

EXPERIMENT 1

```
#include<stdio.h>
#include<ctype.h>
#include<string.h>
int main()
{
    int i,ic=0,m,cc=0,oc=0,j;
    char b[30],identifiers[30],operators[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;
            printf(" constants: %d",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("\n identifiers : ");
    for(j=0;j<ic;j++)
    {
        printf("%c ",identifiers[j]);
    }
    /*printf("\n constants : ");
    for(j=0;j<cc;j++)
    {
        printf("%c ",constants[j]);
    }*/
    printf("\n operators : ");
    for(j=0;j<oc;j++)
    {
        printf("%c ",operators[j]);
    }
}
}

```

OUTPUT

```

enter the string : a*b-c1435/
constants: 1435
identifiers : a b c
operators : * -

```