

PSG COLLEGE OF TECHNOLOGY, COIMBATORE
DEPARTMENT OF APPLIED MATHEMATICS AND COMPUTATIONAL SCIENCES
15XT56 – JAVA PROGRAMMING LAB
PROBLEM SHEET V - OBJECT SERIALIZATION

1. Create a class called `Employee` with following private field

`String empno, String ename, String address`

and following public constructor

`Employee(String empno, String ename, String address)`

and following public methods

`void setEmpno(String empno), String getEmpno(),`

`void setName(String ename), String getName(),`

`void setAddress(String address), String getAddress()`

Create another class named `EmployeeWriter` to create object for the above `Employee` class and write this object in a file named `"emp.ser"`.

Create another class named `EmployeeReader` to read an object of `Employee` class from the file `"emp.ser"` and display all fields in it.

2. Create a class called `Point` with following private fields

`int x, int y`

and following constructor

`Point(int x, int y)`

and following public methods

`int getX(), int getY(), void setX(int x), void setY(int y)`

Create another class named `Line` with following private fields

`Point p1, Point p2`

and following public constructor

`Line(Point p1, Point p2)`

and following public methods

`void setP1(Point p1), Point getP1(), void setP2(Point p2),`

`Point getP2()`

Create another class named `LineWriter` to create object for the above `Line` class and write this object in a file named `"line.ser"`.

Create another class named `LineReader` to read an object of `Line` class from the file `"line.ser"` and display all fields in it.

3. Create a class called `Complex` with following private field

`int real, int imaginary`

and following public constructor

`Complex(int real, int imaginary)`

and following public methods

`void setReal(int real), int getReal(),`

`void setImaginary(int imaginary), int getImaginary()`

Create another class named `ComplexMatrix` with following private field

```
Complex element[][]
```

and following public constructor

```
ComplexMatrix(int row, int column)
```

and following public methods

```
void setElement(int index, Complex element)
```

```
Complex getElement(int index)
```

```
ComplexMatrix add(ComplexMatrix cm)
```

Write a Java program to create two objects for `ComplexMatrix` class and write these objects in two different files. Also write another Java program to read these two files and add these two matrixes and store it an another file.