

Answer Key: Note there may be more than one correct answer - 01/31/06

Lab: Experimenting with Input/Output

3.3. What was the first error generated by the compiler?

```
Rooter.java:15: cannot find symbol
  symbol   : class PrintWriter
  location: class Rooter
    PrintWriter    screen;
```

3.4. What line did you need to add?

```
import java.io.*;
```

Most I/O is part of the java.io package.

3.6. What was the first error generated by the compiler this time?

```
Rooter.java:17: cannot find symbol
  symbol   : class Scanner
  location: class Rooter
    Scanner    keyboard;
    ^
```

3.7. Fix this error. What line did you need to add?

```
import java.util.Scanner;
```

Scanner, however, is part of the util or Utilities package.

4.4. Why was no output generated?

Unlike the System.out.printf (which is using the PrintStream class), PrintWriter leaves the output in a buffer until we “flush” it to the console. When the program ends or the PrintWriter object is closed an automatic flush occurs.

4.5. Fix this mistake. What line did you add?

```
screen.flush();
```

4.6. What do you need to type in the terminal window (as a response to the prompt) in order to make this application terminate normally?

Ctrl d in Unix, Ctrl c in Windows

5.4. What output was generated?

```
Today's Date: 23 January 2006
  Birthday: Chita Rivera
  Birthday: John Hancock
```

5.6. What happened and why?

The system cannot find the file specified.

The redirected input was checked by the OS to see if the file existed even before the OS tried to run the java command. Since anniversaries.txt did not exist, we received a message to that effect.

5.8 What changes did you need to make?

```
File dates;
```

5.10. What changes did you need to make?

```
if (args.length > 0)
    dates = new File(args[0]);
else
    dates = null;
```

This structure checks to see if there is an argument. If not we set dates to null, otherwise, use the argument as the file name.

5.12. What changes did you need to make?

```
try
{
    dateScanner = new Scanner(dates);
}
catch(FileNotFoundException fnfe)
{
    screen.printf("File not found. Aborting...");
    screen.flush();
    System.exit(0);
}
```

5.14. What output was generated?

```
Today's Date: 23 January 2006
    Birthday: Chita Rivera
    Birthday: John Hancock
```

6.2. What changes did you need to make?

Removed:

```
if (args.length > 0)
    dates = new File(args[0]);
else
    dates = null;
```

Added:

```
for (int ii = 0; ii < args.length; ii++)
{
    dates = new File(args[ii]);
    try
    {
        dateScanner = new Scanner(dates);
        processDates(today);
    }
    catch(FileNotFoundException fnfe)
    {
        screen.printf("File not found. Getting next file...");
        screen.flush();
    }
}
```

```
}  
}
```

Comment: Put the process into the try block because with multiple files we may want to process the good names, but ignore the bad. This structure will allow us to do that.

6.4. What output was generated?

```
Today's Date: 23 January 2006  
  Birthday: Chita Rivera  
  Birthday: John Hancock  
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```