1] Serialization and Deserialization

```
package javaapplication15;
import java.io.*;
public class JavaApplication15 implements java.io.Serializable {
  public String stu_Name;
  public String stu_Addr;
  public int stu_Id;
  public static void main(String[] args) {
    JavaApplication15 std = new JavaApplication15();
    std.stu_Name = "George";
    std.stu_Addr = "ABC,XYZ";
    std.stu_Id = 1;
    JavaApplication15 deserializedStudent;
    try {
      FileOutputStream fileOut = new FileOutputStream("C:\\java programs\\sample.txt");
      ObjectOutputStream out = new ObjectOutputStream(fileOut);
      out.writeObject(std);
      out.close();
      fileOut.close();
      System.out.printf("Object serialized");
      FileInputStream fileIn = new FileInputStream("C:\\java programs\\sample.txt");
      ObjectInputStream in = new ObjectInputStream(fileIn);
      deserializedStudent = (JavaApplication15) in.readObject();
      in.close();
      fileIn.close();
      System.out.println("Deserialized Student...");
      System.out.println("Name: " + deserializedStudent.stu_Name);
      System.out.println("Address: " + deserializedStudent.stu_Addr);
    } catch (IOException i) {
      i.printStackTrace();
    } catch (Exception e) {
```

```
    System.out.println("Class not found");
    e.printStackTrace();
    return;}}}
```

Serialization:

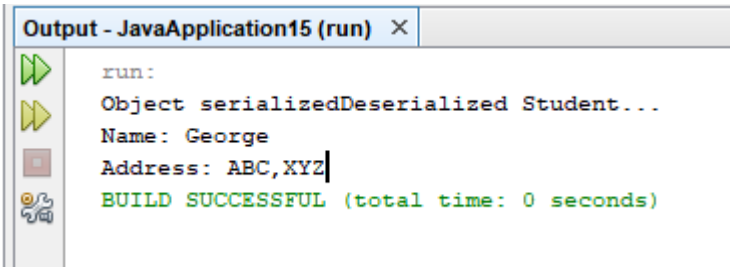
¬í sr #javaapplication15.JavaApplication15¶ÇúÓ¥-J ——————————————I stu_IdL stu_Addrt Ljava/lang/String;L stu_Nameq ~ xp t ABC, XYZt George

Deserialization:

Name: George

Address: ABC, XYZ

Output:

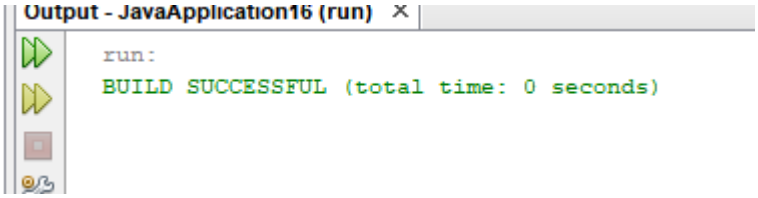


2] Print writer

```
package javaapplication16;
import java.io.FileWriter;
import java.io.IOException;
import java.io.PrintWriter;
import java.io.BufferedWriter;
class ClassName {
   private String name;
   private int age;
   public ClassName() {
      this.name = "Rio";
      this.age = 35;
   }
   public String toString() {
      return "Name: " + name + ", Age: " + age;}}
public class JavaApplication16 {
```

```
    public static void main(String[] args) {
        String filepath = "C:\\java programs\\smp2.txt";
        ClassName objName = new ClassName();
        try {
            writeFile(objName, filepath);
        } catch (IOException e) {
            System.out.println("An error occurred: " + e.getMessage());}}
    public static void writeFile(ClassName objName, String filepath) throws IOException {
        PrintWriter writer = new PrintWriter(new BufferedWriter(new FileWriter(filepath,true)));
        writer.println(objName);
        writer.close();}}
```

Output:

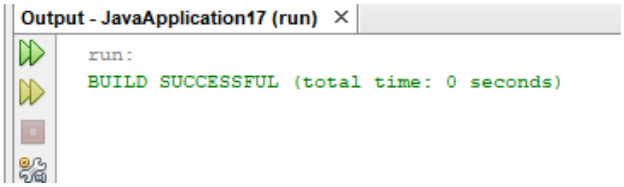


3] File writer

```
package javaapplication17;
import java.io.FileWriter;
import java.io.IOException;
class ClassName {
    private String name;
    private int age;
    public ClassName() {
        this.name = "Jeo";
        this.age = 27;
    }
    public String toString() {
        return "Name: " + name + ", Age: " + age; }}
public class JavaApplication17 {
    public static void main(String[] args) {
```

```
        String filepath = "C:\\java programs\\smp2.txt";
        ClassName objName = new ClassName();
        try {
            writeFile(objName, filepath);
        } catch (IOException e) {
            System.out.println("An error occurred: " + e.getMessage());}}
    public static void writeFile(ClassName objName, String filepath) throws IOException {
        FileWriter writer = new FileWriter(filepath, true);
        writer.write(objName.toString() + "\n");
        writer.close();}}
```

Output:

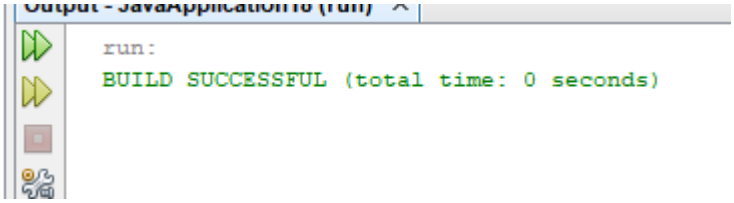


4] Writer

```
package javaapplication18;
import java.io.FileWriter;
import java.io.IOException;
import java.io.Writer;
class ClassName {
    private String name;
    private int age;
    public ClassName() {
        this.name = "Romeo";
        this.age = 25;
    }
    public String toString() {
        return "Name: " + name + ", Age: " + age; }}
public class JavaApplication18 {
    public static void main(String[] args) {
        String filepath = "C:\\java programs\\smp2.txt";
```

```
        ClassName objName = new ClassName();
        try {
            writeFile(objName, filepath);
        } catch (IOException e) {
            System.out.println("An error occurred: " + e.getMessage());} }
    public static void writeFile(ClassName objName, String filepath) throws IOException {
        Writer writer = new FileWriter(filepath, true);
        writer.write(objName.toString() + "\n");
        writer.close();}}
```

Output:

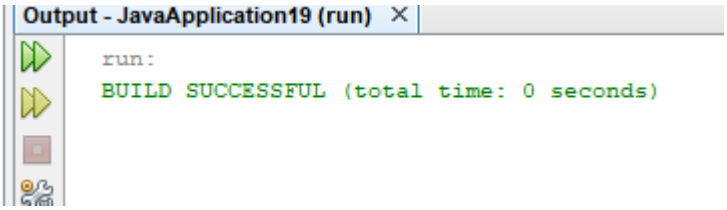


5] Buffer writer

```
package javaapplication19;
import java.io.BufferedWriter;
import java.io.FileWriter;
import java.io.IOException;
import java.io.Writer;
class Person {
    private String name;
    private int age;
    public Person() {
        this.name = "Juliet";
        this.age = 22;
    }
    public String toString() {
        return "Name: " + name + ", Age: " + age;  }}
public class JavaApplication19 {
    public static void main(String[] args) {
```

```
        String filepath = "C:\\java programs\\smp2.txt";
        Person person = new Person();
        try {
            writeFile(person, filepath);
        } catch (IOException e) {
            System.out.println("An error occurred: " + e.getMessage());}}
    public static void writeFile(Person person, String filepath) throws IOException {
        Writer writer = new FileWriter(filepath, true);
        BufferedWriter bufferedWriter = new BufferedWriter(writer);
        bufferedWriter.write(person.toString() + "\n");
        bufferedWriter.close();}}
```

Output:



6] Create student class information class implement serializable method. Student info class contains student name, age, mark and use the Constructor to assign values for class members and demonstrate the serialization.

```
package javaapplication19;
import java.io.BufferedWriter;
import java.io.FileWriter;
import java.io.IOException;
import java.io.Writer;
class Person {
    private String name;
    private int age;
    public Person() {
        this.name = "Juliet";
        this.age = 22;
    }
    public String toString() {
```

```
        return "Name: " + name + ", Age: " + age;}}
public class JavaApplication19 {
    public static void main(String[] args) {
        String filepath = "C:\\java programs\\smp2.txt";
        Person person = new Person();
        try {
            writeFile(person, filepath);
        } catch (IOException e) {
            System.out.println("An error occurred: " + e.getMessage()); }}
    public static void writeFile(Person person, String filepath) throws IOException {
        Writer writer = new FileWriter(filepath, true);
        BufferedWriter bufferedWriter = new BufferedWriter(writer);
        bufferedWriter.write(person.toString() + "\n");
        bufferedWriter.close(); }}
```

Serialization:

¬í sr javaapplication20.Student–…ì(Ÿ- ————————————————I ————————————————ageD

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markL

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namet Ljava/lang/String;xp @U` t Romeo

Output: