LAB EXERCISE – 3 B

Develop the following code by using your prefered language

1)Write a program to list the lexemes of the following assign statement ;

index =3 * count + 20; (assign this statement to a string)

Lexemes
index
=
2
*
count
+
17
;

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
i	n	d	e	x		=		3		*		C	o	u	n	t		+		2	0		;

The statement will be in a string (str), assume that there is 1 blank between each lexemes.
The algorithm;

1. Find the length of the str (ln=24)
2. x=0
3. cnt=0
4. loop until the end of the string
5. y=str(x,ln-x+1).find(" ")
6. lex_array[cnt]=str(x,y-x)
7. x=y+1
8. cnt++
9. goto loop
10. display lex_array

2) List the tokens, the output of the program will be as follows

Lexemes	**Tokens**
index	variable
=	equal sign
3	literal
*	math op
Count	variable
+	math op
20	literal
;	semicolon

Use switch-case, control = sign, math signs and ; in separate case, control literal by using a function and any info other than these will be labeled as variable

3) List the lexemes and tokens of the statement by assuming that there is nospace between eachlexemes.
Find the “=” sign
Label the left side of the equal sign is as variable
Find the mathematical signs
Between each mathematical sign, the lexeme is a variable or a literal, label them
Label the last character as “;”