1)To enter any string an count the number of alphabets digit and special character in it.

```c
//to count the no. of alphabet, digit and other element in the string
#include <stdio.h>
#include <string.h>

int main()
{
    char s[1000];
    int i,alphabets=0,digits=0,specialcharacters=0;

    printf("Enter  the string : ");
    gets(s);

    for(i=0;s[i];i++)
    {
        if((s[i]>=65 && s[i]<=90)|| (s[i]>=97 && s[i]<=122) )
          alphabets++;
        else if(s[i]>=48 && s[i]<=57)
         digits++;
        else
         specialcharacters++;

    }


    printf("Alphabets = %d\n",alphabets);
    printf("Digits = %d\n",digits);
    printf("Special characters = %d", specialcharacters);


    return 0;
}
```
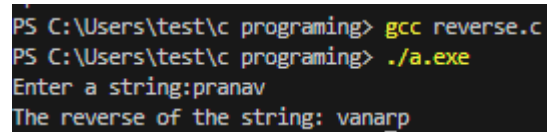
```
PS C:\Users\test\c programing> gcc count.c
PS C:\Users\test\c programing> ./a.exe
Enter  the string : pranav@123
Alphabets = 6
Digits = 3
Special characters = 1
```

2)To input a string and print it into reverse.

```c
#include <stdio.h>
#include <string.h>
int main()
{
    char s[100];
    printf("Enter a string:");
    gets(s);
    strrev(s);
    printf("The reverse of the string: %s\n", s);
    return 0;
}
```

```
PS C:\Users\test\c programing> gcc reverse.c
PS C:\Users\test\c programing> ./a.exe
Enter a string:pranav
The reverse of the string: vanarp
```

3)To input a string and count vowels and consonant

```c
//to count the no of vowel and consonant in a string

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

int main()
{
    char s[1000];
    int i,vowels=0,consonants=0;

    printf("Enter  the string : ");
    gets(s);

    for(i=0;s[i];i++)
    {
        if((s[i]>=65 && s[i]<=90)|| (s[i]>=97 && s[i]<=122))
        {

            if(s[i]=='a'||
s[i]=='e'||s[i]=='i'||s[i]=='o'||s[i]=='u'||s[i]=='A'||s[i]=='E'||s[i]=='I'||s[i]
=='O' ||s[i]=='U')
                vowels++;
            else
              consonants++;
        }

    }


    printf("vowels = %d\n",vowels);
    printf("consonants = %d\n",consonants);
```

```c
    return 0;
}
```


4)To enter a number and return square if even and cube if it is odd

```c
// to give the square of the even no. and cube of the odd one

#include<stdio.h>
int main()

{
    int n;

    printf("Please enter a number: ");
    scanf("%d", &n);

    if(n%2==0)
    {
        printf("%d", n*n);
    }
    else
    {
        printf("%d", n*n*n);
    }

    return 0;

}
```


5)To find weather the string is palindrome or not

```c
//to find out of the string is palinedrome or not
```

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

int main()
{
    char s[1000];
    int i,n,c=0;

    printf("Enter  the string : ");
    gets(s);
    n=strlen(s);

    for(i=0;i<n/2;i++)
    {
        if(s[i]==s[n-i-1])
        c++;

    }
    if(c==i)
        printf("string is palindrome");
    else
        printf("string is not palindrome");



    return 0;
}
```


6)To find all factor of a number

```c
// to find out all factor of any no.
#include <stdio.h>

int main() {
    int n;
    printf("Enter a number : ");
    scanf("%d", &n);

    for (int i = 1; i <= n; ++i) {
        if (n % i == 0) {
            printf("%d  ", i);
        }
    }
    printf("\n");
}
```

7)To convert decimal to binary

```c
#include <stdio.h>

void decToBinary(int n)
{
    int binaryNum[1000];

    int i = 0;
    while (n > 0) {

        binaryNum[i] = n % 2;
        n = n / 2;
        i++;
    }

    for (int j = i - 1; j >= 0; j--)
        printf("%d", binaryNum[j]);
}

int main()
{
    int n = 34;  // you can change the no. by changing the value of n
    decToBinary(n);
    return 0;
}
```

8)To find the largest no. in the array

```c
#include <stdio.h>

int largest(int arr[], int n)
{
    int i;

    int max = arr[0];

    for (i = 1; i < n; i++)
        if (arr[i] > max)
            max = arr[i];
```

```c
        return max;
}

int main()
{
    int arr[] = { 10, 324, 45, 90, 9808 };// you can change the array by making
                                        //changes here

    int n = sizeof(arr) / sizeof(arr[0]);
    printf("Largest in given array is %d", largest(arr, n));
    return 0;
}
```

9)To sort the array .

```c
// to short the given array int hte program


#include <stdio.h>

void swap(int* xp, int* yp)
{
    int temp = *xp;
    *xp = *yp;
    *yp = temp;
}

void selectionSort(int arr[], int n)
{
    int i, j, min_idx;

    for (i = 0; i < n - 1; i++) {

        min_idx = i;
        for (j = i + 1; j < n; j++)
            if (arr[j] < arr[min_idx])
                min_idx = j;

        swap(&arr[min_idx], &arr[i]);
    }
}

void printArray(int arr[], int size)
{
    int i;
    for (i = 0; i < size; i++)
        printf("%d ", arr[i]);
    printf("\n");
}
```

```c
int main()
{
    int arr[] = { 22, 25, 41 , 1, 2, 99 };// you can change the array by making
                                  //changes here
    int n = sizeof(arr) / sizeof(arr[0]);
    selectionSort(arr, n);
    printf("Sorted array: \n");
    printArray(arr, n);
    return 0;
}
```

```
PS C:\Users\test\c programing> gcc shortarray.c
PS C:\Users\test\c programing> ./a.exe
Sorted array:
1 2 22 25 41 99
```