ASSIGNMENT 3 WEEK-1

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CODE :-

3A :-

```
%{
    /*
     *To implement a lexical analyzer for parts of speech without Symbol Table
    */
%}
VERB        is|am|are|brought|disappeared|likes|exhausted|touch|trade|goes|down
ADVERB      very|I|quickly|tentatively|down
PREPOSITION  to|from|behind|below|between|at|of|in
CONJUCTION   if|then|and|but|or|until
ADJECTIVE    his|young|long|two
NOUN        boy|girl|John|letter|teacher|house|street|end|center|ring|boxers|gloves|punches|champ
PRONOUN     me|she|who|his
DETERMINER   a|the
INTERJECTION Oh!|Wow!|Oops!

%%

[ \n\t]+        ;
{VERB}              { printf("%s\t==> VERB\n",yytext); }
{ADVERB}            { printf("%s\t==> ADVERB\n",yytext); }
{PREPOSITION}       { printf("%s\t==> PREPOSITION\n",yytext); }
{CONJUCTION}        { printf("%s\t==> CONJUCTION\n",yytext); }
{ADJECTIVE}         { printf("%s\t==> ADJECTIVE\n",yytext); }
{NOUN}              { printf("%s\t==> NOUN\n",yytext); }
{PRONOUN}           { printf("%s\t==> PRONOUN\n",yytext); }
```

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```
{DETERMINER}          { printf("%s\t==> DETERMINER\n",yytext); }
{INTERJECTION}        { printf("%s\t==> INTERJECTION\n",yytext); }
.                     ;

%%

int yywrap(void){ }
int main()
{
        yylex();
        return 0;
}
```

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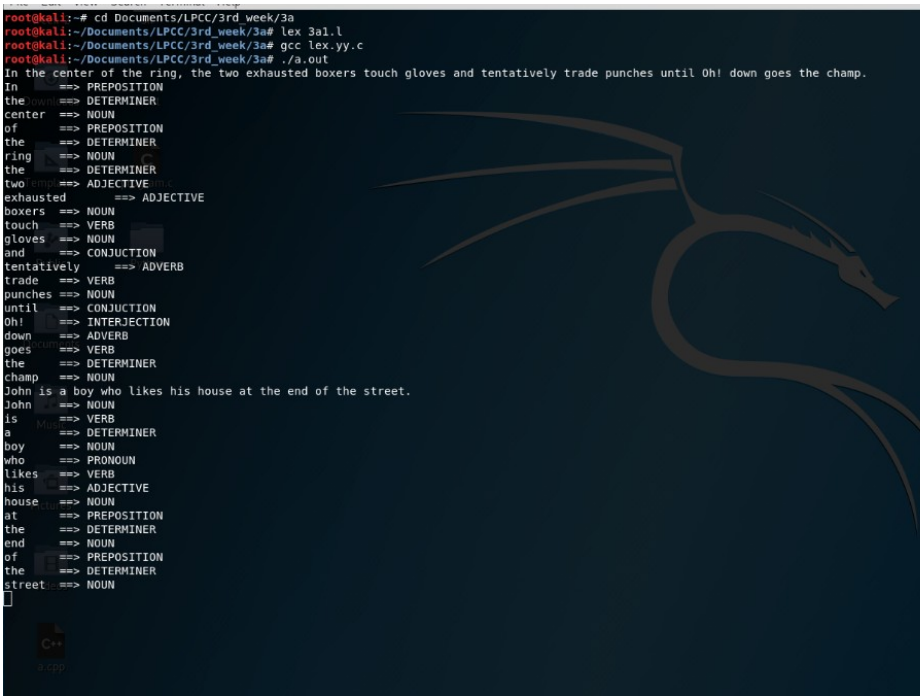
OUTPUT :-



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3C:-

```
%{
%}
DIGIT               [0-9]
NUMBER              [-+]?[0-9]*|[-+]?[0-9]*[.][0-9]+
TEXT                [A-Za-z]
PREPROCESSOR    #include|#define|#undef
HEADERFILE      [a-z]+\.h
KEYWORDS        auto|break|case|const|continue|default|enum|extern|goto|register|return|signedsizeof|static|
struct|switch|typedef|union|unsigned|volatile
INBUILT         printf|scanf|clrscr\(\)|getch\(\)|main\(\)
DATATYPE        boolean|protected|double|byte|int|short|void|char|long|float
CONDITIONAL     if|switch|else|case
ITERATIVE       while|for|do
STRINGLITERAL   \"[^\n]*\"
IDENTIFIER      [A-Za-z$_]({DIGIT}|{TEXT}|_|$)*
ARITH_OP        "+"|"-"|"/"|"%"|"*"
LOGICAL_OP      "&&"|"||"|"!"|"!="
REL_OP          "<"|">"|"<="|">="|"=="
UNARY           "++"|"--"
SC              "."|"{"|"}"|","|":"|"'"|";"|"("|")"
FORMATSPECIFIER %d|%c|%s|%f
%%
[ \n\t]+                ;
{NUMBER}                    { printf("%s\t==> NUMBER\n",yytext); }
{PREPROCESSOR}                      { printf("%s\t==> PREPROCESSOR\n",yytext); }
{HEADERFILE}                { printf("%s\t==> HEADERFILE\n",yytext); }
{KEYWORDS}                  { printf("%s\t==> KEYWORDS\n",yytext); }
{INBUILT}                   { printf("%s\t==> INBUILTFUNC\n",yytext); }
{DATATYPE}                  { printf("%s\t==> DATATYPE\n",yytext); }
{CONDITIONAL}               { printf("%s\t==> CONDITIONAL\n",yytext); }
{ITERATIVE}                 { printf("%s\t==> ITERATIVE\n",yytext); }
{IDENTIFIER}                { printf("%s\t==> IDENTIFIER\n",yytext); }
{ARITH_OP}                  { printf("%s\t==> ARITHMETIC OPERATOR\n",yytext); }
{LOGICAL_OP}                { printf("%s\t==> LOGICAL OPERATOR\n",yytext); }
{REL_OP}                    { printf("%s\t==> RELATIONAL OPERATOR\n",yytext); }
{UNARY}                         { printf("%s\t==> UNARY OPERATOR \n",yytext); }
{SC}                { printf("%s\t==> PUNCTUATION\n",yytext); }
{FORMATSPECIFIER}       { printf("%s\t==> FORMAT SPECIFIER\n",yytext); }
{STRINGLITERAL}                     { printf("%s\t==> STRINGLITERAL\n",yytext); }
"="                         { printf("%s\t==> ASSIGNMENT OP\n",yytext); }
.                           ;
%%
int yywrap(void){ }
int main()
{
        yylex();
        return 0;
```

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```
}
```

OUTPUT:-