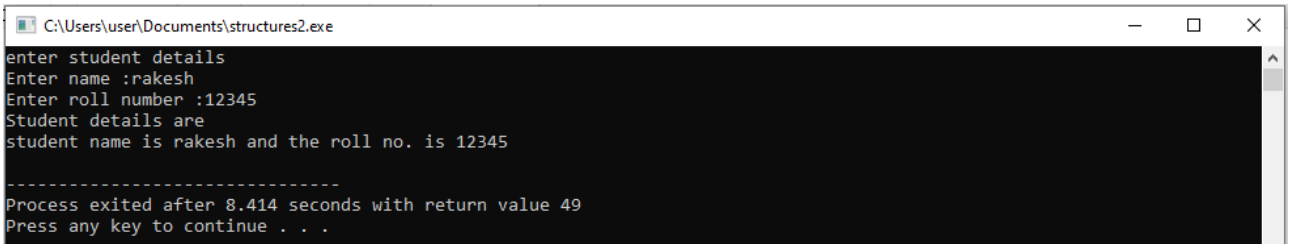
1. Store information of a student using structure

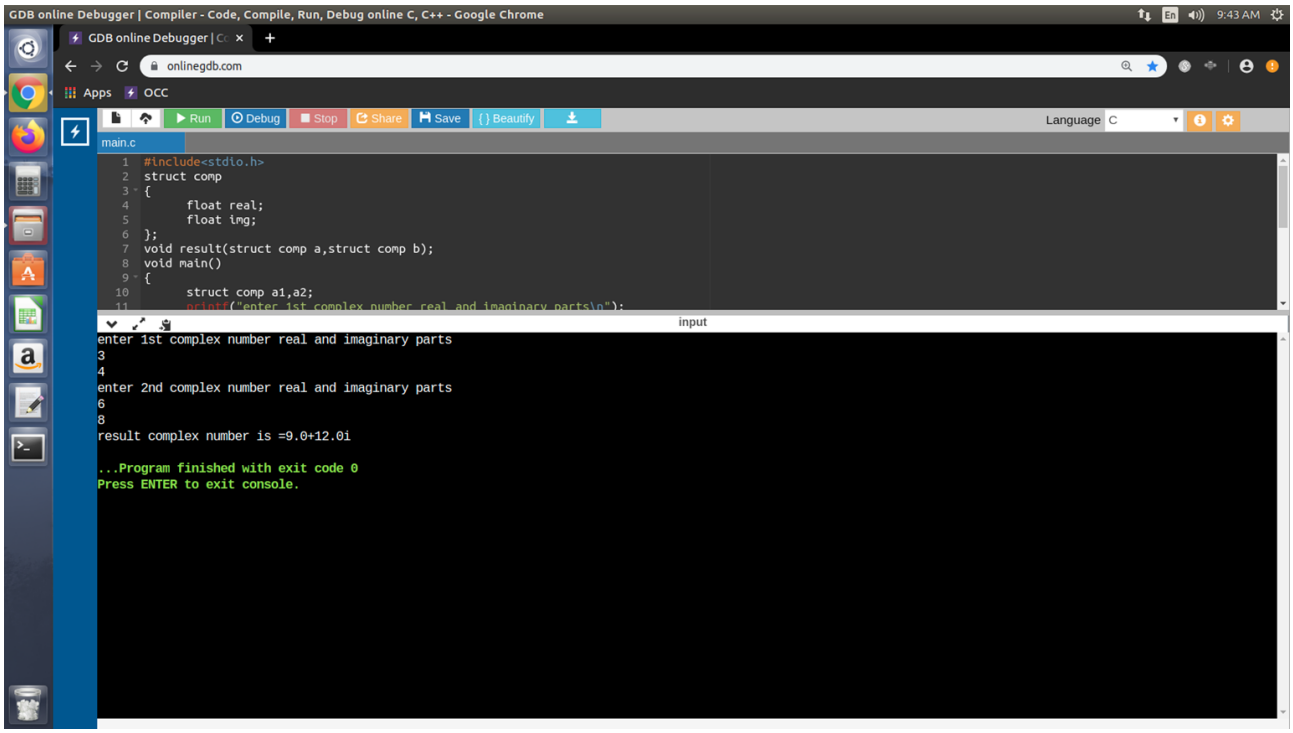
```
#include<stdio.h>
struct student
{
    char name[20];
    int roll;
};
void main()
{
    int i;
    struct student s1;
    printf("enter student details\n");
    printf("Enter name :");
    scanf("%s",s1.name);
    printf("Enter roll number :");
    scanf("%d",&s1.roll);
    printf("Student details are\n");
    printf("student name is %s and the roll no. is %d\n",s1.name,s1.roll);
}
```



Add two complex numbers by passing structures to a function

```
#include<stdio.h>
struct comp
{
    float real;
    float img;
};
void result(struct comp a,struct comp b);
void main()
{
    struct comp a1,a2;
    printf("enter 1st complex number real and imaginary parts\n");
    scanf("%f%f",&a1.real,&a1.img);
    printf("enter 2nd complex number real and imaginary parts\n");
    scanf("%f%f",&a2.real,&a2.img);
    result(a1,a2);
```

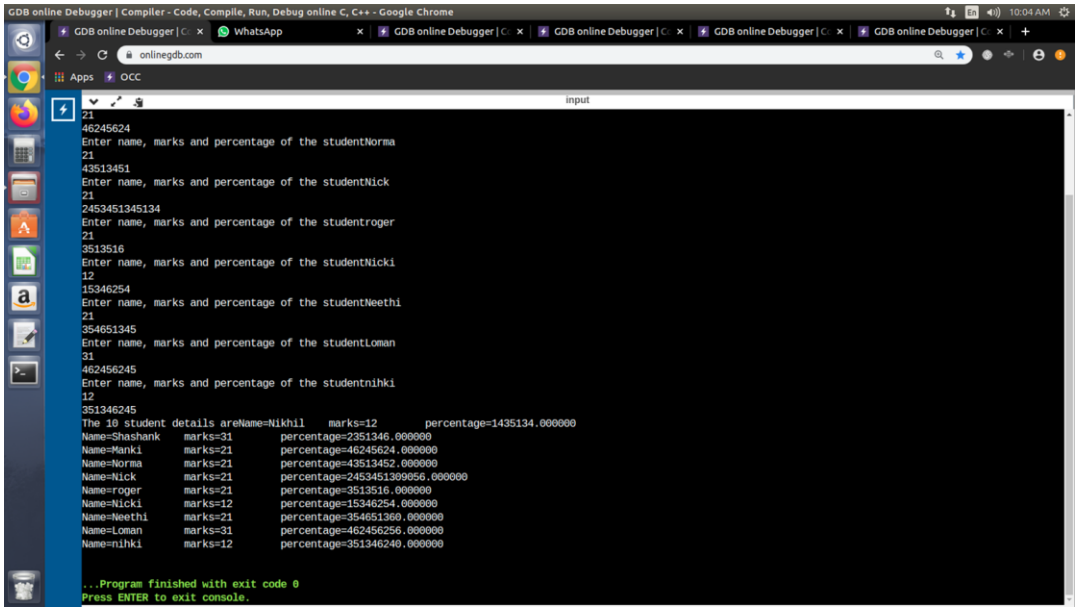
```
}
void result(struct comp x,struct comp y)
{
     struct comp res;
     res.real=x.real+y.real;
     res.img=x.img+y.img;
     printf("result complex number is =%.1f+%.1fi",res.real,res.img);
}
```



Store information of 10 students using structures

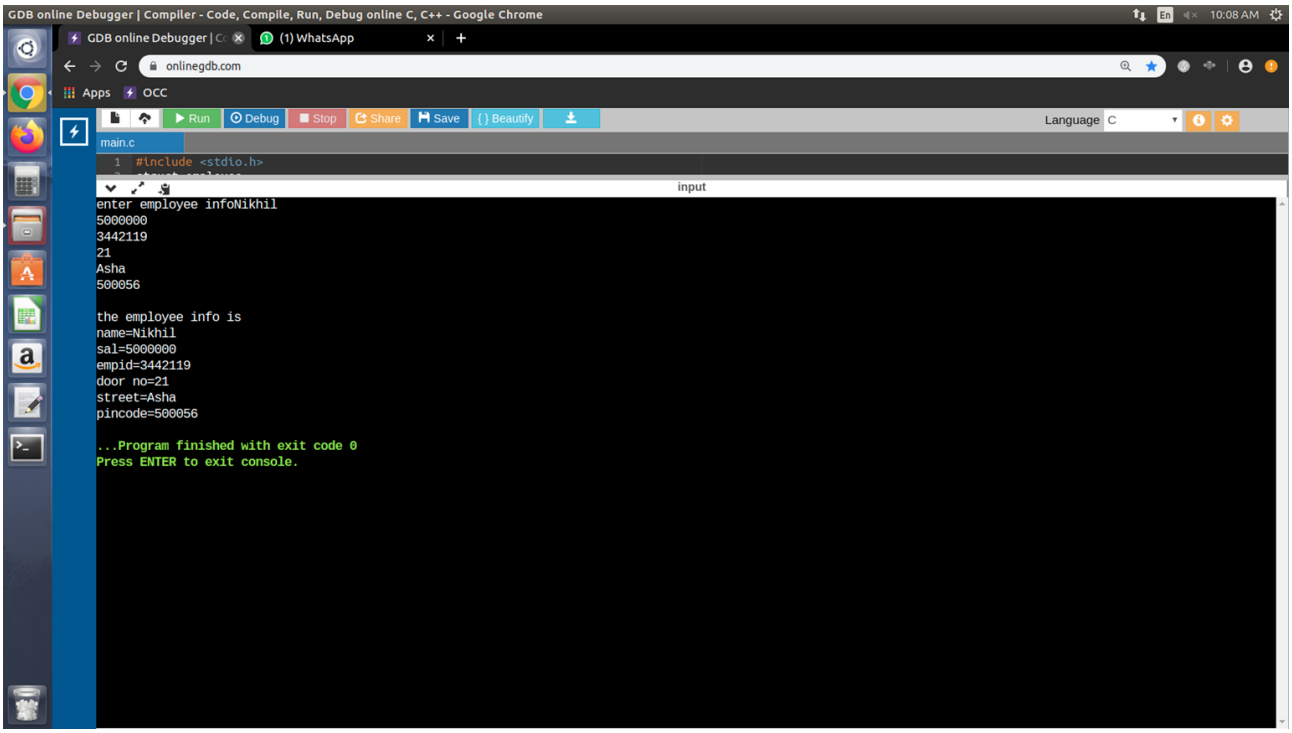
```
#include<stdio.h>
struct student
{
   char name[20];
   int marks;
   float perc;
}s[10];
void main()
{
printf("enter 10 student details");
for(int i=0;i<10;i++)
{   printf("Enter name, marks and percentage of the student");
   scanf("%s%d%f",s[i].name,&s[i].marks,&s[i].perc);
}
printf("The 10 student details are");
```

```
for(int i=0;i<10;i++)
{
   printf("Name=%s\t marks=%d\t percentage=%f\n",s[i].name,s[i].marks,s[i].perc);
}
}
```



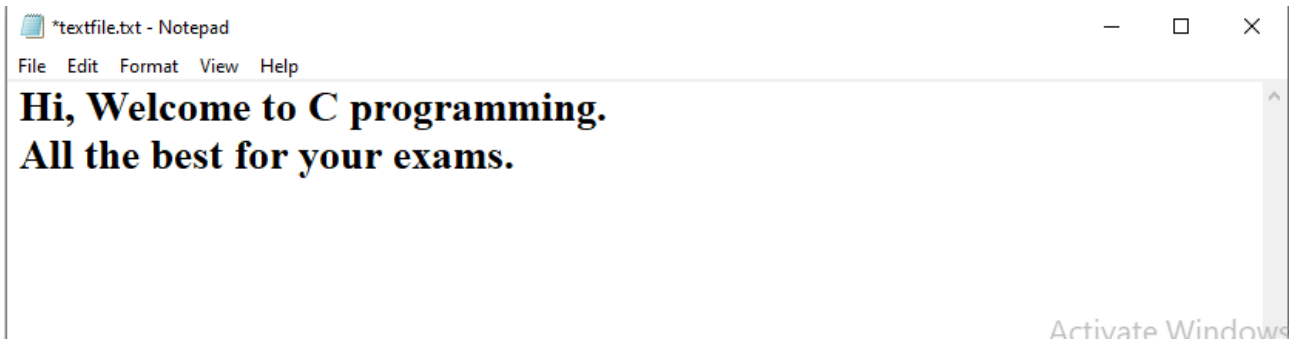
Store Employee information using nested structure

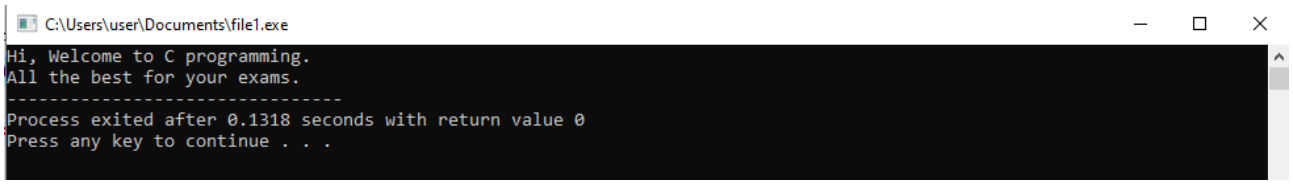
```
#include <stdio.h>
struct employee
{
   char name[50];
   int sal;
   int empid;
   struct adress
   {
     int doorno;
     char street[50];
     int pincode;
   }a1;
}e1;
void main()
{
printf("enter employee info");
scanf("%s%d%d%d%s%d",e1.name,&e1.sal,&e1.empid,&e1.a1.doorno,e1.a1.street,&e1.a1.pincod
e);
printf("\nthe employee info is\n");
printf("name=%s\nsal=%d\nempid=%d\ndoorno=%d\nstreet=%s\npincode=%d",e1.name,e1.sal,e1.
empid,e1.a1.doorno,e1.a1.street,e1.a1.pincode);
}
```



Read file contents and display on console.

```
#include<stdlib.h>
void main()
{
   FILE *fp;
   char ch;
   fp=fopen("E:/ramani/college-work/subjects/CP/textfile.txt","r");
   if(fp==NULL)
   {
      printf("error");
      exit(0);
   }
   while((ch=fgetc(fp))!=EOF)
   {
         putchar(ch);
         }
   fclose(fp);
}
```

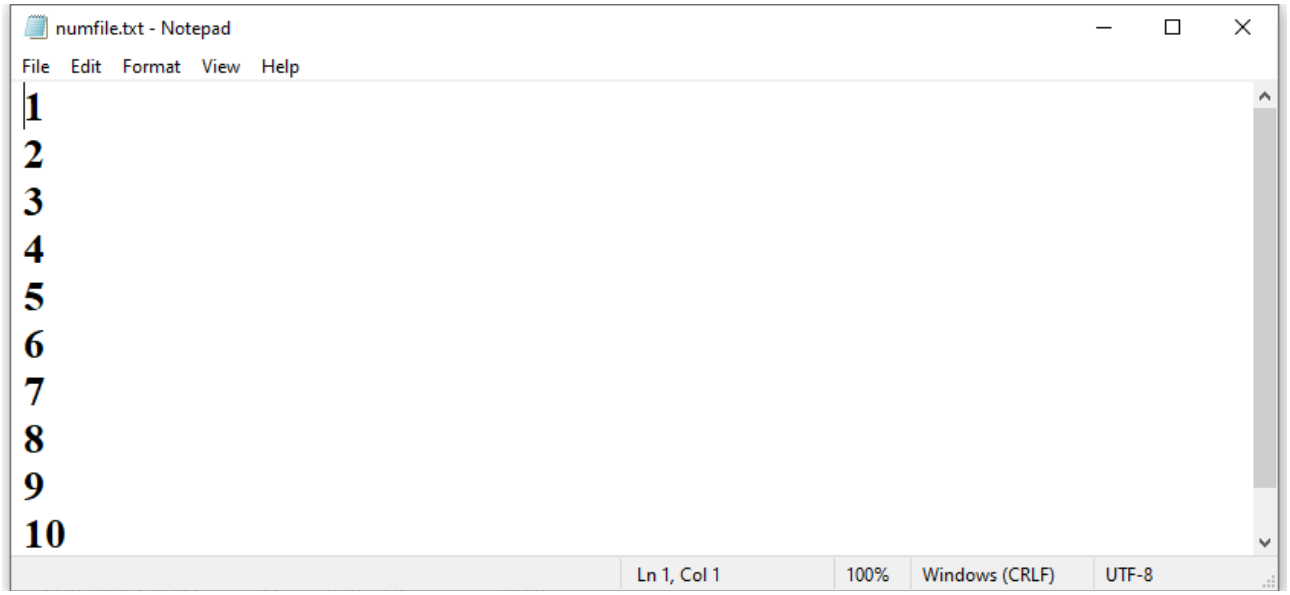


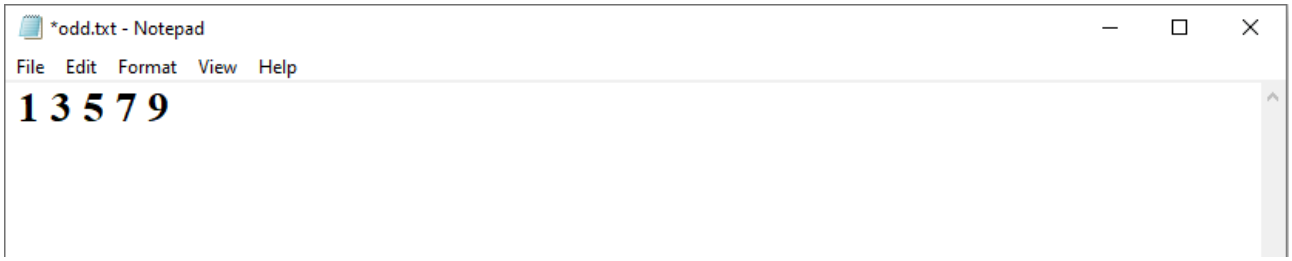


Read numbers from a file and write even and odd numbers to separate file.

```
#include<stdio.h>
#include<stdlib.h>
void main()
{
   FILE *fp,*fp1,*fp2;
   int a;
   fp=fopen("E:/ramani/college-work/subjects/CP/numfile.txt","r");
   if(fp==NULL)
   {
      printf("error");
      exit(0);
   }
   fp1=fopen("E:/ramani/college-work/subjects/CP/even.txt","w");
   if(fp1==NULL)
   {
      printf("error");
      exit(0);
   }
   fp2=fopen("E:/ramani/college-work/subjects/CP/odd.txt","w");
   if(fp2==NULL)
   {
      printf("error");
      exit(0);
   }

   while(fscanf(fp,"%d",&a)!=EOF)
   {
         if (a%2==0)
                        fprintf(fp1,"%d ",a);
                else
                        fprintf(fp2,"%d ",a);
```

```
        }
    fclose(fp);
    fclose(fp1);
    fclose(fp2);
}
```

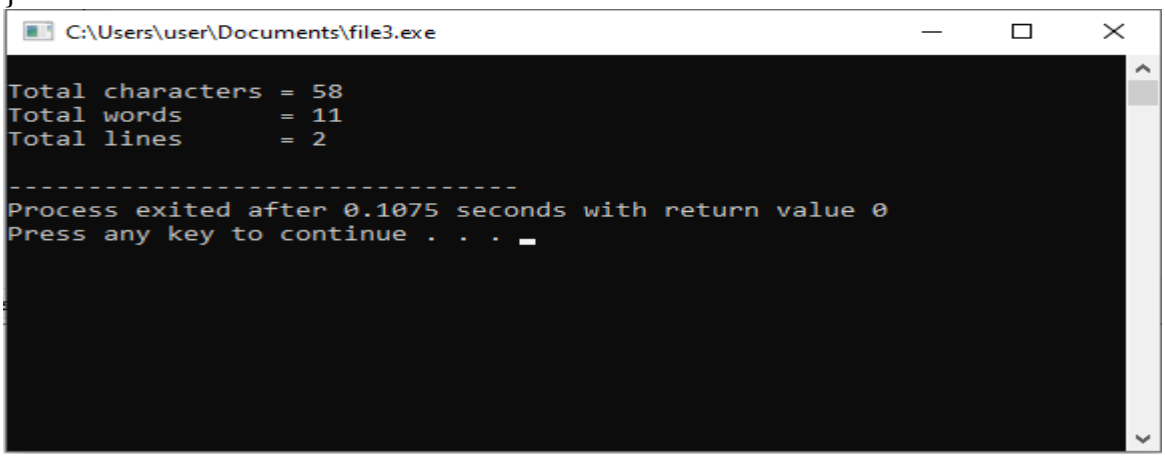


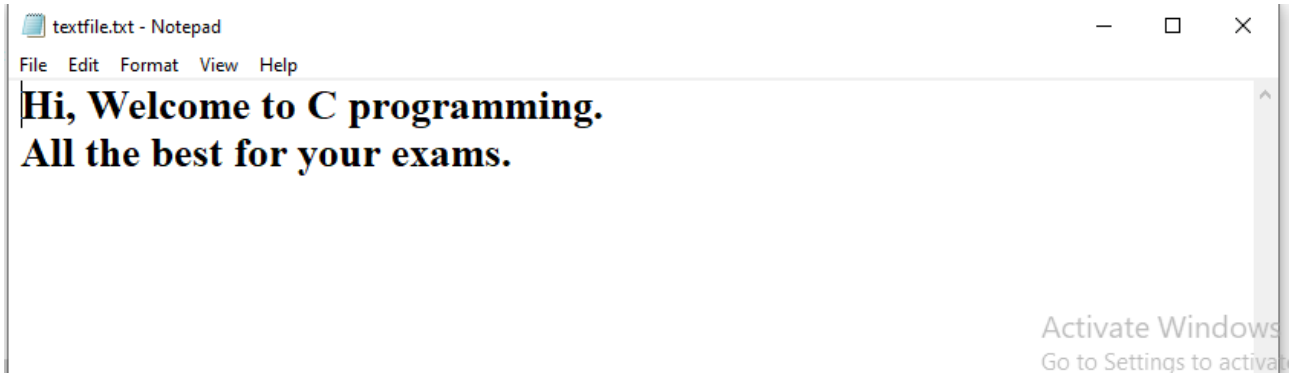


Count characters, words and lines in a text file.

```
#include<stdio.h>
#include<stdlib.h>
void main()
{
    FILE *fp;
    char ch;
        int characters=0,lines=0,words=0;
```

```
   fp=fopen("E:/ramani/college-work/subjects/CP/textfile.txt","r");
   if(fp==NULL)
   {
      printf("error");
      exit(0);
   }

   while((ch=fgetc(fp))!=EOF)
   {
         characters++;
                  /* Check new lines */
         if (ch == '\n' )//|| ch == '\0')
         {
                  lines++;
                  //characters++;
         }

      /* Check words */
      if (ch == ' ' || ch == '\t' || ch == '\n' )// || ch == '\0')
         {
                  words++;
                  //characters++;
         }
         }
         /* Increment words and lines for last word */
   if (characters > 0)
   {
      words++;
      lines++;
   }

   /* Print file statistics */
   printf("\n");
   printf("Total characters = %d\n", characters);
   printf("Total words      = %d\n", words);
   printf("Total lines      = %d\n", lines);

   fclose(fp);
}
```




textfile.txt - Notepad
File Edit Format View Help
Hi, Welcome to C programming.
All the best for your exams.
Activate Windows
Go to Settings to activate