```cpp
// Prog 01
// Reading a data file
#include<conio.h>
#include<fstream.h>

void main()
{
  clrscr();

  char name[30];
  int marks;
  ifstream fin("c:\\data\\student.dat");
  fin>>name;
  fin >>marks;
  cout <<"Name:"<<name<<endl;
  cout <<"Marks secured:"<<marks<<endl;
  getch();
}
```

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```cpp
// Prog 02
// Reading and writting with file
#include<conio.h>
#include<fstream.h>

void main()
{
  clrscr();
  char name[30];
```

```cpp
    int marks;

    ofstream
fout("c:\\data\\student.dat");

    cout <<"Enter Name:";
    cin >>name;

    cout <<"Enter Marks secured:";
    cin >>marks;

    fout <<name<<endl;
    fout<<marks;

    fout.close();

    ifstream fin("c:\\data\\student.dat");
    fin >>name;
    fin >>marks;

    cout <<"name:"<<name<<endl;
    cout <<"marks:"<<marks<<endl;

    fin.close();
    getch();
    }
```

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```cpp
// Prog 03
// Reading writting functions
#include<conio.h>
#include<iostream.h>
#include<fstream.h>

void student_write(int count)
{
  char name[30];
  int i,marks;

  ofstream  fout;
  fout.open("c:\\data\\student.dat");
  if(!fout)
  {
    cout <<"error: file cant be
created:";
    return ;
  }

  for(i=0;i<count;i++)
  {
    cout <<"enter name:";
    cin >>name;
    cout <<"enter marks:";
    cin >>marks;

    fout <<name <<endl;
    fout <<marks <<endl;
  }
  fout.close();
```

```cpp
}

void student_read()
{
    char name[30];
    int i,marks;

    ifstream fin;
    fin.open("c:\\data\\student.dat");

    if(!fin)
    {
        cout <<"Error file cant be opened:"<<endl;
        return;
    }
    while(1)
    {
        fin >>name;
        fin >>marks;

        if (fin.eof())
    break;
        cout <<"name:" <<name<<endl;
        cout <<"Marks secured:"<<marks<<endl;
    }
    fin.close();
}
```

```cpp
  void main()
  {
    clrscr();
    int count;

    cout <<"How many students:";
    cin >>count;
    cout <<"enter  student details to
be stored:"<<endl;
    student_write(count);
    cout<<"student details processed
from the file..."<<endl;
    student_read();
    getch();
  }
```

// Prog 04
//copying contents from one file to
another
#include<fstream.h>
#include<conio.h>

```cpp
int main()
{
    ofstream outfile;
    ifstream infile;

    infile.open("c:\\data\\poem");
```

```cpp
    if (infile.fail())
    {
      cout <<"cant open file";
      getch();
      return 1;
    }
    outfile.open("c:\\data\\poem1");
    if (outfile.fail())
        {
      cout <<"cant create file";
      getch();
      return (1);
        }

      while(!infile.eof())
      {
    ch=(char)infile.get();
    outfile.put(ch);
        }
      infile.close();
      outfile.close();
}
```

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```cpp
// Prog 05
//deletion of white spaces,new line
from text file

#include<fstream.h>
```

```cpp
#include<conio.h>

int main()
{
    ofstream outfile;
    ifstream infile;

    infile.open("c:\\data\\poem.txt");

    if (infile.fail())
    {
      cout <<"cant open file";
      getch();
      return 1;
    }
    outfile.open("c:\\data\\poem2");
    if (outfile.fail())
        {
      cout <<"cant create file";
      getch();
      return (1);
        }
      char ch;
      ch=(char)infile.get();

      while(!infile.eof())
      {
    if(!(ch== ' '||ch=='\t' ||ch=='\n'))
        outfile.put(ch);
    ch=(char)infile.get();
      }
```

```cpp
        infile.close();
        outfile.close();
}



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// Prog 06
//writing the contents in uppercase to
a file

#include<fstream.h>
#include<conio.h>
#include<ctype.h>

int main()
{
    ofstream outfile;
    ifstream infile;

    infile.open("c:\\data\\poem.txt");

    if (infile.fail())
    {
      cout <<"cant open file";
      getch();
      return 1;
    }
    outfile.open("c:\\data\\poem3");
    if (outfile.fail())
        {
```

```cpp
        cout <<"cant create file";
        getch();
        return (1);
          }

          char ch;
          ch=(char)infile.get();

          while(!infile.eof())
          {
            ch=toupper(ch);   if ((ch>='a')
&& (ch<='z'))
    ch-=' ';
            outfile.put(ch);
            ch=(char)infile.get();
        }
          infile.close();
          outfile.close();
}
```

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```cpp
// Prog 07
// File opening modes.  Use of seekg().
Writting ascii data to the file
#include<fstream.h>
#include<conio.h>

void main()
{
   fstream finout;
```

```cpp
    finout.open
("C:\\data\\marks",ios::out|ios::in);

    clrscr();

    for(int i=65;i<=90;i++)
    {
        finout.put(i);
    }

    finout.seekg(0);

    for(i=65;i<=90;i++)
    {
            cout <<"     "<<i<<" = ";
        char ch = (char) finout.get();
            cout<<ch;
    }
     finout.close();
     getch();
}
```

// Prog 08
// Binary read and write

```cpp
#include<fstream.h>
#include<iomanip.h>
#include<conio.h>
```

```cpp
int const max=200;

class student_info
{
  protected:
      char name[20];
      int age;
      char sex;
      float height;
      float weight;

  public:
      void getdata();
      void display();
};

void student_info::getdata()
{
  cout <<" name ";
  cin >>name;

  cout <<" age ";
  cin >>age;

  cout <<" sex ";
  cin >>sex;

  cout <<" height ";
  cin >>height;

  cout <<" weight ";
```

```cpp
    cin >>weight;
}


void student_info::display()
{
    cout
<<name<<setw(5)<<age<<setw(10)<<sex<<se
tw(5)<<height <<setw(5)<<weight<<endl;
}


void main()
{
  clrscr();
  student_info obj[max];
  fstream infile;
  char fname[10];

  int i,n;
  cout<<endl<<"Enter filepath and
name");
  cin>>fname;

  infile.open
(fname,ios::in|ios::out);

  cout <<"How many objects are to be
stored:";
  cin >>n;
```

```cpp
    cout <<"Enter the following
information:";
    for(i=0;i<n;++i)
    {
       cout<<endl;
       cout <<"Object = "<<i+1<<endl;
       obj[i].getdata();
    }

    //infile.open(fname,ios::out);
    cout <<" storing  data in file ";

    for(i=0;i<n;i++)
    {infile.write((char*)
&obj[i],sizeof(obj[i]));
    }
    //infile.close();

    //infile.open(fname,ios::in);
     Infile.seekg(0);
    cout <<"reading from the file....";
    for(i=0;i<n;++i)
    {
       infile.read((char *)
&obj[i],sizeof(obj[i]));
       obj[i].display();
    }
infile.close();
getch();
}
```

```cpp
// Prog 09
// Appending a data file
#include<fstream.h>
#include<conio.h>

class student
{
    int rollno;
    char name[40];
    char grade;
    float marks;
    public:
    void getdata();
    void display();
};

void student::getdata()
{
  cout <<"enter roll no:";
  cin >>rollno;
  char ch;
  cin.get(ch);

  cout <<"enter name:";
  cin.getline(name,40);


  cout <<"enter marks:";
  cin >>marks;
```

```cpp
   cin.get(ch);

   if(marks>75)
       grade='A';
       else if (marks>=60)
         grade='B';
         else if (marks>=50)
         grade='C';
         else grade='F';
}

void student::display()
{
cout <<"roll no"<<rollno<<"name:"<<name
<<"grade:"<<grade<<"marks:"<<marks<<end
l;
}

void main()
{
   clrscr();
   student s;
   fstream
f("c:\\data\\stu.txt",ios::app|ios::in);
   char ans='y';
   while(ans=='y')
   {
       s.getdata();
       f.write((char *) &s,sizeof(s));

       cout <<"record added:"<<endl;
```

```cpp
            cout <<"add more records:";
            cin >>ans;


    }
    f.seekg(0);
    while(!f.eof())
    {
        f.read((char *)&s,sizeof(s));
        s.display();
    }
    getch();
    f.close();
}
```

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```cpp
// Prog 10
//searching for data in file
#include<fstream.h>
#include<conio.h>

class student
{
    int rollno;
    char name[40];
    char grade;
    float marks;
    public:
    void display();
    int getno();
};
```

```cpp
void student::display()
{
cout <<"rollno "<<rollno<<"name:"<<name
<<"grade:"<<grade<<"marks:"<<marks<<end
l;
}

int student:: getno()
{
   return rollno;
}


void main()
{
   clrscr();
   student s;
   int rln;
   char found='n';

   ifstream fin("c:\\data\\stu",ios::in);

   cout <<"enter roll no to be
searched:";
   cin >>rln;

   while(!fin.eof())
   {
      fin.read((char *) &s,sizeof(s));
```

```cpp
        if(s.getno()==rln)
        {
          s.display();
          found='y';
          break;
        }
    }

    if (found=='n')
        cout <<"roll no not found:"<<endl;

    fin.close();
    getch();
}
```

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```cpp
// Prog 11
//writing-reading the contents   in
terms of blocks

#include<fstream.h>
#include<iomanip.h>
#include<conio.h>
int const max=200;

class student_info
{
  protected:
      char name[20];
```

```cpp
        int age;
        char sex;
        float height;
        float weight;

   public:
        void getdata();
        void display();
};

void student_info::getdata()
{
   cout <<" name ";
   cin >>name;

   cout <<" age ";
   cin >>age;

   cout <<" sex ";
   cin >>sex;

   cout <<" height ";
   cin >>height;

   cout <<" weight ";
   cin >>weight;
}


void student_info::display()
{
```

```cpp
   cout
<<name<<setw(5)<<age<<setw(10)<<sex<<se
tw(5)<<height <<setw(5)<<weight<<endl;
}


void main()
{
   clrscr();
   student_info obj[max];
   fstream ffile;
   char fname[10];

   int i,n;

   cout <<"How many objects are to be
stored:";
   cin >>n;

   cout <<"Enter the following
information:";
   for(i=0;i<n;++i)
   {
     cout<<endl;
     cout <<"Object = "<<i+1<<endl;
     obj[i].getdata();
   }

   ffile.open(fname,ios::out);
   cout <<" storing  data in file ";
```

```
    for(i=0;i<n;i++)
    {
        ffile.write((char*)
&obj[i],sizeof(obj[i]));
    }
    ffile.close();

    ffile.open(fname,ios::in);
    cout <<"reading from the file....";
    for(i=0;i<n;++i)
    {
        ffile.read((char *)
&obj[i],sizeof(obj[i]));
        obj[i].display();
    }
ffile.close();
getch();
}
```

```
// Prog 11
//appending the contents  to a file
#include<fstream.h>
#include<conio.h>

class student
{
    int rollno;
    char name[40];
```

```cpp
        char grade;
        float marks;
        public:
        void getdata();
        void display();
};

void student::getdata()
{
    cout <<"enter roll no:";
    cin >>rollno;
    char ch;
    cin.get(ch);

    cout <<"enter name:";
    cin.getline(name,40);


    cout <<"enter marks:";
    cin >>marks;
    cin.get(ch);

    if(marks>75)
        grade='A';
        else if (marks>=60)
         grade='B';
         else if (marks>=50)
         grade='C';
         else grade='F';
}
```

```cpp
void student::display()
{
cout <<"roll no"<<rollno<<"name:"<<name
<<"grade:"<<grade<<"marks:"<<marks<<end
l;
}

void main()
{
   clrscr();
   student s;
   fstream f("c:\\stu.txt",ios::app|
ios::in);
   char ans='y';
   while(ans=='y')
   {
      s.getdata();
      f.write((char *) &s,sizeof(s));

      cout <<"record added:"<<endl;
      cout <<"add more records:";
      cin >>ans;

   }
   f.seekg(0);
   while(!f.eof())
   {
      f.read((char *)&s,sizeof(s));
      s.display();
   }
   getch();
```

```cpp
    f.close();
}
--------------------------------------------
-----------------------------------
// Prog 12
//searching for data in file
#include<fstream.h>
#include<conio.h>

class student
{
    int rollno;
    char name[40];
    char grade;
    float marks;
    public:
    void display();
    int getno();
};


void student::display()
{
cout <<"rollno "<<rollno<<"name:"<<name
<<"grade:"<<grade<<"marks:"<<marks<<end
l;
}

int student:: getno()
{
    return rollno;
```

```cpp
}

void main()
{
  clrscr();
  student s;
  int rln;
  char found='n';

  ifstream fin("c:\stu",ios::in);

  cout <<"enter roll no to be
searched:";
  cin >>rln;

  while(!fin.eof())
  {
     fin.read((char *) &s,sizeof(s));

     if(s.getno()==rln)
     {
       s.display();
       found='y';
       break;
     }
  }

  if (found=='n')
     cout <<"roll no not found:"<<endl;
```

```cpp
    fin.close();
    getch();
}


-------------------------------------------
---------------------------
// Prog 13
//deleting  for data in file
#include<fstream.h>
#include<conio.h>

class student
{
    int rollno;
    char name[40];
    char grade;
    float marks;

    public:
    void display();
    int getno();
};

void student::display()
{
cout <<"rollno "<<rollno<<"name:"<<name
<<"grade:"<<grade<<"marks:"<<marks<<end
l;
}
```

```cpp
int student:: getno()
{
  return rollno;
}

void main()
{
  student s;
  ifstream fin("c:\\data\\stu",ios::in);
  ofstream fout
("c:\\data\\temp",ios::out);

  int rno;
  char found='n',confirm='n';

  cout <<"enter  rollno to be deleted:";
  cin >> rno;


  while(!fin.eof())
  {
      fin.read((char *) &s,sizeof(s));
      if(s.getno()==rno)
       {
           s.putdata();
           found='y';

           cout <<"want to delete the
data:";
           cin >>confirm;
```

```cpp
            if (confirm=='n')
              {
                fout.write((char *)
&s,sizeof(s));
              }
          }
        else
          {
             fout.write(char *)
&s,sizeof(s));
          }
    }

    if (found=='n')
        cout <<"record not found:";

    fout.close();
    fin.close();

    remove("c:\\data\\stu");
    rename("c:\\data\\temp","c:\\data\
\stu");


    fin.open("c:\\stu",ios::in);

    cout <<"now the file contains:";
    while(!fin.eof())
       {
            fin.read((char *)
&s,sizeof(s));
```

```
                if(fin.eof())
                    break;

                s.putdata();
         }
        fin.close();
}


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//Prog 14
//modifying  the contents  to a file
#include<fstream.h>
#include<conio.h>
#include<string.h>
class student
{
    int rollno;
    char name[40];
    char grade;
    float marks;
    public:
    void getdata();
    void display();
};

void student::getdata()
{
  cout <<"enter roll no:";
  cin >>rollno;
```

```cpp
    char ch;
    cin.get(ch);

    cout <<"enter name:";
    cin.getline(name,40);


    cout <<"enter marks:";
    cin >>marks;
    cin.get(ch);

    if(marks>75)
        grade='A';
        else if (marks>=60)
          grade='B';
          else if (marks>=50)
          grade='C';
          else grade='F';


}

void student::display()
{
cout <<"roll no"<<rollno<<"name:"<<name
<<"grade:"<<grade<<"marks:"<<marks<<end
l;
}


int student:: getno()
```

```cpp
{
  return rollno;
}

void student::modify()
{
    cout <<endl<<"Roll No:"<<rollno;
    cout <<endl<<"name:"<<name;
    cout <<endl<<"marks:"<<marks;
    cout <<endl<<"grade:"<<grade;


    cout <<"enter new deatisl:";
    char nm[30];
    int m;

    cout <<"enter new name";
    cin >>nm;

    cout <<"enter new marks:";
    cin >>m;


    strcpy(name,nm);
    marks=mks;

    if(marks>75)
      grade='A';
    else if (marks>=60)
       grade='B';
    else if (marks>=50)
```

```cpp
        grade='C';
    else grade='F';

}

void main()
{
  clrscr();
  student s;

  long pos;
  fstream
f("c:\\data\\stu.txt",ios::in|ios::out);

  cout <<"enter roll no to be modified:"
  cin >>rno;

  while(!f.eof())
   {
       pos=f.tellg();

       f.read((char *) &s,sizeof(s));

       if (s.getno()==rno)
        {
            s.modify();
            f.seekg(pos);

            f.write((char *)
&s,sizeof(s));
```

```cpp
                    found='y';
                    break;
                }
        }

    if (found=='n')
      {
          cout <<"record not found:";
      }

    f.seekg(0);
    cout <<"now the file contains:";

    while(!f.eof())
      {
          f.read((char *) &s,sizeof(s));
          s.putdata();
      }
    f.close();
}


   char ans='y';
   while(ans=='y')
   {
      s.getdata();
      f.write((char *) &s,sizeof(s));

      cout <<"record added:"<<endl;
      cout <<"add more records:";
```

```cpp
        cin >>ans;

    }
    f.seekg(0);
    while(!f.eof())
    {
        f.read((char *)&s,sizeof(s));
        s.display();
    }
    getch();
    f.close();
}
```