

Simple File Input And Output

Types of Java Files

Simple File Output in Java

Simple File Input in Java

James Tam

Storing Information On Files

Types of files

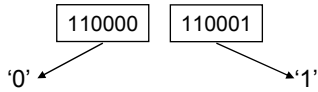
- Text files
- Binary files

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Text Files

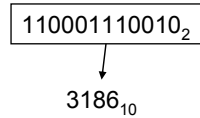
Text files

- Every 8 bits represents a character
- e.g., '0' = 48, '1' = 49



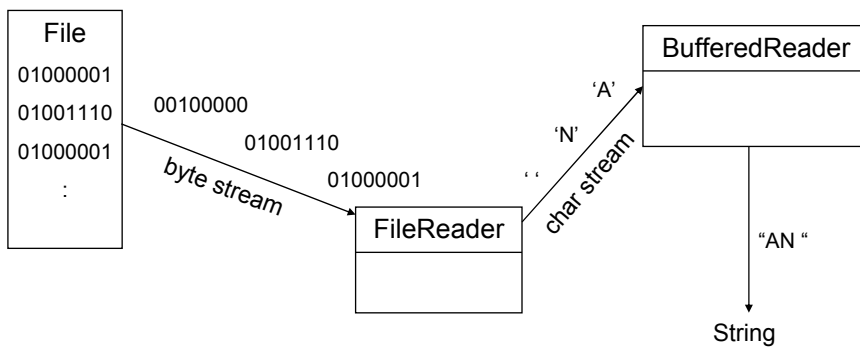
Binary files

- Includes all other types of files (it's a catch all term)
- e.g., Interpret the bit pattern as a 16 bit unsigned short



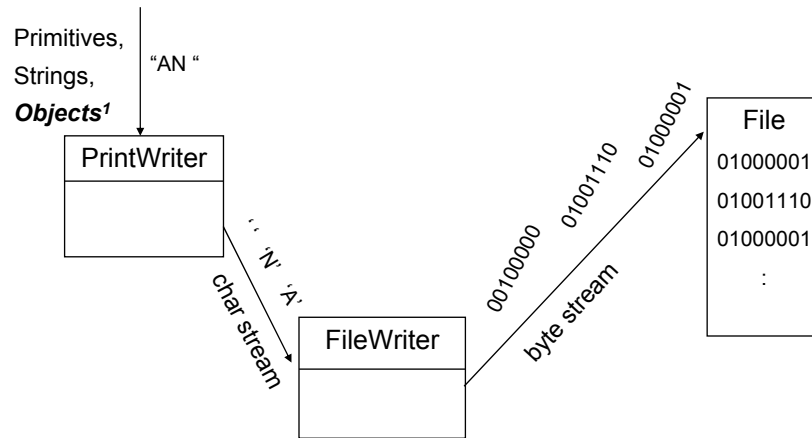
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Reading Text Input From A File



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Writing Text Output To A File



¹ By objects we of course mean references to objects

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An Example Of Simple Input And Output

The full example can be found in Unix in the directory:
`/home/233/examples/fileIO`

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Class IntegerWrapper

```
class IntegerWrapper
{
    private int num;

    public IntegerWrapper ()
    {
        num = (int) (Math.random() * 100);
    }
    public void setNum (int newValue)
    {
        num = newValue;
    }
    public int getNum ()
    {
        return num;
    }
}
```

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Class SimpleIO

```
import java.io.*;

class SimpleIO
{
    public static void main (String [] argv)
    {
        IntegerWrapper iw1 = new IntegerWrapper ();
        IntegerWrapper iw2 = new IntegerWrapper ();
        String filename = "data";
        PrintWriter pw;
        FileWriter fw;
        BufferedReader br;
        FileReader fr;
```

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Class SimpleIO (2)

```
try
{
    fw = new FileWriter(filename);
    pw = new PrintWriter(fw);

    System.out.println("Written to file: " + iw1.getNum());
    pw.println(iw1.getNum());
    System.out.println("Written to file: " + iw2.getNum());
    pw.println(iw2.getNum());
    pw.close();
}
```

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Class SimpleIO (3)

```
fr = new FileReader(filename);
br = new BufferedReader(fr);
System.out.println("Read from file: " + br.readLine());
System.out.println("Read from file: " + br.readLine());
}
```

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Class SimpleIO (4)

```
    catch (IOException e)
    {
        e.printStackTrace();
    }
}
```

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Summary

Writing text information to files with Java classes

- FileWriter
- PrintWriter

Reading text information to files with Java classes

- FileReader
- BufferedReader

James Tam