Core Java

13. Java Util and I/O

Util

- A package which provides a set of classes as utilities purposes
- Collections are already part of *util*
- Includes *Date*, *Currency*, *Calendar* types
- Includes *Timer*s for scheduling tasks
- Includes *Locale*, *Properties* and *ResourceBundle*
- Extensive Java documentation available

I/O

- A package which provides a set of classes for input/output purposes

- Very essential because the nature of input isn't always interactive

- Essential to understand Networked I/O as well

- Java I/O framework is the *java.io* package

- Java New I/O framework in the *java.nio* package

I/O Class Design

- *InputStream*, *OutputStream* are for raw character I/O; Equivalent of file descriptors in the OS

- *Reader* and *Writer* are for reading/writing from streams

- *IOException*s can occur during I/O operations

- *File* represents a physical file as shown by the OS

- *Console* represents a console window

General I/O Usage

- Get a *Reader*/*Writer* or associated *InputStream*/*OutputStream*

- Read/Write to the stream directly or with wrapper: notion of Byte I/O (locale independent) vs. Character I/O (locale-dependent)

- Wrap a *BufferedReader* or *BufferedWriter* to buffer and hence Read/Write in non-length chunks

- Use *PrintStream* for *printf* functionality

Demonstration

- Compile and Execute a few programs

Questions?