Conversion using function: Binary to Decimal, Decimal to 17 Binary, Binary to Hexadecimal, Hexadecimal to Binary

```
// Binary <--> Decimal || Hex <-->  Decimal CONVERSION
#include<stdio.h>
#include<math.h>

//Function Decleration
int bintodec(int b);
void dectobin(int d);
void bintohex(int n);
long int  hextobin(char hex[]);

//Main Function
main()
{
  int ch,e,n,b,d;
  char c,hex[20];
 do
   {
      printf("\n\t\tConversion Program\nMenu:\n\n\n1.Binary to
         decimal\n2.Decimal to binary\n3.Binary to
         Hexadecimal\n4.Hexadecimal to Binary\n5.Exit\nEnter
         your option:  ");
      scanf("%d",&ch);
      switch(ch)
  {
  case 1:
          printf("\nEnter a binary number:");
          scanf("%d",&b);
    e=bintodec(b);
    printf("\nThe decimal number is : %d\n",e);
          break;
        case 2:
          printf("\nEnter the decimal value of the number: ");
          scanf("%d",&d);

          dectobin(d);
          break;
  case 3:
    printf("\nEnter a binary number :");
    scanf("%d",&n);
    bintohex(n);
          break;
       case 4:
    printf("\nEnter  a hexadecimal number :");
```

```
    scanf("%s",hex);
    printf("\nThe binary is : %ld\n",hextobin(hex));
    break;
  case 5:
          printf("\nExiting!!!");
    exit(0);
        default:
          printf("\nInvalid Choice!!!");
  }
      printf("\nDo you wish to continue...?(y/n)");
      scanf("%s",&c);
    }while(c=='y');
}


void bintohex(int n)
{
  int i,l,d,r,j;
  char temp[20],hex[20];
  d=bintodec(n);
  for(i=0;d>0;i++)
    {
      r=d%16;
      if(r>9)
  {
      switch(r)
  {
  case 10:
    hex[i]='A';
    break;
  case 11:
    hex[i]='B';
    break;
  case 12:
    hex[i]='C';
    break;
  case 13:
    hex[i]='D';
    break;
  case 14:
    hex[i]='E';
    break;
  case 15:
    hex[i]='F';
    break;
  }
  }
      else
```

```
    hex[i]=r+48;
        d=d/16;
      }
    hex[i]='\0';
    l=i-1;
    for(j=0;j<i;j++,l--)
      {
        temp[j]=hex[l];
      }
    temp[j]='\0';
    printf("\nThe hexadecimal number is : %s\n",temp);
}




long int hextobin(char hex[20])
{
    long int i,l,d=0,b=0;
    for(l=0;hex[l]!='\0';l++);
    l=l-1;
    for(i=0;l>=0;i++,l--)
      {
        if(hex[l]>='0' && hex[l]<='9')
    d=d+(hex[l]-'0')*(pow(16,i));
        if(hex[l]>='A' && hex[l]<='F')
    d=d+(hex[l]-55)*(pow(16,i));
        if(hex[l]>='a' && hex[l]<='f')
    d=d+(hex[l]-87)*(pow(16,i));
      }

    i=1;
    while(d>0)
      {
        b=b+(d%2)*i;
        d=d/2;
        i=i*10;
      }
    return b;

}



int bintodec(int b)
{
    int rem,sum=0,power=0;
```

```
  while(b>0)
    {
      rem=b%10;
      sum=sum+rem*pow(2,power);
      power++;
      b=b/10;
    }
  return sum;
}




void dectobin(int d)
{
  int count=0,i,rev=0,rem,quo,rev1=0;
  for(;d>0;)
    {
      rem=d%2;
      rev=(rev*10)+rem;
      if(rev==0)
  count++;
      d=d/2;
    }

  for(;rev>0;)
    {
      rem=rev%10;
      rev1=(rev1*10)+rem;
      rev=rev/10;
    }
  printf("\nThe binary number is:");
  printf("%d",rev1);

 for(i=0;i<count;i++)
    printf("0");
  printf("\n");
}
```

Output

```
Conversion Program
Menu:


1.Binary to decimal
2.Decimal to binary
3.Binary to Hexadecimal
4.Hexadecimal to Binary
```

```
5.Exit
Enter your option:  1

Enter a binary number:100

The decimal number is : 4

Do you wish to continue...?(y/n)y

    Conversion Program
Menu:


1.Binary to decimal
2.Decimal to binary
3.Binary to Hexadecimal
4.Hexadecimal to Binary
5.Exit
Enter your option:  2

Enter the decimal value of the number: 6

The binary number is:110

Do you wish to continue...?(y/n)y

    Conversion Program
Menu:


1.Binary to decimal
2.Decimal to binary
3.Binary to Hexadecimal
4.Hexadecimal to Binary
5.Exit
Enter your option:  3

Enter a binary number :1111

The hexadecimal number is : F

Do you wish to continue...?(y/n)n
```

Evaluate Taylor Series expansion ex , sin(x),cos(x) using recursion

```
//Program to Evaluate Taylor Series Expansion e(x),sinx,cosx
   using Recursion
#include<stdio.h>
#include<math.h>
void e();
void sin1();
void cos1();
int fact(int );
main()
{
 int m;
 char ch='y';
 do
   {
 printf("\n\tProgram to Evaluate Taylor Series Expansion
    e(x),sinx,cosx using Recursion");
 printf("\n\nMenu:");
 printf("\nFind taylor series expansion
    of\n1.e(x)\n2.sinx\n3.cosx\n4.exit\nEnter a Choice: ");
 scanf("%d",&m);
 switch(m)
       {
       case 1:e();
              break;
       case 2:sin1();
         break;
       case 3:cos1();
         break;
       case 4:exit(0);
         break;
       }
 printf("\nDo you wish to continue (y/n)?: ");
 scanf("%s",&ch);
   }while(ch=='y');
}
void e()
{
  float i;
  float x,n,s=1.0;
  printf("\nenter the value for x,n");
  scanf("%f%f",&x,&n);
  for(i=1;i<n;i++)
  {
    s=s+(pow(-1,i)*(pow(x,i)/fact(i)));
```

```
  }
  printf("\nthe sum of series is %f",s);
}
void sin1()
{
  float s=0.0,x,f=1,n,r=1;
  int i;
  printf("enter the values for x,n\n");
  scanf("%f%f",&x,&n);
  x=(x*3.14)/180;
  for(i=1;i<=n;i++)
    {
      s=s+(f*(pow(x,r))/fact(r));
      r=r+2;
      f=f*-1;

    }
  printf("the sum is %f\n",s);
}
void cos1()
{
  float i,x,n,s=1,f,j;
  float sum=0,t;

  printf("enter the values for x,n");
  scanf("%f%f",&x,&n);
  x=(x*3.14)/180;
  for(i=0,j=0;j<n;j++,i=i+2)
    {
      f=fact(i);
      t=pow(x,i)/f;
      sum=sum+(t*s);
      s=s*(-1);
    }
  printf("the sum is %f\n",sum);
}
int fact(int n)
{
  if(n==1||n==0)
    return 1;
  else
    return n*(fact(n-1));
}
```

Output

```
Program to Evaluate Taylor Series Expansion e(x),sinx,cosx
   using Recursion
```

```
Menu:
Find taylor series expansion of
1.e(x)
2.sinx
3.cosx
4.exit
Enter a Choice: 1

enter the value for x,n 2 3

the sum of series is 1.000000
Do you wish to continue (y/n)?: y

  Program to Evaluate Taylor Series Expansion e(x),sinx,cosx
     using Recursion

Menu:
Find taylor series expansion of
1.e(x)
2.sinx
3.cosx
4.exit
Enter a Choice: 2
enter the values for x,n
9 8
the sum is 0.156356

Do you wish to continue (y/n)?: y

  Program to Evaluate Taylor Series Expansion e(x),sinx,cosx
     using Recursion

Menu:
Find taylor series expansion of
1.e(x)
2.sinx
3.cosx
4.exit
Enter a Choice: 3
enter the values for x,n7 9
the sum is 0.992554

Do you wish to continue (y/n)?: n
```

To find transpose of Matrix using pointers and functions

```
//Transpose of a matrix using pointers and functions

#include<stdio.h>
#include<stdlib.h>
void matranspose(int *a,int *m,int *n);
main()
{
  int *a,*m,*n,i,j,*b;
  m=(int*)malloc(sizeof(int));
  n=(int*)malloc(sizeof(int));
  a=(int*)malloc(sizeof(int)*(*m)*(*n));
  b=(int*)malloc(sizeof(int)*(*m)*(*n));
  printf("\nEnter the row and column index\n");
  scanf("%d%d",m,n);
  printf("\nEnter the elements in the matrix\n");
  for(i=0;i<*m;i++)
    for(j=0;j<*n;j++)
      scanf("%d",(a+(i*(*n))+j));
  printf("\nThe entered matrix is\n");
  for(i=0;i<*m;i++)
    {
      for(j=0;j<*n;j++)
          printf(" %d",*(a+(i*(*n))+j));
    printf("\n");
    }
  printf("\nthe Transpose Matrix is\n");
  matranspose(a,m,n);
}


void matranspose(int *a,int *m,int *n)
{

  int *b,i,j;
  b=(int*)malloc(sizeof(int)*(*m)*(*n));
  for(i=0;i<*m;i++)
    {
      for(j=0;j<*n;j++)
  {
    *(b+(j*(*m))+i)=*(a+(i*(*n))+j);
  }
    }

  for(i=0;i<*n;i++)
```

```
    {
      for(j=0;j<*m;j++)
        printf(" %d ",*(b+(i*(*m)+j)));
      printf("\n");
    }
}
```

Output

```
Enter the row and column index
3 3

Enter the elements in the matrix
1 1 1 2 2 2 3 3 3

The entered matrix is
 1 1 1
 2 2 2
 3 3 3

the Transpose Matrix is
 1  2  3
 1  2  3
 1  2  3
```

Menu driven program for Palindrome checking, String Concatenation, Replace a Substring

```
//Menu driven program for Palindrome checking,String
   concatenation and to Replace a Substring.

#include<stdio.h>
void palindrome(char str[25]);
void concat(char str[25]);
void replace(char str[25]);
int search(char src[25],char str[25]);
char str[25];
main()
{
  int op;
  char ch;
  printf("Enter a string:");

  gets(str);
  do
    {
      printf("MENU\n=====\n1.Palindrome checking\n2.String
         concatenation\n3.Replace a substring\n4.Exit");
      printf("\nEnter your choice:");
      scanf("%d",&op);
      switch(op)
  {
  case 1:palindrome(str);
    break;
  case 2:concat(str);
    break;
  case 3:replace(str);
    break;
  case 4:printf("Exiting program!!");
    break;
  default:printf("Invalid choice!!!");
  }
      printf("Do you want to continue(y/n)??");
      scanf("%s",&ch);
    }while(ch=='y');
}

//Function to check whether a string is palindrome.
void palindrome(char str[25])
{
  char b[25];
  int i=0,j,len,flag=0;
```

```
  while(str[i]!='\0')
    i++;
  len=i;
  j=len-1;
  i=0;
  while(str[i]!='\0')
    {
      b[i]=str[j];
      i++;
      j--;
    }
  b[len]='\0';
  for(i=0;i<len;i++)
    {
      if(str[i]!=b[i])
  {
    printf("Given string is not a palindrome.\n");
    flag++;
    break;
  }
    }
  if(flag==0)
    printf("Given string is a palindrome.\n");
}

//Function to Concatenate two strings.

void concat(char str[25])
{
  char b[25];
  int i=0,j,len;
  printf("Enter the second string:");
  scanf("%s",b);
  while(str[i]!='\0')
    i++;
  len=i;
  for(j=len,i=0;b[i]!='\0';j++,i++)
    str[j]=b[i];
  str[j]='\0';
  printf("Concatenated string:");
  puts(str);
}

//Function to Replace a substring.
void replace(char str[25])
{
  char sub[25],temp[25];
  int i=0,tlen,nlen,j,rep,len;
```

```
  printf("Enter a substring:");
  scanf("%s",sub);
  while(sub[i]!='\0')
    i++;
  len=i;
  rep=search(str,sub);
  printf("Position is %d\n",rep+1);
  for(j=0;str[rep+j]!='\0';j++)
    temp[j]=str[rep+j+len];
  tlen=j;
  printf("Enter the string to replace:");
  scanf("%s",sub);
  i = 0;
  while(sub[i]!='\0')
    i++;
  nlen=i;
  for(j=0,i=rep;j<nlen;i++,j++)
    str[i]=sub[j];
  for(j=0,i=rep+nlen;j<(rep+tlen+nlen);i++,j++)
    str[i]=temp[j];
  puts(str);
}

int search(char src[25],char str[25])
{
  int i=0,j=0,found;
  while(src[i]!='\0')
    {
      while((src[i]!='\0') && (src[i]!=str[0]))
  {
    i++;
  }
      found=i;
      if(src[i]==str[0])
  while((src[i]==str[j]) && (src[i]!='\0') && (str[j]!='\0'))
    {
      i++;
      j++;
    }
      if(str[j]=='\0')
  {
    return found;
  }
      if(src[i]=='\0')
  return -1;
      found++;
      j=0;
    }
```

```
}
```

Output

```
Enter a string:malayalam
MENU
=====
1.Palindrome checking
2.String concatenation
3.Replace a substring
4.Exit
Enter your choice:1
Given string is a palindrome.
Do you want to continue(y/n)??y
MENU
=====
1.Palindrome checking
2.String concatenation
3.Replace a substring
4.Exit
Enter your choice:2
Enter the second string:malayalamkerala
Concatenated string:malayalammalayalamkerala
Do you want to continue(y/n)??y
MENU
=====
1.Palindrome checking
2.String concatenation
3.Replace a substring
4.Exit
Enter your choice:3
Enter a substring:malayalamkerala
Position is 10
Enter the string to replace:india
malayalamindia
Do you want to continue(y/n)??n
```

Sort a list of names using pointers

```
//Program to sort a list of strings.
#include<stdio.h>
#include<stdlib.h>
void copy(char *str,char *b);
void sort(char **a,int n);
int compare (char *str1,char *str2);
void swap(char *a,char *b);
int length(char str[20]);
main()
{
  char name[20],*ptr[10];
  int i,n,len;
  printf("Enter the number of strings:");
  scanf("%d",&n);
  for(i=0;i<n;i++)
    {
      printf("Enter name:");
      scanf("%s",name);
      len=length(name);
      *(ptr+i)=(char*)malloc(sizeof(char)*len);
      copy(name,*(ptr+i));
    }
  sort(ptr,n);
  printf("Sorted list of strings is as follows:\n");
  for(i=0;i<n;i++)
    {
      printf("%s\n",*(ptr+i));
    }
}
//Function to copy.
void copy(char *str,char *b)
{
  int i;
  for(i=0;*(str+i)!='\0';i++)
    *(b+i)=*(str+i);
  *(b+i)='\0';
}

//Function to sort the array.
void sort(char **str,int n)
{
  int i,j;
  for(i=0;i<n;i++)
    for(j=0;j<n-i-1;j++)
      {
  if(compare((*(str+j)),(*(str+j+1)))==1)
```

```
      swap(*(str+j),*(str+j+1));
       }
}
//Function to compare to strings.
int compare (char *str1,char *str2)
{
  int i=0;
  while(*(str1+i)!='\0' && *(str2+i)!='\0')
    {
      if((*(str1+i))==(*(str2+i)))
  i++;
      else if((*(str1+i))>(*(str2+i)))
  return 1;
      else
  return 0;
    }
}
//Function to swap to strings.
void swap(char *a,char *b)
{
  char temp[20];

  copy(a,temp);                    //swapping value of variables
  copy(b,a);
  copy(temp,b);
}
//Function to find length of a string.
int length(char str[20])
{
  int i=0;
  while(*(str+i)!='\0')
    i++;
  return i;
}
```

Output

```
Enter the number of strings:5
Enter name:Suzuki
Enter name:Hyundai
Enter name:Mitsubushi
Enter name:Honda
Enter name:Chevorlet
Sorted list of strings is as follows:
Chevorlet
Honda
Hyundai
Mitsubushi
Suzuki
```

Menu driven program to: Add a student record,Delete a student record, Prepare a ranklist of student records

```
//Program to Store Marklist of Students
#include<stdio.h>
struct student
{
     int roll,m[5];
     char name[15];
     float total;
}s[30];
void add(int,int);
int del(int,int);
void rank(int,int);
main()
{
        int i=0,k,z=0,n,j,t;
  char c='y';
        printf("Enter the value of n \n");
        scanf("%d",&n);
  printf("Enter the number of subjects\t");
    scanf("%d",&t);
        printf("Enter the student details \n");
        for(i=0;i<n;i++)
    {
    s[i].total=0;
          printf("Enter roll no: ");
            scanf("%d",&s[i].roll);
      printf("Enter name: ");
      __fpurge(stdin);
      gets(s[i].name);
    printf("Enter marks of %d subjects: ",t);
      for(j=0;j<t;++j)
        {
            scanf("%d",&s[i].m[j]);
            s[i].total=s[i].total+s[i].m[j];
        }
      }
  do
  {
  int n,j;
        printf("\n\t\t\tMENU\n");
        printf("\n\t1.Add record\n\t2.Delete
           record\n\t3.Display ranklist\n");
        printf("\nEnter your choice: ");
        scanf("%d",&n);
        switch(n)
```

```
        {
            case 1:add(i,t);i++;break;
            case 2:z=del(i,t);if(z==1)i--;break;
            case 3:k=i;rank(k,t);break;
     default:printf("Invalid selection\n");
         }
  }while(c=='y');
}

void add(int i,int t)
{
     int j;
     s[i].total=0;
     printf("Enter roll no: ");
     scanf("%d",&s[i].roll);
     printf("Enter name: ");
     __fpurge(stdin);
     gets(s[i].name);
     printf("Enter marks of %d subjects: ",t);
     for(j=0;j<t;++j)
     {
          scanf("%d",&s[i].m[j]);
          s[i].total+=s[i].m[j];
     }
     printf("Roll no :%d  Name:%s  Total
        mark:%f",s[i].roll,s[i].name,s[i].total);
}


 void rank(int k,int t)
 {
     int i,j;
     struct student temp;
     for(i=0;i<=k-2;++i)
           for(j=0;j<k-i-1;++j)
                if(s[j].total<s[j+1].total)
          {
            temp=s[j+1];
            s[j+1]=s[j];
            s[j]=temp;
          }
      printf("\nRank Roll no  Name                    Total\n");
      for(i=0;i<k;++i)
      printf("%d    %d        %-12s
         %f\n",i+1,s[i].roll,s[i].name,s[i].total);
 }
```

```
int del(int k,int t)
{
  if(k==0)
    printf("\nEmpty");
else
  {
    int i,j,rolln,f=0;
    printf("Enter the roll no of the record to be deleted :");
    scanf("%d",&rolln);
    for(i=0;i<k;++i)
    {
        if(s[i].roll==rolln)
        {
           for(j=i;j<k;++j)
           s[j]=s[j+1];
           f=1;
        }
    }

  if(f!=1)
    printf("\nRecord not found");
  else
    return 1;
  }
}
```

Output

```
Enter the student details
Enter roll no: 1001
Enter name: Akshay
Enter the number of subjects  3
Enter marks of 3 subjects: 99 66 88
Enter roll no: 1002
Enter name: Jyothi
Enter the number of subjects  3
Enter marks of 3 subjects: 55 66 89
Enter roll no: 1003
Enter name: Raj
Enter the number of subjects  3
Enter marks of 3 subjects: 66 89 90
Enter roll no: 1004
Enter name: Jyothi
Enter the number of subjects  3
Enter marks of 3 subjects: 55 56 89

       MENU
```

```
  1.Add record
  2.Delete record
  3.Display ranklist

Enter your choice: 3

Rank Roll no  Name                    Total
1    1001        Akshay                    253.000000
2    1003        Raj                       245.000000
3    1002        Jyothi                    210.000000
4    1004        Jyothi                    200.000000

      MENU

  1.Add record
  2.Delete record
  3.Display ranklist

Enter your choice: 1
Enter roll no: 1005
Enter name: Arun
Enter marks of 3 subjects: 3
99 98 97
Roll no :1005  Name:Arun  Total mark:200.000000
      MENU

  1.Add record
  2.Delete record
  3.Display ranklist

Enter your choice: Invalid selection

      MENU

  1.Add record
  2.Delete record
  3.Display ranklist

Enter your choice: 3

Rank Roll no  Name                    Total
1    1001        Akshay                    253.000000
2    1003        Raj                       245.000000
3    1002        Jyothi                    210.000000
4    1004        Jyothi                    200.000000
5    1005        Arun                      200.000000

      MENU
```

```
1.Add record
2.Delete record
3.Display ranklist
```

To find the palindrome words in a file and store it in another file

```
//To find the palindrome words in a file and store it in
   another file

#include<stdio.h>
int pal(char []);
main()
{
  char a[30],c;
  int i,f;
  FILE *ptr,*ptr1;
  ptr= fopen("new","r");
  if(ptr==NULL)
  {
    printf("Cannot open source file\n");
    exit(0);
  }
  ptr1=fopen("palin.txt","w");
  if(ptr1==NULL)
  {
    printf("Cannot open destination file\n");
    exit(0);
  }
  while(1)
  {
    c=fgetc(ptr);
    for(i=0;c!=EOF && (c>='a'&& c<='z') || (c>='A' &&
       c<='Z');i++)
    {
     a[i]=c;
     c=fgetc(ptr);
    }
    a[i]='\0';
    if(strlen(a)>1)
    {
    f=pal(a);
    if(f==0)
    {fputs(a,ptr1);
    fputc(' ',ptr1);}
    }
          if(c==EOF)
    break;
  }
  fclose(ptr);
  fclose(ptr1);
```

```
}
int pal(char a[])
{
  int i,l,j,f=0;
  char b[40];
  for(i=0;a[i]!='\0';i++);
  l=i;
  j=l-1;i=0;
        while(j>=0 && i<l)
        {
                b[j]=a[i];
    j--;
    i++;
  }
  b[i]='\0';
        puts(b);
  i=0;f=0;
  while(b[i]!='\0')
  {
    if(a[i]!=b[i])
    f=1;
    i++;
  }
  return f;
}
```

Output

```
Contents in new
malayalam and are eye palindrome
Contents in palin.txt
malayalam eye
```

MENU DRIVEN PROGRAM TO ADD DELETE AND MODIFY THE DETAILS OF A BOOK USING FILES

```
//Menu driven program to add,delete and modify the details of a
   book using files
#include<stdio.h>
#include<stdlib.h>
struct book
{
  int bookno;
  char name[30];
  char author[30];
  float cost;
}s;
void add();
void delete();
void modify();
void display();
main()
{
        int n;
  char c;
  do
  {
  printf("Enter your choice\n");
  printf("\n\t\tMENU\n\t\t====\n");
  printf("\t1.Add a book \n\t2.Delete a book \n\t3.Modify a
     book\n\t4.Display Details\n\tEnter Choice: ");
  scanf("%d",&n);
  switch(n)
    {
    case 1:add();break;
    case 2:delete();break;
    case 3:modify();break;
    case 4:display();break;
    default:printf("Invalid choice\n");
    }
  printf("\nDo you want to continue(y/n): ");
        __fpurge(stdin);
        scanf("%c",&c);
  }while(c=='y'||c=='Y');
}
void add()
{
  int n;
  FILE *ptr;
  ptr=fopen("books.txt","a+");
```

```
  if(ptr==NULL)
    {
      printf("Cannot open source file\n");
      exit(0);
    }
  printf("Enter the book number : ");
  scanf("%d",&s.bookno);
  printf("Enter the book name : ");
  __fpurge(stdin);
  gets(s.name);
  printf("Enter the name of author : ");
  __fpurge(stdin);
  gets(s.author);
  printf("Enter the cost : ");
  scanf("%f",&s.cost);
  fprintf(ptr," %d %s %s %f",s.bookno,s.name,s.author,s.cost);
  fclose(ptr);
}
void delete()
{
  int a;char c;
  FILE *ptr,*ptr1;
  ptr=fopen("books.txt","r");
  if(ptr==NULL)
    {
      printf("Cannot open source file\n");
      exit(0);
    }
  ptr1 = fopen("temp.txt","w+");
  if(ptr1==NULL)
  {
    printf("Cannot open destination file\n");
    exit(0);
  }
  printf("Enter the book number to be deleted : ");
  scanf("%d",&a);
  fscanf(ptr,"%d %s %s %f",&s.bookno,s.name,s.author,&s.cost);
  while(1)
    {
      if(s.bookno==a)
        {
    printf("Deleted Line: %d %s %s %f
       \n",s.bookno,s.name,s.author,s.cost);
        }
  else
    {
      fprintf(ptr1," %d %s %s
        %f",s.bookno,s.name,s.author,s.cost);
```

```
    }
      if(feof(ptr))
        break;
      fscanf(ptr,"%d %s %s
        %f",&s.bookno,s.name,s.author,&s.cost);
    }
  fclose(ptr);
  fclose(ptr1);
  remove("books.txt");
  rename("temp.txt","books.txt");
}
void modify()
{
  int a;
  FILE *ptr,*ptr1;
  ptr=fopen("books.txt","r+");
  if(ptr==NULL)
    {
    printf("Cannot open source file\n");
    exit(0);
    }
  ptr1=fopen("temp.txt","w");
  if(ptr1==NULL)
    {
      printf("Cannot open destination file\n");
      exit(0);
    }
  printf("Enter the book number to be modified : ");
  scanf("%d",&a);
  while(1)
    {
      if(feof(ptr))
  break;
      fscanf(ptr,"%d %s %s
        %f",&s.bookno,s.name,s.author,&s.cost);
      if(s.bookno!=a)
    {
      fprintf(ptr1," %d %s %s
        %f",s.bookno,s.name,s.author,s.cost);
    }
      else
  {
    printf("Enter the book name : ");
    __fpurge(stdin);
    gets(s.name);
    printf("Enter the name of author : ");
    gets(s.author);
    printf("Enter the cost : ");
```

```
    scanf("%f",&s.cost);
    fprintf(ptr1," %d %s %s
      %f",s.bookno,s.name,s.author,s.cost);
  }

    }
  fclose(ptr);
  fclose(ptr1);
  remove("books.txt");
  rename("temp.txt","books.txt");

}

void display()
{
  FILE *ptr;
  char g;
  ptr=fopen("books.txt","r");
  if(ptr==NULL)
    {
      printf("Cannot open source file\n");
      exit(0);
    }
  while((g=fgetc(ptr))!=EOF)
    printf("%c",g);
}
```

Output

```
Enter your choice

    MENU
    ====
  1.Add a book
  2.Delete a book
  3.Modify a book
  4.Display Details
  Enter Choice: 1
Enter the book number : 100
Enter the book name : C Programming
Enter the name of author : Balaguruswamy
Enter the cost : 200

Do you want to continue(y/n): y
Enter your choice

    MENU
    ====
  1.Add a book
```

```
  2.Delete a book
  3.Modify a book
  4.Display Details
  Enter Choice: 1
Enter the book number : 101
Enter the book name : C Programming edition 2
Enter the name of author : Ashok N kamthane
Enter the cost : 400

Do you want to continue(y/n): y
Enter your choice

    MENU
    ====
  1.Add a book
  2.Delete a book
  3.Modify a book
  4.Display Details
  Enter Choice: 4
 100 C Programming Balaguruswamy 200.000000 101 C Programming
    edition 2 Ashok N kamthane 400.000000
Do you want to continue(y/n): n
```