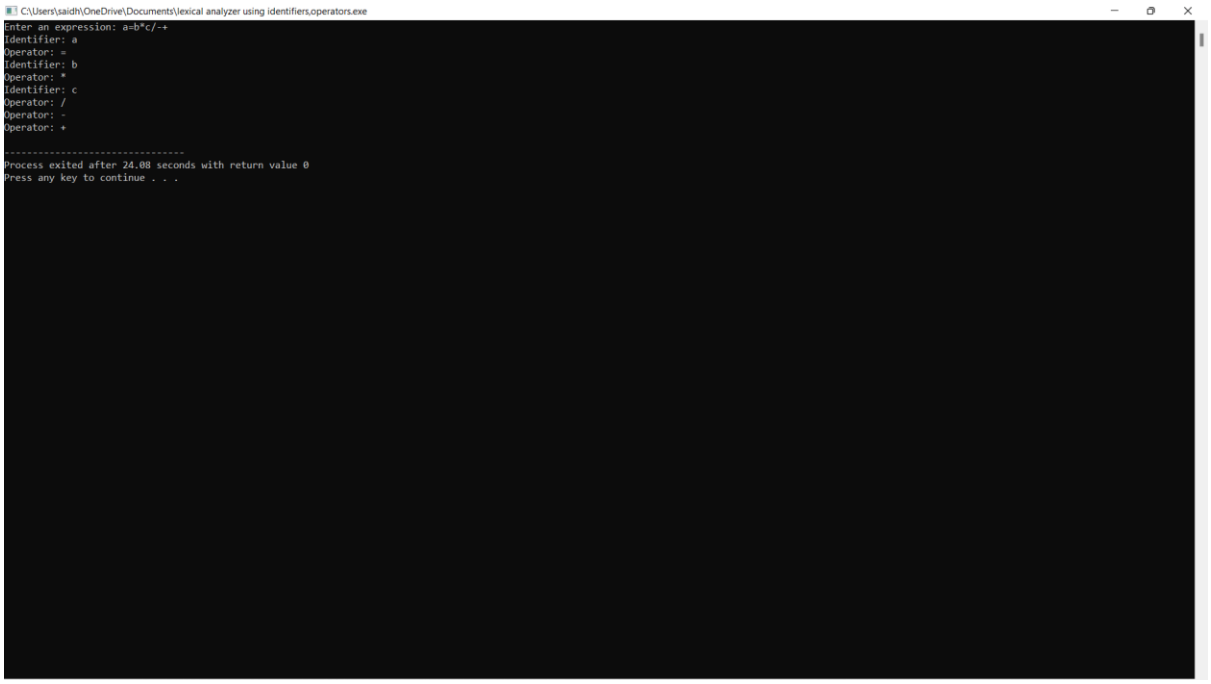
1.Develop a lexical Analyzer to identify identifiers, constants, operators using C program.

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

#define MAX_LENGTH 100

const char operators[] = "+-*/%=";

int isOperator(char c) {
   int i;
   for (i = 0; i < strlen(operators); i++) {
      if (c == operators[i]) {
         return 1;
      }
   }
   return 0;
}

int main() {
   char input[MAX_LENGTH];
   int i = 0, length;

   printf("Enter an expression: ");
   scanf("%s", input);

   length = strlen(input);
   while (i < length) {
      if (isalpha(input[i])) {
         printf("Identifier: ");
         while (isalpha(input[i])) {
```

```
            printf("%c", input[i]);
            i++;
        }
        printf("\n");
    } else if (isdigit(input[i])) {
        printf("Constant: ");
        while (isdigit(input[i])) {
            printf("%c", input[i]);
            i++;
        }
        printf("\n");
    } else if (isOperator(input[i])) {
        printf("Operator: %c\n", input[i]);
        i++;
    } else {
        i++;
    }
  }

  return 0;
}
```


C:\Users\saidh\OneDrive\Documents\lexical analyzer using identifiers,operators.exe
Enter an expression: a=b*c/-+
Identifier: a
Operator: =
Identifier: b
Operator: *
Identifier: c
Operator: /
Operator: -
Operator: +

Process exited after 24.08 seconds with return value 0
Press any key to continue . . .