Assignment 10:- (**Halstead complexity measures**)

Write a java code which takes c code and calculate the following:-

n1**=** the number of distinct operators

n2 = the number of distinct operands

N1= the total number of operators

N2= the total number of operands

**Example:- <input.c>**

void sort( int\*a, int n )

{

int i, j, t;

if ( n <2 )

return;

for( i=0 ; i < n-1; i++)

{

for( j=i+ 1 ; j < n ; j++)

{

if ( a[i] > a[ j] )

{

t = a[ i] ;

a[ i] =a[ j] ;

a[ j] = t;

}

}

}

}

Output:-

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| S.No. | Operators | Count | S.No. | Operators | Count |
| 1. | < | 3 | 10. | { | 3 |
| 2. | = | 5 | 11. | } | 3 |
| 3. | > | 1 | 12. | + | 1 |
| 4. | - | 1 | 13. | ++ | 2 |
| 5. | , | 2 | 14. | for | 2 |
| 6. | ; | 9 | 15. | if | 2 |
| 7. | ( | 4 | 16. | int | 1 |
| 8. | ) | 4 | 17. | return | 1 |
| 9. | [] | 6 |  |  |  |

|  |  |  |
| --- | --- | --- |
| S.No. | Operands | Count |
| 1. | 0 | 1 |
| 2. | 1 | 2 |
| 3. | 2 | 1 |
| 4. | a | 6 |
| 5. | i | 8 |
| 6. | j | 7 |
| 7. | n | 3 |
| 8. | t | 3 |

|  |  |  |
| --- | --- | --- |
|  | Total | Unique |
| Operators | N1=50 | n1=17 |
| Operands | N2=30 | n2=7 |