/\*1) Create a class called Book with author name,book name and isbc number as variable and store it in collection and retrive

it using for each loop and itertor and also do serializaion and clonning\*/

import java.io.\*;

import java.util.\*;

class Book implements Serializable

{

String auname;

String boname;

int isbcnum;

Book (String auname,String boname, int isbcnum)

{

this.auname=auname;

this.boname=boname;

this.isbcnum=isbcnum;

}

public String toString()

{

return "Auther Name : "+auname+"BooK Name :"+boname+"ISBC Number : "+isbcnum;

}

}

class MainBook

{

public static void main(String[] args)throws IOException, ClassNotFoundException

{

HashSet<Book> hs=new HashSet<Book>();

Book b1=new Book("Rabindranath Tagore","Chandalika", 91055);

hs.add(b1);

for (Book boo:hs)

{

System.out.println(boo);

}

Iterator it=hs.iterator();

while(it.hasNext());

{

System.out.println(it.next());

}

FileOutputStream fos=new FileOutputStream("C:\\ROOBINI\\05-10-2023(2)\\Book.txt");

ObjectOutputStream oos=new ObjectOutputStream(fos);

oos.writeObject(b1);

oos.close();

fos.close();

FileInputStream fis=new FileInputStream("C:\\Roobini\\05-10-2023(2)\\Book.txt");

ObjectInputStream ois=new ObjectInputStream(fis);

Book b2 =(Book)ois.readObject();

ois.close();

fis.close();

System.out.println(b2);

}

}

class Collage1 implements Runnable

{

int Noofseat=100;

int Nooffullseat=98;

int Noofavalseat;

Collage1(int Noofavalseat)

{

this.Noofavalseat=Noofavalseat;

}

public void run()

{

String name= Thread.currentThread().getName();

synchronized(this){

if(Nooffullseat<=Noofseat)

{

System.out.println(name+"Gojan Collage Admission booking :");

Nooffullseat++;

try

{

Thread.sleep(1000);

}

catch(InterruptedException ie)

{

}

}

else

{

System.out.println(name+"SOORY Seat is Full Admission Close :");

}

}

}

}

public class MainCollage1

{

public static void main(String[]args)

{

Collage1 obj=new Collage1(4);

Thread t1=new Thread(obj);

Thread t2=new Thread(obj);

Thread t3=new Thread(obj);

Thread t4=new Thread(obj);

t1.setName("santhosh ");

t2.setName("ravi ");

t3.setName("Karthi ");

t4.setName("roobini ");

t1.start();

t2.start();

t3.start();

t4.start();

}

}

/\*

3) Create a class called Student with student name,id,attendance and mark and sort it according to students name and display

the details

\*/

import java.util.\*;

class Student implements Comparator<Student>{

String stName;

int stId,marks;

int att;

public int compare(Student s1, Student s2){

return s1.stName.compareTo(s2.stName);

}

Student(String stName,int stId,int marks,int att)

{

this.stName=stName;

this.stId=stId;

this.marks=marks;

this.att=att;

}

Student(){

}

public String toString()

{

return "Student Name :"+stName+"\t"+"ID: "+stId+" \t"+"Marks :"+marks+"\t"+"Attendance:"+att;

}

}

class MainStudent

{

public static void main(String...args)

{

LinkedList<Student> srt=new LinkedList<Student>();

Student s1= new Student("Ruby",1003,55,67);

Student s2=new Student("Joy",1002,45,55);

Student s3=new Student("Anu",1001,23,99);

srt.add(s1);

srt.add(s2);

srt.add(s3);

Collections.sort(srt,new Student());

Iterator i = srt.iterator();

while(i.hasNext()){

System.out.println(i.next());

}

}

}