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### Practical No-3

\* Title: Count number of words starting with 'A'.

\* Objectives: Students will learn and implement  
→ Lex as a scanner  
→ Count number of words starting with specific letter.

\* Description:

i) Create a LEX file that first.

ii) Initialize count variables as a zero

iii) Write RE for ~~all~~ alphabets, digits, spaces and start.

iv) In Rules section, write rules for start condition and for words starting with 'A'.

v) Counting variables needs to be incremented in the rules section too.

vi) In the main body call yylex() and print the required count.

\* Conclusion: Thus, we have implemented a ~~scan~~ scanner to count the number of words starting with a specific letter.

Code:

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

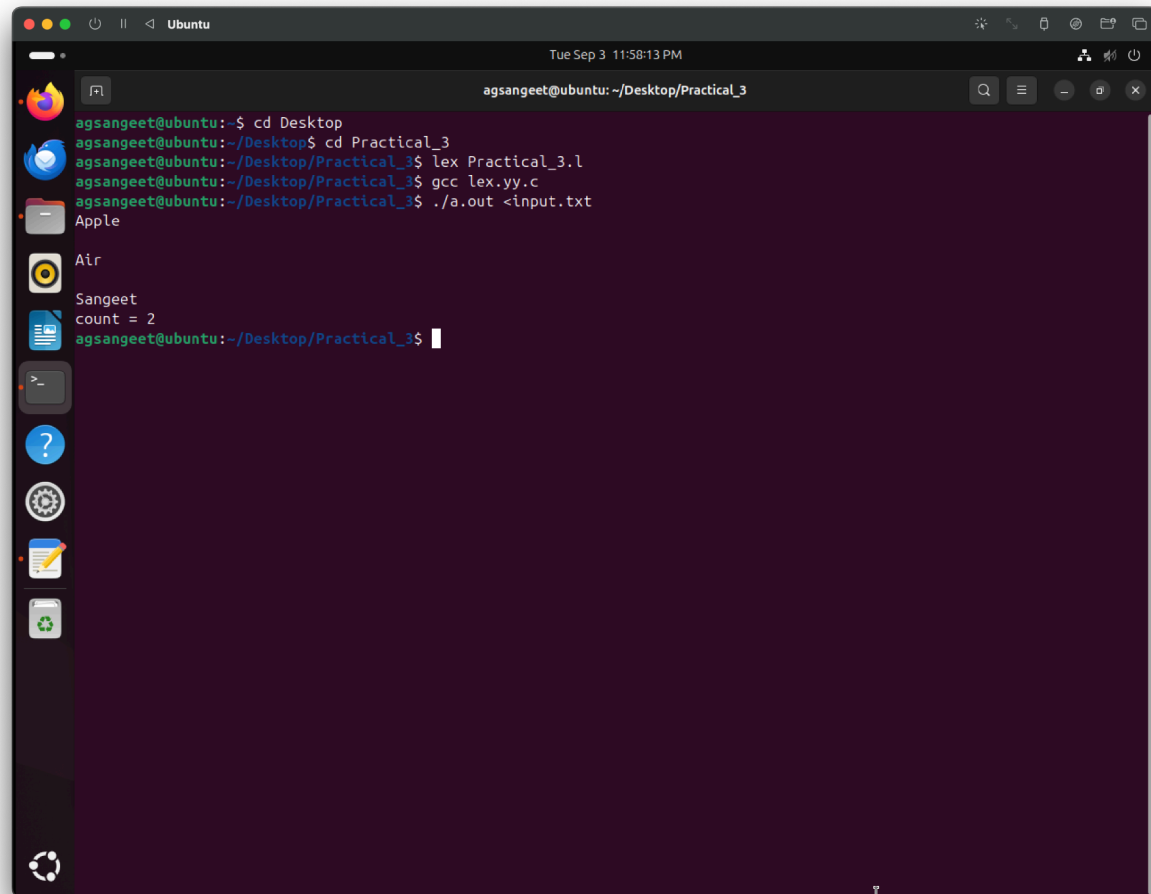
alpha [a-zA-Z]
digit [0-9]
space [ \t\n]

%%
^[aA][a-zA-Z0-9]*    {
    printf("%s\n", yytext);
    count++;
}
{space}([aA][a-zA-Z0-9]*) {
    printf("%s\n", yytext);
    count++;
}
%%

int main() {
    yylex();
    printf("count = %d\n", count);
    return 0;
}

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

Output:



A terminal window titled "Ubuntu" with a dark background and light text. The window shows a series of commands and their outputs. The user navigates to the Desktop and then to a directory named "Practical\_3". They run "lex Practical\_3.l" and "gcc lex.yy.c", which produces an executable "a.out". Finally, they run "./a.out <input.txt", which outputs "Apple", "Air", "Sangeet", and "count = 2". The terminal window has a standard Ubuntu interface with a top bar showing the date and time, and a left sidebar with application icons.

```
agsangeet@ubuntu:~$ cd Desktop
agsangeet@ubuntu:~/Desktop$ cd Practical_3
agsangeet@ubuntu:~/Desktop/Practical_3$ lex Practical_3.l
agsangeet@ubuntu:~/Desktop/Practical_3$ gcc lex.yy.c
agsangeet@ubuntu:~/Desktop/Practical_3$ ./a.out <input.txt
Apple
Air
Sangeet
count = 2
agsangeet@ubuntu:~/Desktop/Practical_3$
```