**JAVA PROGRAMMING**

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**Problem**

**Write a program using File .**

**Eg., Define a class ‘Donor’ to store the below mentioned details of  a blood donor.**

**Name, age, Address, Contact number, blood group, date of last donation**

**Create ‘n’ objects of this class for all the regular donors at Vellore. Write these objects to a file. Read these objects from the file and display only those donors’ details whose blood group is ‘A+ve’ and had not donated for the recent six months**

**Code**

**Donors.java**

package donors;

import java.io.\*;

import java.util.Scanner;

import java.util.Date;

import java.util.List;

import java.util.ArrayList;

import java.text.SimpleDateFormat;

public class Donors implements Serializable{

String name,add;

String contact;

int age;

String bg;

//Date ldate;

String ldate;

static String file="C:\\Users\\Sathya\\Desktop\\VIT\\VIT 6th sem\\JAVA\\LAB\\donors.txt";

public void getInfo(int n)

{

Scanner sc=new Scanner(System.in);

System.out.println("Enter details for the Donor "+(n+1)+" \n");

System.out.print("Enter your name : ");name=sc.nextLine();

System.out.print("Enter your age : ");age=sc.nextInt();

System.out.print("Enter your contact number : ");contact=sc.next();

System.out.print("Enter your address : ");add=sc.next();

System.out.print("Enter your Blood group : ");bg=sc.next();

System.out.print("Enter the last date of donation in dd/MM/yyyy format : ");ldate=sc.next();

System.out.println("----------------------------------------------------");

}

public void searilizeDonors(ArrayList<Donors> donors) {

try {

FileOutputStream fileOut = new FileOutputStream(file,true);

ObjectOutputStream out = new ObjectOutputStream(fileOut);

out.writeObject(donors);

out.close();

fileOut.close();

} catch (IOException ex) {

}

}

public void deserializeDonors() {

List<Donors> donor\_list = null;

try {

ObjectInputStream in = new ObjectInputStream(new FileInputStream(file));

donor\_list = (List<Donors>)in.readObject();

in.close();

}

catch(Exception e) {}

Donors oo;

int c=0;

for (int i=0;i<donor\_list.size();i++)

{

oo=donor\_list.get(i);

String bloodgrp=oo.bg;

if(bloodgrp.equalsIgnoreCase("a+"))

{

String ldate2=oo.ldate;

//difference should be more than 6 months

int m=Integer.parseInt(ldate2.substring(ldate2.indexOf("/")+1,ldate2.lastIndexOf("/")));

int y=Integer.parseInt(ldate2.substring(ldate2.lastIndexOf("/")+1));

int mm=(2019-y)\*12+(3-m);

if(mm>6)

{ c++;

System.out.println("Name : "+oo.name);

System.out.println("Age : "+oo.age);

System.out.println("Address : "+oo.add);

System.out.println("Blood Group : "+oo.bg);

System.out.println("Contact : "+oo.contact);

System.out.println("Last donated : "+oo.ldate);

System.out.println("Last donated "+mm+" months ago");

System.out.println("-----------------------------------");

}

}

oo=null;

}

if(c==0)

System.out.println("None");

}

}

**Donors\_main.java**

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\* and open the template in the editor.

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package donors;

import java.util.ArrayList;

import java.util.Arrays;

import java.util.List;

import java.util.Scanner;

public class Donors\_main {

public static void main(String[] args)

{

Scanner sc=new Scanner(System.in);

System.out.println("\n\*\*\*\*\*WELCOME TO BLOOD DONATION APPLICATION\*\*\*\*\*\*\*\n");

System.out.println("Enter the number of donors");

int n=sc.nextInt();

System.out.println();

Donors donorlist[]=new Donors[n];

ArrayList<Donors> donors\_d=new ArrayList<Donors>();

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

{

donorlist[i]=new Donors();

donorlist[i].getInfo(i);

donors\_d.add(donorlist[i]);

}

//serialize into file

Donors o=new Donors();

Donors oo=null;

o.searilizeDonors(donors\_d);

//deserialize from file

System.out.println("\n\*\*\*\*\*\*\*VALID DONORS\*\*\*\*\*\*\*\*\*\n");

System.out.println("------------------------------------");

o.deserializeDonors();

}

}

**Output**

run:

\*\*\*\*\*WELCOME TO BLOOD DONATION APPLICATION\*\*\*\*\*\*\*

Enter the number of donors

3

Enter details for the Donor 1

Enter your name : Meghna

Enter your age : 21

Enter your contact number : 8511192673

Enter your address : Chennai

Enter your Blood group : a+

Enter the last date of donation in dd/MM/yyyy format : 12/05/2018

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Enter details for the Donor 2

Enter your name : Harshit

Enter your age : 17

Enter your contact number : 8511199717

Enter your address : Vadodara

Enter your Blood group : b+

Enter the last date of donation in dd/MM/yyyy format : 10/10/2017

----------------------------------------------------

Enter details for the Donor 3

Enter your name : Poonam

Enter your age : 37

Enter your contact number : 9457806213

Enter your address : Patna

Enter your Blood group : a+

Enter the last date of donation in dd/MM/yyyy format : 10/1/2016

----------------------------------------------------

\*\*\*\*\*\*\*VALID DONORS\*\*\*\*\*\*\*\*\*

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Name : Meghna

Age : 21

Address : Chennai

Blood Group : a+

Contact : 8511192673

Last donated : 12/05/2018

Last donated 10 months ago

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Name : Poonam

Age : 37

Address : Patna

Blood Group : a+

Contact : 9457806213

Last donated : 10/1/2016

Last donated 38 months ago

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BUILD SUCCESSFUL (total time: 1 minute 40 seconds)

**Screenshot**



