1.

a)

for x in n

x = x + 1

print (x)

2a

reserved word: for in print

separator: ( )

identifier: x n x x

constant 1

lexical error: 2a

b)

fir(i=0;i<n;i++)

s = s+i

cout<<s

for -> reserved word

( -> separator

i -> identifier

= -> operator

0 -> constant

; -> separator

i -> identifier

< -> operator

n -> identifier

; -> separator

i -> identifier

++-> operator

) -> separator

s -> identifier

= -> operator

S -> identifier

+ -> operator

i -> identifier

cout -> reserved word

<< -> operator

s -> identifier

2. Generate PIF and ST for this fragment

Int a, b;

a = 3;

if(a > 1){

b=a+1

b++

} else {

a=a-2

}

**token.in**

Int

If

Else

,

;

(

)

{

}

=

>

+

++

-

Identifier 1

Constant 0

PIF ST

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Int | 0 |  | 1 | a |
| 1 | 1 |  | 2 | b |
| , | 0 |  | 3 | 3 |
| 1 | 2 |  | 4 | 1 |
| ; | 0 |  | 5 | 2 |
| 1 | 1 |  |  |  |
| = | 0 |  |  |  |
| 0 | 3 |  |  |  |
| ; | 0 |  |  |  |
| if | 0 |  |  |  |
| ( | 0 |  |  |  |
| 1 | 1 |  |  |  |
| > | 0 |  |  |  |
| 0 | 4 |  |  |  |
| ) | 0 |  |  |  |
| { | 0 |  |  |  |
| 1 | 2 |  |  |  |
| = | 0 |  |  |  |
| 1 | 1 |  |  |  |
| + | 0 |  |  |  |
| 0 | 4 |  |  |  |
| 1 | 2 |  |  |  |
| ++ | 0 |  |  |  |
| } | 0 |  |  |  |
| else | 0 |  |  |  |
| { | 0 |  |  |  |
| 1 | 2 |  |  |  |
| = | 0 |  |  |  |
| 1 | 1 |  |  |  |
| - | 0 |  |  |  |
| 0 | 5 |  |  |  |
| } | 0 |  |  |  |
| ; | 0 |  |  |  |

3.construct ST for some identifiers:

a)

Integer a, A, b, c;

a = A + a;

b = b + c;

ST (unsorted)

|  |  |
| --- | --- |
| 1 | a |
| 2 | A |
| 3 | b |
| 4 | c |

b)

Integer d, c, b, a;

a = a + c;

b = b + d;

ST(lexicographically sorted) **!PIF**

|  |  |
| --- | --- |
| 1 | a |
| 2 | b |
| 3 | c |
| 4 | d |
|  |  |

Test

Seminar 2 FLCD

Required

1.How many unique identifiers are here: int main(int a,b); a=3; b= a+2;Required to answer.Single choice.

(2 Points)

5

2

7

4

2.How many tokens are here: int main(int a,b);Required to answer.Single choice.

(2 Points)

2

9

8

10

3.How will ”ifa” be classified in the sequence: ifa (b<2) {a=b}Required to answer.Single choice.

(2 Points)

Lexical error

Reserved word “if” followed by identifier “a”

Identifier “ifa”

Syntactical error

4.Is there a lexical error in the following example? if (a<b) { a=bRequired to answer.Single choice.

(2 Points)

Yes

No

6.How many constants are here: a=p+3; b = “Hello”; c = “”Required to answer.Single choice.

(2 Points)

3

4

2

1