

Experiment – 15

```
#include <stdio.h>

#include <ctype.h>

#include <string.h>

#define MAX_TOKEN_LENGTH 50

void tokenize(char *code) {

    char token[MAX_TOKEN_LENGTH];

    int i = 0, j = 0;

    while (code[i] != '\0') {

        if (isalpha(code[i])) {

            j = 0;

            while (isalnum(code[i]) || code[i] == '_' ) {

                token[j++] = code[i++];

            }

            token[j] = '\0';

            printf("Identifier: %s\n", token);

        } else if (isdigit(code[i])) {

            j = 0;

            while (isdigit(code[i])) {

                token[j++] = code[i++];

            }

            token[j] = '\0';

            printf("Number: %s\n", token);

        } else if (strchr("+-*/=;{}", code[i])) {

            printf("Operator/Symbol: %c\n", code[i++]);

        } else {

            i++;

        }

    }

}

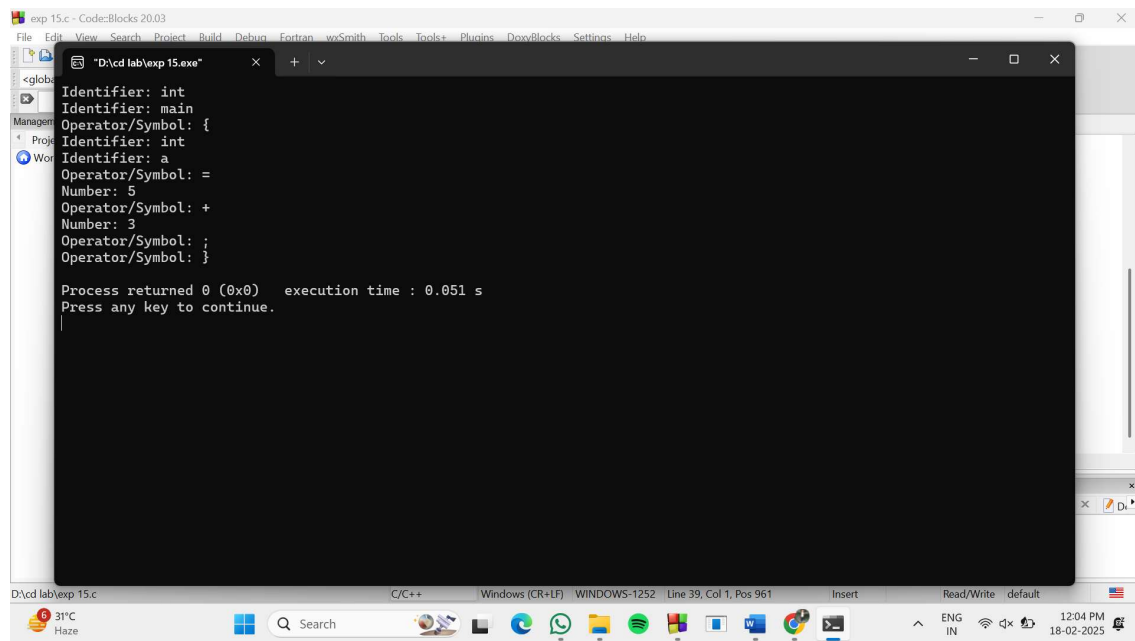
int main() {
```

```
char code[] = "int main() { int a = 5 + 3; }";

tokenize(code);

return 0;

}
```



The screenshot shows the Code::Blocks IDE interface. The main window displays the output of a program execution. The output text is as follows:

```
Identifier: int
Identifier: main
Operator/Symbol: {
Identifier: int
Identifier: a
Operator/Symbol: =
Number: 5
Operator/Symbol: +
Number: 3
Operator/Symbol: ;
Operator/Symbol: }

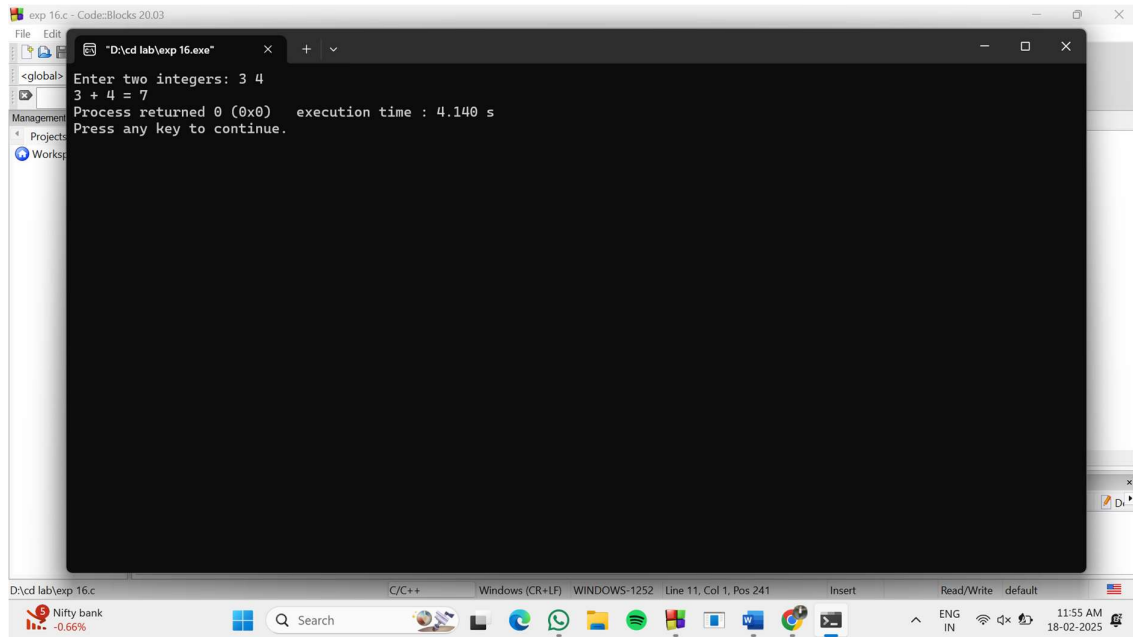
Process returned 0 (0x0)   execution time : 0.051 s
Press any key to continue.
```

The status bar at the bottom indicates the file path is D:\cd lab\exp 15.c, the language is C/C++, and the current line is 39, column 1, position 961. The system tray shows the date and time as 12:04 PM on 18-02-2025.

Experiment – 16

```
#include <stdio.h>

int main()
{
    int number1, number2, sum;
    printf("Enter two integers: ");
    scanf("%d %d", &number1, &number2);
    sum = number1 + number2;
    printf("%d + %d = %d", number1, number2, sum);
    return 0;
}
```



Experiment – 17

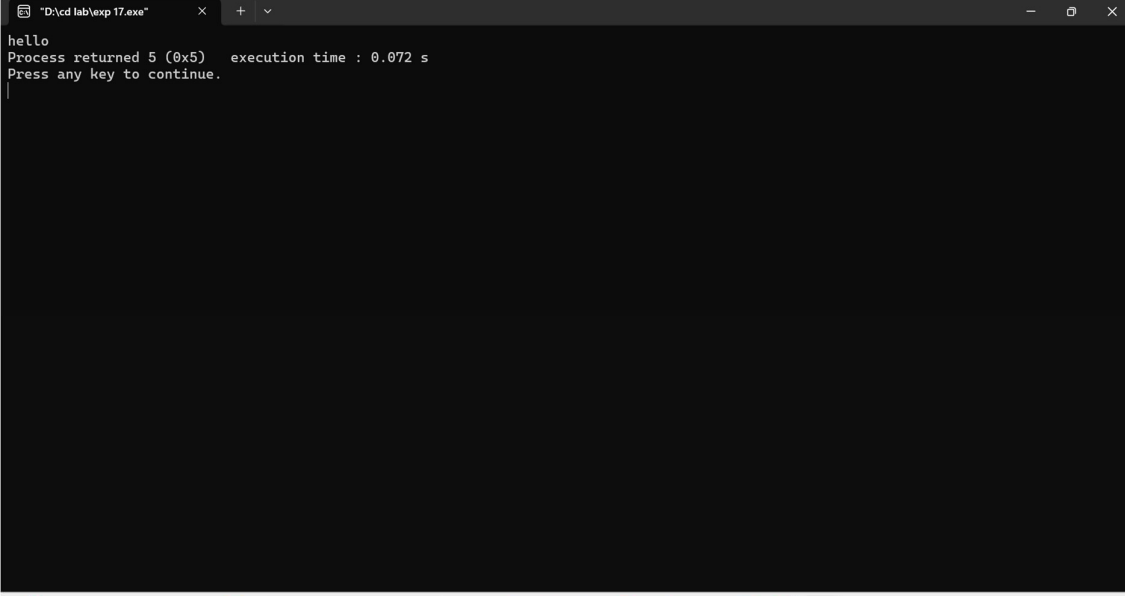
```
#define PI 3.14

#include<stdio.h> #include<conio.h>

void main()
{
    int a,b,c = 30;

    printf("hello");

}
```



The screenshot shows a Windows command prompt window titled "D:\cd lab\exp 17.exe". The window displays the output of a C program: "hello", "Process returned 5 (0x5)", "execution time : 0.072 s", and "Press any key to continue.". The Windows taskbar is visible at the bottom, showing the Start button, a search bar, and various application icons. The system tray on the right indicates the language is "ENG IN", the time is "11:55 AM", and the date is "18-02-2025".

```
"D:\cd lab\exp 17.exe"
hello
Process returned 5 (0x5)   execution time : 0.072 s
Press any key to continue.
```

Experiment – 18

```
#include <stdio.h>

#include <string.h>

int main() {

    char str[] = "#define PI 3.14\n#include<stdio.h>\n#include<conio.h>\nint main() { return
0; }\n";

    int macro_count = 0, header_count = 0;

    printf("Input Source Program:\n%s\n", str);

    char *line = strtok(str, "\n");

    while (line) {

        if (strcmp(line, "#define", 7) == 0) macro_count++;

        if (strcmp(line, "#include", 8) == 0) header_count++;

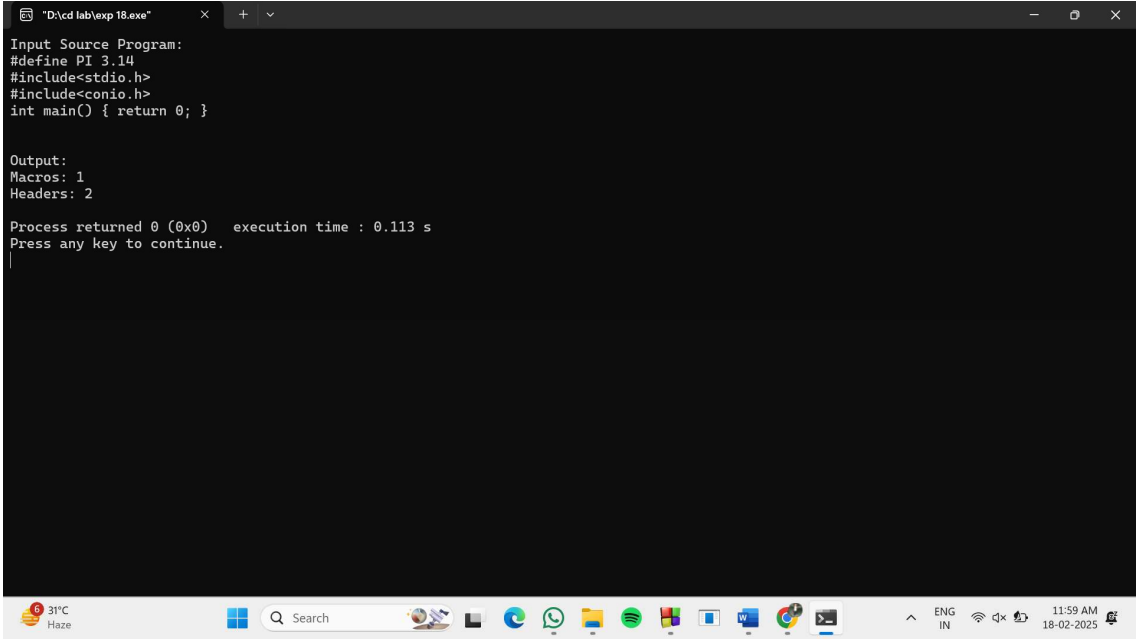
        line = strtok(NULL, "\n");

    }

    printf("Output:\nMacros: %d\nHeaders: %d\n", macro_count, header_count);

    return 0;

}
```



```
"D:\cd lab\exp 18.exe" x + -
Input Source Program:
#define PI 3.14
#include<stdio.h>
#include<conio.h>
int main() { return 0; }

Output:
Macros: 1
Headers: 2

Process returned 0 (0x0)   execution time : 0.113 s
Press any key to continue.
```

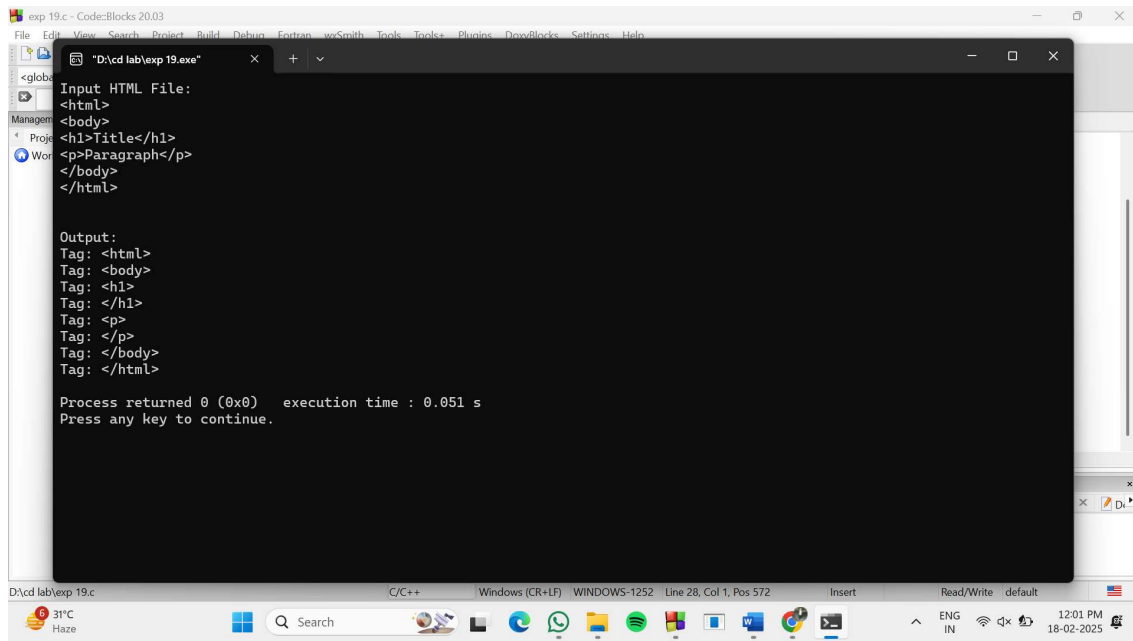
Experiment – 19

```
#include <stdio.h>

int main() {
    char str[] =
"<html>\n<body>\n<h1>Title</h1>\n<p>Paragraph</p>\n</body>\n</html>\n";

    printf("Input HTML File:\n%s\n\n", str);
    printf("Output:\n");

    int inside_tag = 0;
    for (int i = 0; str[i] != '\0'; i++) {
        if (str[i] == '<') {
            inside_tag = 1;
            printf("Tag: ");
        }
        if (inside_tag) {
            printf("%c", str[i]);
        }
        if (str[i] == '>') {
            inside_tag = 0;
            printf("\n");
        }
    }
    return 0;
}
```



Experiment – 20

```
#include <stdio.h>
```

```
int main() {
```

```
    char str[] = "#define PI 3.14\n#include<stdio.h>\nint main() {\n    int a = 10;\n    printf(\"Hello\");\n    return 0;\n}\n";
```

```
    int line_num = 1;
```

```
    printf("Input C Program:\n%s\n", str);
```

```
    printf("Output:\n");
```

```
    printf("%d: ", line_num++);
```

```
    for (int i = 0; str[i] != '\0'; i++) {
```

```
        printf("%c", str[i]);
```

```
        if (str[i] == '\n' && str[i + 1] != '\0') {
```

```
            printf("%d: ", line_num++);
```

```
        }
```

```
    }
```

```
    return 0;
```

```
}
```

```
"D:\cd lab\exp 20.exe" x + v - 0 x
Input C Program:
#define PI 3.14
#include<stdio.h>
int main() {
    int a = 10;
    printf("Hello");
    return 0;
}

Output:
1: #define PI 3.14
2: #include<stdio.h>
3: int main() {
4:     int a = 10;
5:     printf("Hello");
6:     return 0;
7: }

Process returned 0 (0x0)   execution time : 0.089 s
Press any key to continue.
|
```

31°C Haze

Search

ENG IN 12:03 PM 18-02-2025