SERIALIZATION:

import java.io.\*;

import java.util.\*;

abstract class currency

{

public abstract void display();

public abstract void convert();

}

class rupee extends currency implements Serializable

{

private double rupees;

public rupee(double r)

{

rupees=r;

}

public void convert()

{

System.out.println("Converted Rs."+rupees);

}

public void display()

{

System.out.println("Rs."+rupees);

}

}

class dollar extends currency implements Serializable

{

private double dollars;

public dollar(double r)

{

dollars=r;

}

public void convert()

{

double r=dollars\*61;

}

public void display()

{

System.out.println("$"+dollars);

}

}

public class ser

{

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

{

int i=0,j;

double r,d,ch;

dollar dol;

rupee rup;

try

{

FileOutputStream fileOut =new FileOutputStream("C:/java/curency.ser");

ObjectOutputStream out = new ObjectOutputStream(fileOut);

do

{

ch=Math.random()%2;

if(ch<0.5)

{

d=(double)((200-50+1)\*Math.random()+50);

dol=new dollar(d);

dol.display();

out.writeObject(dol);

i++;

}

if(ch>0.5)

{

r=(double)((200-50+1)\*Math.random()+50);

rup=new rupee(r);

rup.display();

out.writeObject(rup);

i++;

}

}while(i!=10);

out.close();

fileOut.close();

System.out.println("Serialized data is saved in currency.ser");

}

catch(IOException ioe)

{

ioe.printStackTrace();

}

}

}

DESERIZLIZATION:

import java.io.\*;

import java.util.\*;

abstract class currency

{

public abstract void display();

public abstract void convert();

}

class rupee extends currency implements Serializable

{

private double rupees;

public rupee(double r)

{

rupees=r;

}

public void convert()

{

System.out.println("Converted Rs."+rupees);

}

public void display()

{

System.out.println("Rs."+rupees);

}

}

class dollar extends currency implements Serializable

{

private double dollars;

public dollar(double r)

{

dollars=r;

}

public void convert()

{

double r=dollars\*61;

System.out.println("Converted Rs."+r);

}

public void display()

{

System.out.println("$"+dollars);

}

}

public class deserial

{

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

{

currency cur;

Class c;

int i=0,j;

double r,d,ch;

String str;

dollar dol;

rupee rup;

try

{

FileInputStream fileIn = new FileInputStream("C:/java/curency.ser");

ObjectInputStream in = new ObjectInputStream(fileIn);

do

{

cur=(currency)in.readObject();

c=cur.getClass();

str=c.getName();

System.out.println(str);

if(str.equals("dollar"))

{

cur.convert();

}

i++;

}while(i!=10);

in.close();

fileIn.close();

}

catch(IOException ioe)

{

//ioe.printStackTrace();

return;

}

catch(ClassNotFoundException cnot)

{

System.out.println("class not found");

return;

//cnot.printStackTrace();

}

}

}

SAMPLE INPUT AND OUTPUT:

Microsoft Windows [Version 6.1.7601]

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C:\Users\dell>cd..

C:\Users>cd..

C:\>cd java

C:\java>set path=%path%;C:\java\Java\jdk1.7.0\_21\bin

C:\java>javac ser.java

C:\java>java ser

$139.65

$140.00

$186.90

$168.90

$123.811

$191.36

Rs.82.04

$87.58

$165.92

Rs.158.48

Serialized data is saved in currency.ser

C:\java>javac deserial.java

C:\java>java deserial

dollar

Converted Rs.8518.99

dollar

Converted Rs.8540.36

dollar

Converted Rs.11401.34

dollar

Converted Rs.10303.11

dollar

Converted Rs.7552.47

dollar

Converted Rs.11673.54

rupee

dollar

Converted Rs.5342.42

dollar

Converted Rs.10121.14

rupee

C:\java>