return 0;
}
```

Input Text

```
apurva.jpr@gmail.com
apurva.jpr@yahoo.com
valid@email.com

invalid@emailcom
.invliad@gmail.com
```

Output

```
da/ass2/ques1 via C v15.0.0-clang  
> just  
lex main.l  
zig cc lex.yy.c -o main;  
./main  
Valid Email  
Valid Email  
Valid Email  
  
Invalid Email  
Invalid Email
```

Problem 0.2.

Write a LEX code to check URL is valid or not

Code

```
%option noyywrap
%{
#include <stdio.h>
%}
url (www)\.(((([a-zA-Z0-9])|\_|\.)*)\.(in)|(com)|(org))
invalid .*
%%
{url} {printf("Valid URL");}
{invalid} {printf("Invalid URL");}
%%
int main() {
    yyin = fopen("input.txt", "r");
    yylex();
    return 0;
}
```

Input Text

```
www.apurva.com
www.google.com
www.evilcorp.org
www.mycountry.in
www.goo_.com
www.vit.ac.in

www.$money.com
sheets.google.com
vtop.vit.ac
google.com
www.google.somelongtext
www.google
www.google?.com
```

Output

```
da/ass2/ques2 via C v15.0.0-clang
> just
lex main.l
zig cc lex.yy.c -o main;
./main
Valid URL
Valid URL
Valid URL
Valid URL
Valid URL
Valid URL
Valid URL

Invalid URL
Invalid URL
Invalid URL
Invalid URL
Invalid URL
Invalid URL
Invalid URL
```

Problem 0.3.

Write a LEX code to print the length of longest word in a file.

Code

```
%option noyywrap
%{
#include <stdio.h>
int len = 0;
%}
word ([a-zA-Z])+
invalid .*
%%
{word} {printf("Valid World");len=len>yyleng?len:yyleng;}
{invalid} {printf("Invalid Word");}
%%
int main() {
    yyin = fopen("input.txt", "r");
    yylex();
    printf("Length of longest word: %d", len);
    return 0;
}
```

Input Text

These
are
some
verrry
long
words
Actually
No

Output

```
da/ass2/ques3 via C v15.0.0-clang
> just
lex main.l
zig cc lex.yy.c -o main;
./main
Valid Word
Valid Word
Valid Word
Valid Word
Valid Word
Valid Word
Valid Word
Valid Word
Length of longest word: 8
```