INSTITUTE OF ENGINEERING
ADVANCED COLLEGE OF ENGINEERING & MANAGEMENT
KUPONDOLE, LATITPUR
(AFFILATED TO TRIBHUVAN UNIVERSITY)

LAB REPORT
LAB NO.: 10
SUBJECT: C PROGRAMMING

SUBMITTED BY:

NAME: ASHWANI KUMAR CHAUDHARY
ROLL NO.: 019
DATE: 2078

SUBMITTED TO:

DEPARTMENT OF COMPUTER & ELECTRONICS

Source Code

1. Write characters into a file "Filec.txt". The set of characters are read from the keyboard until an enter key is pressed (use put c() & get c() function.

```
#include <stdio.h>
#include <conio.h>
#include <process.h>
Void main ()
    {
      char ch;
      FILE *fp;
      fp= fopen ("C:\\Files\\files.txt:","w");
      if (fp==NULL)
      {
        printf ("Error");
        exit(1);
      }
      printf ("Enter any characters :");
      fflush (stdin)
      while ((ch = get char()) != '\n')
       {
         fputc(ch, fp);
       }
       fclose (fp);
      }.
```

2. WAP to write name, roll no. & age of 5 students into a disk file name "STUDENT.DAT"

```
# include <stdio.h>
# include <conio.h>
# include <process.h>
struct student
  {
    char name [20];
     int roll;
     int age;
  };
  void main()
   {
     struct student s[5];
     int i;
     FILE *fp;
      for (i=0; i<5; i++)
     {
       printf ("Enter name");
       fflush (stdin);
       gets (s[i].name);
       printf ("Enter rollno.");
        scanf ("%d", &s[i].roll);
        printf ("Enter age");
        scanf ("%d", &s[i].age);
     }
     fp = fopen ("C:\\files\\STUDENT.DAT", "w");
     if (fp==NULL)
     {  printf ("Error");
        exit(1);
     }
     fwrite (s,sizeof (s[0]), 5, fp);
     fscope(fp);
   }.
```

3. klAP to input & save record like name, roll, address & obtained marks of 48 students in a binary file & search & display the record of a student whose obtained marks is the highest. The information should be organized in a structure.

```
# include <stdio.h>
# include <conio.h>
# include < process.h>
Struct student
  {
    char name[50];
    int roll;
    char add[50];
    int mark;
  }
   void main()
   {
    struct student s[48], temp;
    int i,j;
     FILE *fp;
     printf ("Enter the data of students: \n");
     for (i=0; i<48; i++)
     {
       printf ("Enter Name");
       fflush (stdin);
        gets (s[i].name);
        printf("Enter Roll Number. ");
       scanf ("%d", &s[i].roll);
        printf ("Enter Address ");
       fflush (stdin);
       gets (s[i].add);
        printf ("Enter Marks Obtained:");
        scanf ("%d", & s[i].mark);
     }
     fp = fopen ("C:\\File\\data.txt", "wb");
```

```
if (fp==NULL)
{
  printf ("Error");
  exit (1);
 }
 printf (" writing to file \n");
 fwrite (s, size of (s[0]), 48, fp);
 fclose (fp);
 fp= fopen ("C:\\files\\data.txt", "rb");
  if (fp!=NULL)
    {
      printf ("Error");
      exit (1);
    }
    printf ("Reading file \n");
    fread (s, size of (s[0]), 48, fp);
    for (i=0; i<48-1; i++)
    {
       for (j=0; j<48-i-1; j++)
       { if (s[j].mark ) s[j+1].mark)
         {
           temp = s[j];
           s[j] = s[j+1];
           s[j+1] = temp;
         }
       }
    }

Printf ("Student with highest marks is: \n");
Printf ("Name  Roll  Adress  obtained marks \n");
printf ("%.s %.d %.s %.d", s[48-1].name, s[48-1].roll,
                           s[48-1].add, s[48-1].mark);

fclose (fp);
getch();
}
```

Output

```
Enter the data of students.
Enter name: Ram
Enter Roll Number: 23
Enter Address: ktm
Enter Marks Obtained : 88.

Enter name : shyamu.
Enter Roll number : 43
Enter Address : ktm
Enter Marks obtained : 86.

Writing to file
Reading file
Student with highest marks is:.

Name    Roll    Address    Obtained marks
Ram     23      ktm        88
shyamu  43      ktm        86.
```

4.

```
#include <stdio.h>
#include <conio.h>
#include <process.h>
#include <string.h>
struct author
{
  char name[20];
  char nation[20];
  int books;
};
void main();
{
 struct author as[20]; a2[20];
 char dec[5];
 int i=0; n;
 FILE *fp, *fptr;
 fp = fopen("C:\\file\\Authors.txt", "w");
 if(fp==NULL)
  {
   printf("Error");
   exit(1);
  }
 do
 {
  printf("Enter name");
  gets(as[i].name);
   printf("Enter nationality.");
   fflush(stdin);
   gets(as[i].nation);
   printf("Enter no. of books published.");
   scanf("%d", &a[i].books);
   i = i+1;
   printf("Type yes to continue or any key to stop");
```

```
    fflush (stdin);
    gets (dec);
  }
    while (strcmp (dec, "yes") == 0);
fwrite (as, size of (as[0]), i, fp);
fclose (fp);
printf ("Reading the file ---\n");
fptr = fopen ("C:\\files\\Authors.txt", "r");
if (fptr == NULL)
  {
    printf ("Error");
    exit (1);
  }
printf ("Enter the number of record");
scanf ("%d", &n);
fread (a2, size of (a2[0]), i, fptr);
printf ("The information of %d th record is:\n", n);
printf ("Name  Nationality  No. of books published\n");
printf ("%s %s %d", a2[n-1].name, a2[n-1].nation,
                    a2[n-1].books);

fclose (fptr);
getch();
}
```

Discussion & Conclusion

In todays lab we learnt about data file & file handling in C programming. We used c-programming to create & store data permanently in the disk. similarly we were able to access the file present in the disk & were able to read the desired record. In a nutshell we learnt to create a file, write data inside it & also read data from it using c-programming.