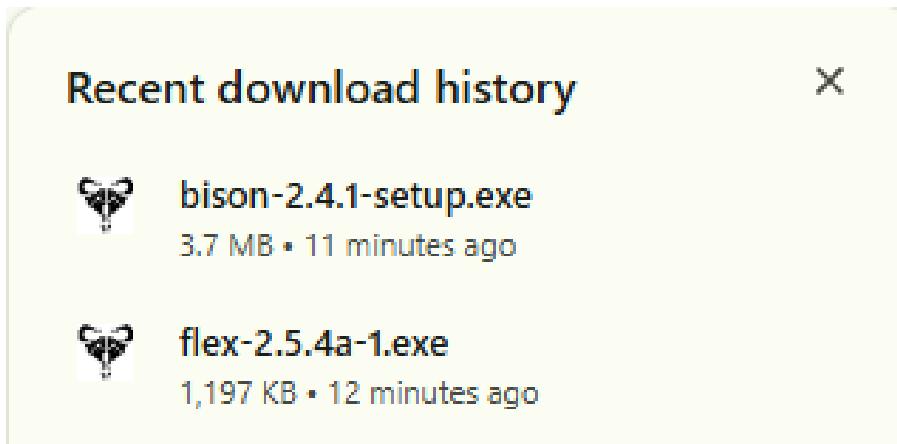


Lab Report 1

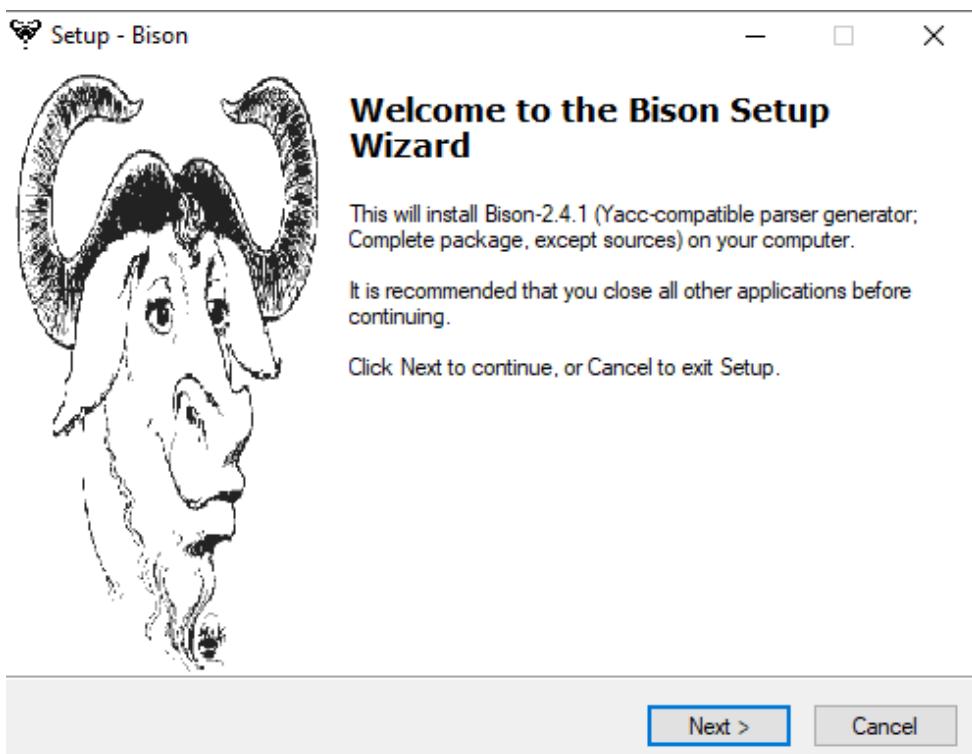
ID: 0242310005101019 (64_M2)

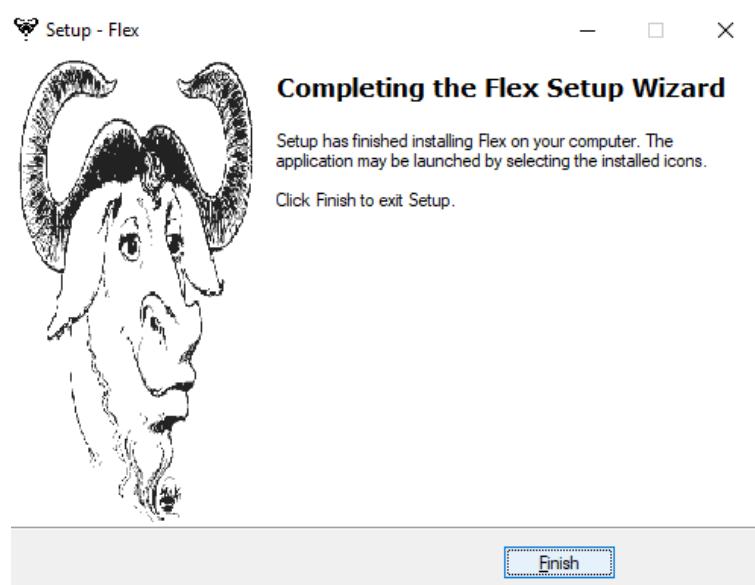
Environment Setup:

1. **Download File:** bison-2.4.1-setup.exe & flex-2.5.4a-1.exe

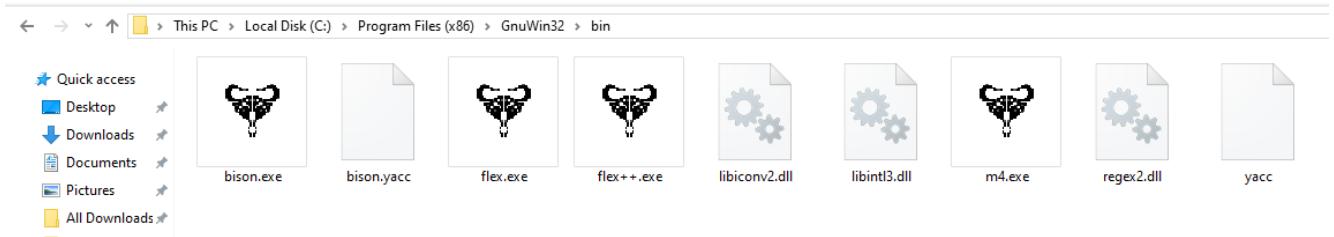


2. **Install:** bison-2.4.1-setup.exe & flex-2.5.4a-1.exe

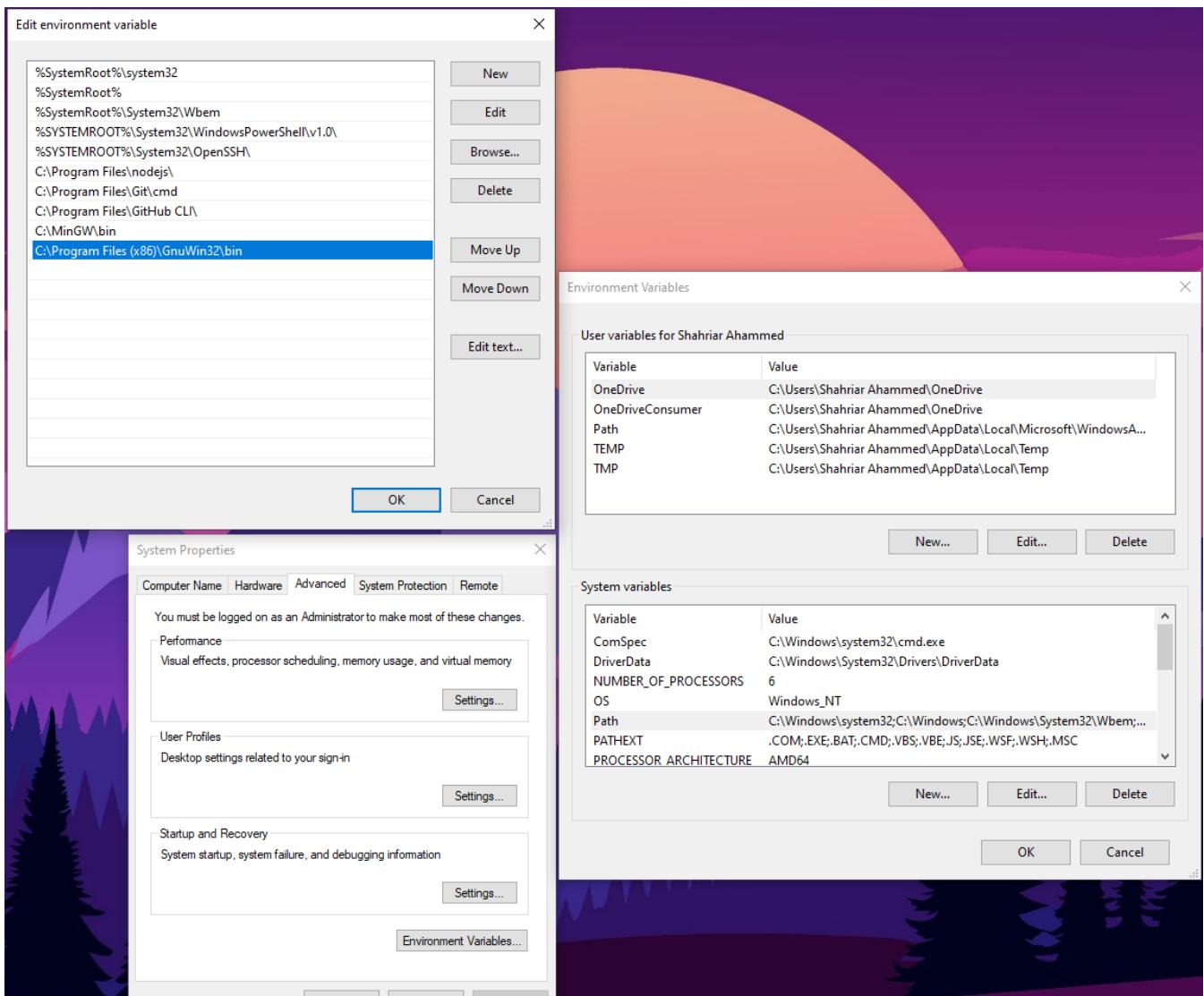




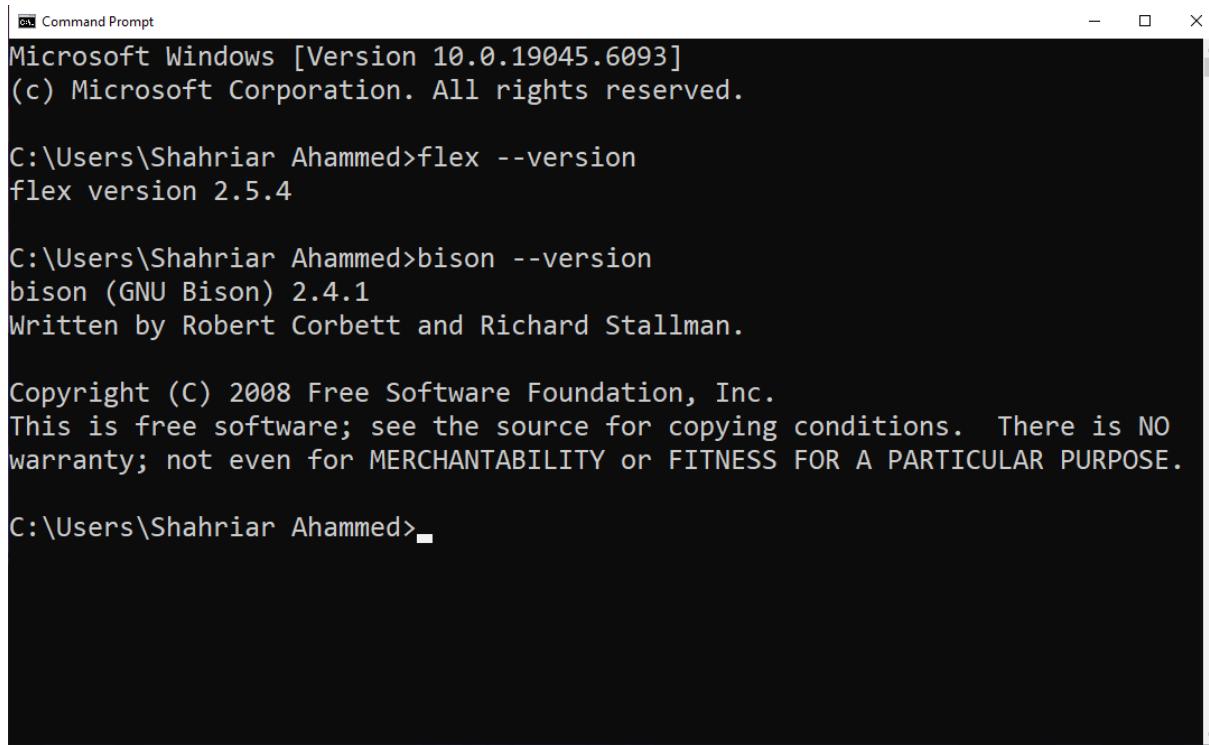
3. Showing Path : C:\Program Files (x86)\GnuWin32\bin



4. Environment variable set up → System variable → Path → Edit → New → C:\Program Files (x86)\GnuWin32\bin → Ok



5. Version Check: flex --version & bison –version



```
Command Prompt
Microsoft Windows [Version 10.0.19045.6093]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Shahriar Ahammed>flex --version
flex version 2.5.4

C:\Users\Shahriar Ahammed>bison --version
bison (GNU Bison) 2.4.1
Written by Robert Corbett and Richard Stallman.

Copyright (C) 2008 Free Software Foundation, Inc.
This is free software; see the source for copying conditions. There is NO
warranty; not even for MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.

C:\Users\Shahriar Ahammed>
```

Now, we can see Successfully software install and Environment setup completed.

Lab Report 2

1. Identifying words using only Flex:

Open Notepad, write your code or text, then go to File > Save As, type a file name ending with .l, select All Files as the file type, and click Save. This will create a .l extension file using Notepad.

Code:

```
%{  
#include<stdio.h>  
%}  
  
%%  
[a-zA-Z]+ {printf("This is word:%s",yytext);}  
.|\n  
%%  
  
int main ()  
{  
printf("input:");  
yylex();  
return 0;  
}  
  
int yywrap()  
{  
return 1;  
}
```

Output:

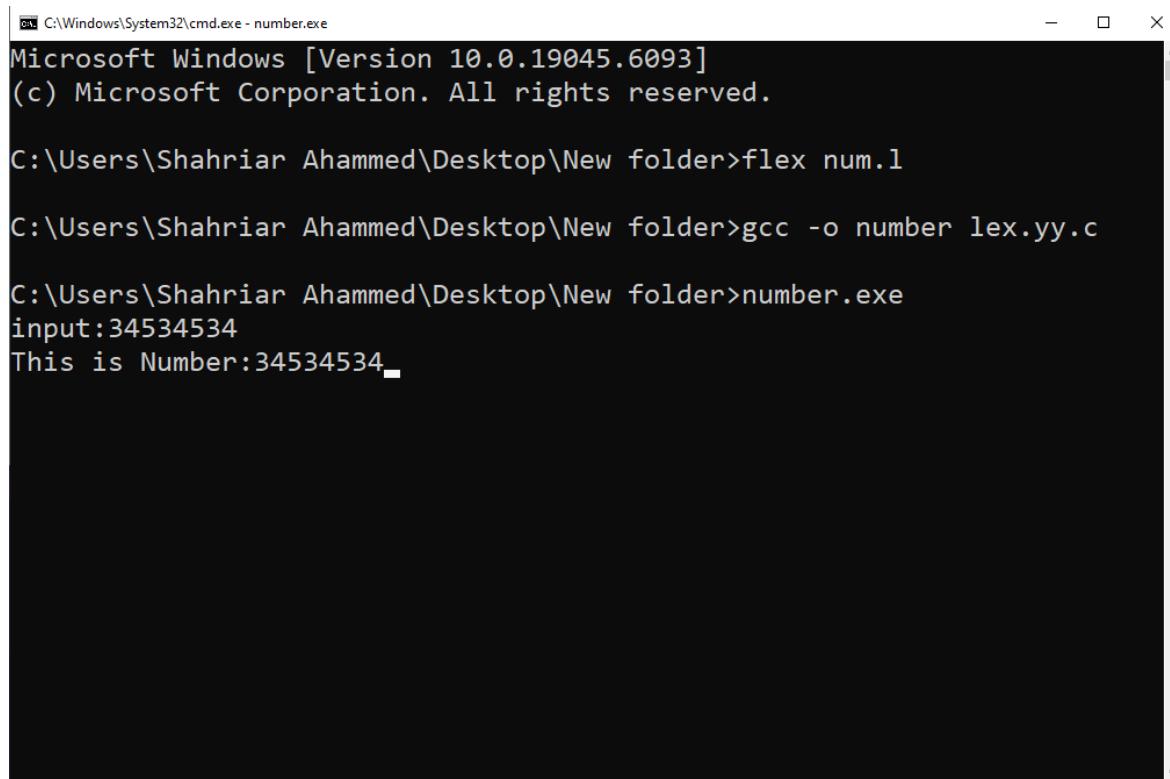
```
C:\Windows\System32\cmd.exe - word.exe  
Microsoft Windows [Version 10.0.19045.6093]  
(c) Microsoft Corporation. All rights reserved.  
  
C:\Users\Shahriar Ahammed\Desktop\New folder>flex word.l  
  
C:\Users\Shahriar Ahammed\Desktop\New folder>gcc -o word lex.yy.c  
  
C:\Users\Shahriar Ahammed\Desktop\New folder>word.exe  
input:Kdfhkhldf  
This is word:Kdfhkhldf_
```

2. Identifying Numbers using only Flex:

Code:

```
%{  
#include<stdio.h>  
%}  
  
%%  
[0-9]+ {printf("This is Number:%s",yytext);}  
.|\n  
%%  
  
int main ()  
{  
printf("input:");  
yylex();  
return 0;  
}  
  
int yywrap()  
{  
return 1;  
}
```

Output:



The screenshot shows a Windows command prompt window titled 'C:\Windows\System32\cmd.exe - number.exe'. The window displays the following text:

```
Microsoft Windows [Version 10.0.19045.6093]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Shahriar Ahammed\Desktop\New folder>flex num.l

C:\Users\Shahriar Ahammed\Desktop\New folder>gcc -o number lex.yy.c

C:\Users\Shahriar Ahammed\Desktop\New folder>number.exe
input:34534534
This is Number:34534534
```

3. Find valid identifiers word, number and symbols using only Flex:

Code :

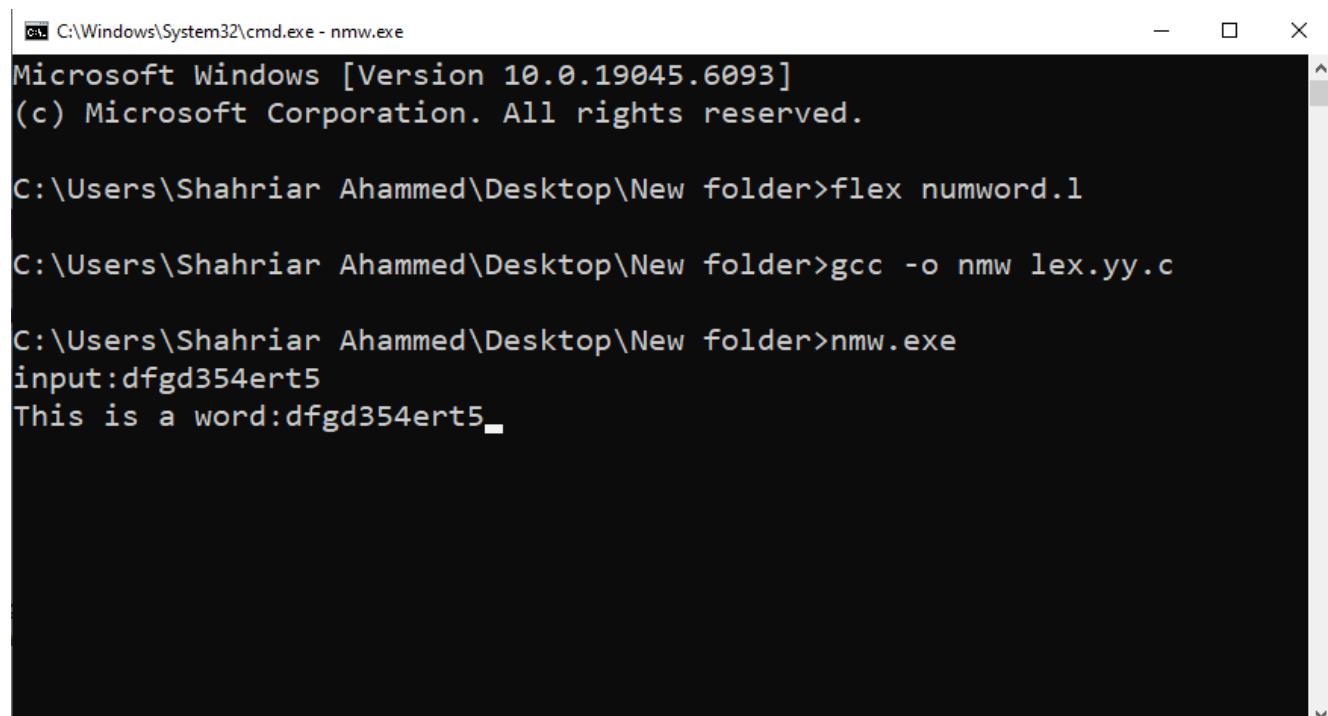
```
%{
#include<stdio.h>
%}

%% 
[a-zA-Z_][a-zA-Z0-9_]* {printf("This is a word:%s",yytext);}
.| \n
%%

int main ()
{
printf("input:");
yylex();
return 0;
}

int yywrap()
{
return 1;
}
```

Output:



```
C:\Windows\System32\cmd.exe - nmw.exe
Microsoft Windows [Version 10.0.19045.6093]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Shahriar Ahammed\Desktop\New folder>flex numword.l

C:\Users\Shahriar Ahammed\Desktop\New folder>gcc -o nmw lex.yy.c

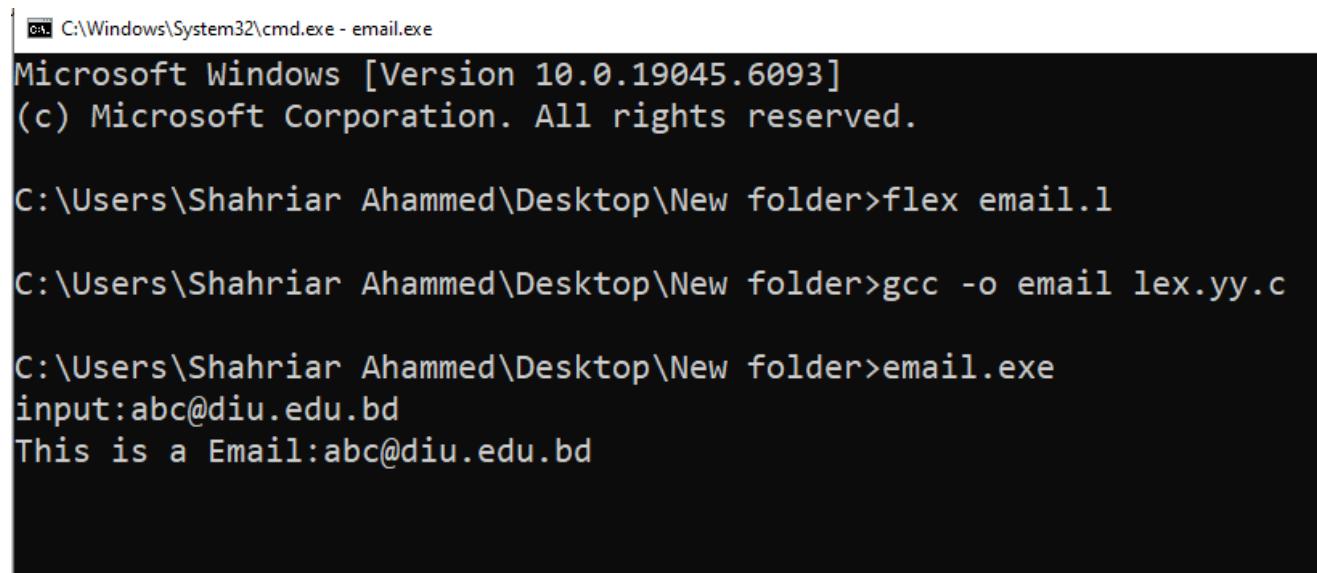
C:\Users\Shahriar Ahammed\Desktop\New folder>nmw.exe
input:dfgd354ert5
This is a word:dfgd354ert5
```

4. Identifying valid Email using only Flex:

Code:

```
%{  
#include<stdio.h>  
%}  
  
%%  
[a-z0-9._]+@[a-z.]+\.[a-z]+ {printf("This is a Email:%s",yytext);}  
.|\n  
%%  
  
int main ()  
{  
printf("input:");  
yylex();  
return 0;  
}  
  
int yywrap()  
{  
return 1;  
}
```

Output:



```
C:\Windows\System32\cmd.exe - email.exe  
Microsoft Windows [Version 10.0.19045.6093]  
(c) Microsoft Corporation. All rights reserved.  
  
C:\Users\Shahriar Ahammed\Desktop\New folder>flex email.l  
  
C:\Users\Shahriar Ahammed\Desktop\New folder>gcc -o email lex.yy.c  
  
C:\Users\Shahriar Ahammed\Desktop\New folder>email.exe  
input:abc@diu.edu.bd  
This is a Email:abc@diu.edu.bd
```