**PROBLEM STATEMENT:**

Write a program that creates ‘*n*’ objects of class ‘*directory*’ which has fields like *name*, *phone no*., and *address*. Write the objects onto a file “*object.t*xt”. Open the file and check if each object is valid or not. A valid entry means that the *name* and *phone no*. should be a string and a numeric string respectively. The valid objects alone are to be written onto another file “*newobject.txt*”. Also provide options for appending objects to the existing file, after their validity check.

**PROGRAM CODE:**

**#include<iostream>**

**#include<fstream>**

**#include<conio.h>**

**#include<cstring>**

**using namespace std;**

**class directory**

**{**

**private:**

**char\* name;**

**char\* phone;**

**char\* addrs;**

**public:**

**directory()**

**{**

**name=new char[50];**

**phone=new char[20];**

**addrs=new char[100];**

**}**

**void getdata()**

**{**

**cout<<"enter name: ";**

**cin.getline(name,50,'\n');**

**cout<<"enter phone: ";**

**cin.getline(phone,20,'\n');**

**cout<<"enter address: ";**

**cin.getline(addrs,100,'\n');**

**}**

**void putdata()**

**{**

**cout<<"\nname: "<<name<<'\n';**

**cout<<"phone: "<<phone<<'\n';**

**cout<<"address: "<<addrs<<'\n';**

**}**

**int validity()**

**{**

**int flagn=0,flagp=0;**

**for(int i=0;i<strlen(name);i++)**

**{**

**if(((\*(name+i)<='z')&&(\*(name+i)>='a'))||((\*(name+i)<='Z')&&(\*(name+i)>='A'))||(\*(name+i)==' '))**

**flagn=0;**

**else**

**{**

**flagn=1;**

**break;**

**}**

**}**

**for(int i=0;i<strlen(phone);i++)**

**{**

**if((\*(phone+i)<='9')&&(\*(phone+i)>='0'))**

**flagp=0;**

**else**

**{**

**flagp=1;**

**break;**

**}**

**}**

**if(flagp==0&&flagn==0)**

**return 1;**

**else**

**return 0;**

**}**

**};**

**int main()**

**{**

**int n,i;**

**directory\* obj;**

**ifstream infile;**

**ofstream outfile;**

**cout<<"enter the number of entries (n): ";**

**cin>>n;**

**cin.ignore(50,'\n');**

**outfile.open("object.txt");**

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

**{**

**obj=new directory;**

**cout<<"\nentry "<<i+1<<":\n";**

**obj->getdata();**

**outfile.write((char\*)obj,sizeof(directory));**

**delete obj;**

**}**

**outfile.close();**

**int vald,no=0;**

**infile.open("object.txt");**

**outfile.open("newobject.txt");**

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

**{**

**obj=new directory;**

**infile.read((char\*)obj,sizeof(directory));**

**vald=obj->validity();**

**if(vald==1)**

**{**

**outfile.write((char\*)obj,sizeof(directory));**

**no++;**

**}**

**delete obj;**

**}**

**infile.close();**

**outfile.close();**

**cout<<"\n\*\*\*\* valid entries are: \*\*\*\*\n";**

**infile.open("newobject.txt");**

**for(i=0;i<no;i++)**

**{**

**obj=new directory;**

**infile.read((char\*)obj,sizeof(directory));**

**obj->putdata();**

**delete obj;**

**}**

**infile.close();**

**char ch;**

**outfile.open("newobject.txt",ios::app);**

**cout<<"\ndo you wish to append (y/n): ";**

**cin>>ch;**

**cin.ignore(50,'\n');**

**while(ch=='y')**

**{**

**obj=new directory;**

**obj->getdata();**

**vald=obj->validity();**

**if(vald==1)**

**{**

**outfile.write((char\*)obj,sizeof(directory));**

**no++;**

**}**

**delete obj;**

**cout<<"\ndo you wish to append (y/n): ";**

**cin>>ch;**

**cin.ignore(50,'\n');**

**}**

**outfile.close();**

**cout<<"\n\*\*\*\* final entries are: \*\*\*\*\n";**

**infile.open("newobject.txt");**

**for(i=0;i<no;i++)**

**{**

**obj=new directory;**

**infile.read((char\*)obj,sizeof(directory));**

**obj->putdata();**

**delete obj;**

**}**

**getch();**

**return 0;**

**}**

**OUTPUT:**

enter the number of entries (n): 3

entry 1:

enter name: Sambhav R Jain

enter phone: 23456

enter address: NIT Trichy

entry 2:

enter name: Disprop456

enter phone: 122122

enter address: Alamni St

entry 3:

enter name: Happy

enter phone: 2345TY43

enter address: Jukkli Per

\*\*\*\* valid entries are: \*\*\*\*

name: Sambhav R Jain

phone: 23456

address: NIT Trichy

do you wish to append (y/n): y

enter name: Assimov

enter phone: 12234

enter address: Werrt

do you wish to append (y/n): y

enter name: Raol 990

enter phone: 34344

enter address: Poolar

do you wish to append (y/n): n

\*\*\*\* final entries are: \*\*\*\*

name: Sambhav R Jain

phone: 23456

address: NIT Trichy

name: Assimov

phone: 12234

address: Werrt