1. **Description**

Let’s consider the following C++ program

#include <iostream>

using namespace std;

int main() {

int i = 1;

while (i <= 5) {

cout << i << " ";

++i;

}

return 0;

}

1. **Question**

Develop a lexer to recognize the following tokens

|  |  |  |
| --- | --- | --- |
| **No** | **Token** | **Description** |
| 1 | Include | #include |
| 2 | InternalLib | <anystring> |
| 3 | Using | using |
| 4 | NameSpace | namespace |
| 5 | Semi | ; |
| 6 | Int | int |
| 7 | Integer | 2, 3, -7 |
| 8 | Main | main |
| 9 | OpenPara | ( |
| 10 | ClosePara | ) |
| 11 | Id | identiier |
| 12 | While | while |
| 13 | OpenBraket | { |
| 14 | CloseBraket | } |
| 15 | InEq | >,<,<=,>=, |
| 16 | Cout | cout |
| 17 | String | C string: “abc” |
| 18 | Inc | ++,-- |
| 19 | Return | return |
| 20 | If | if |
| 21 | Eq | ==,!= |
| 22 | Assignment | = |
| 23 | Char | ‘a’ |
| 24 | Float | -5.0, 6.7f, 9.87654e+06 |
| 25 | Shift | >>, << |