1)Develop a lexical analyzer to identify, constants, operators using C program.

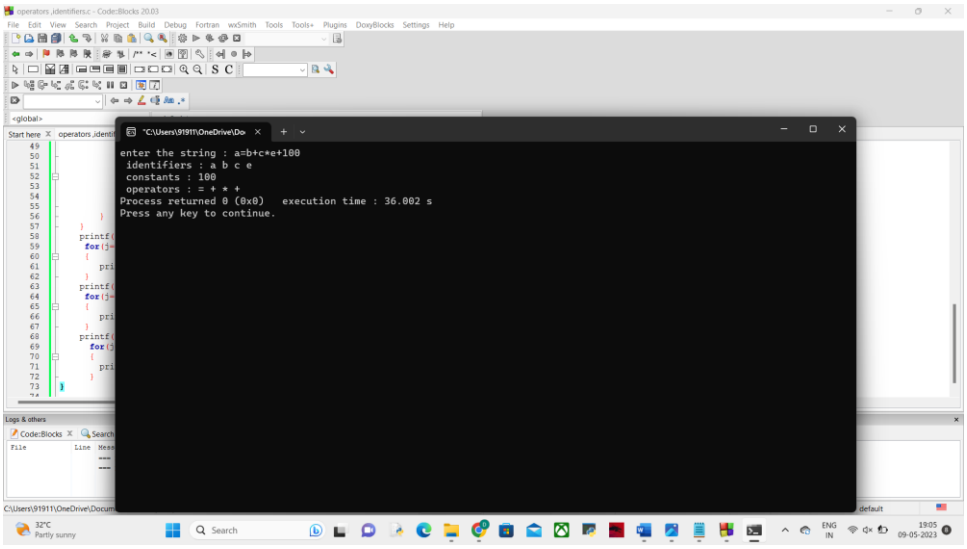
Code:

```
#include<stdio.h>
#include<ctype.h>
#include<string.h>
int main()
{
int i,ic=0,m,cc=0,oc=0,j;
char b[30],operators[30],identifiers[30],constants[30];
printf("enter the string : ");
scanf("%[^\n]s",&b);
for(i=0;i<strlen(b);i++)
{
    if(isspace(b[i]))
{
        continue;
    }
    else if(isalpha(b[i]))
{
```

```
            identifiers[ic] =b[i];
            ic++;
        }
        else if(isdigit(b[i]))
{
            m=(b[i]-'0');
            i=i+1;
            while(isdigit(b[i]))
{
            m=m*10 + (b[i]-'0');
            i++;
            }
            i=i-1;
            constants[cc]=m;
            cc++;
        }
        else
{
            if(b[i]=='*')
{
```

```
            operators[oc]='*';
            oc++;
            }
            else if(b[i]=='-')
{
            operators[oc]='-';
            oc++;
            }
            else if(b[i]=='+')
{
            operators[oc]='+';
            oc++;
            }
            else if(b[i]=='=')
{
            operators[oc]='=';
            oc++;
            }
            }
}
```

```
    printf(" identifiers : ");
     for(j=0;j<ic;j++)
 {
        printf("%c ",identifiers[j]);
     }
    printf("\n constants : ");
     for(j=0;j<cc;j++)
 {
        printf("%d ",constants[j]);
     }
    printf("\n operators : ");
      for(j=0;j<oc;j++)
  {
        printf("%c ",operators[j]);
      }
}
```


"C:\Users\91911\OneDrive\Do
enter the string : a=b+c*e+100
identifiers : a b c e
constants : 100
operators : = + * +
Process returned 0 (0x0) execution time : 36.002 s
Press any key to continue.