

# More Sophisticated Behaviour

Technical Support System V1.0

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# Lectures and Labs

- The Tech Support System lectures and labs are based on examples in Chapter 5 of:
  - Objects First with Java  
- A Practical Introduction using BlueJ, ©  
David J. Barnes, Michael Kölling



# Topic List

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 1. Recap of Library Classes (**Java's API**).

2. **Interface Vs Implementation.**

3. **Technical Support System V1:**

– Three Classes:

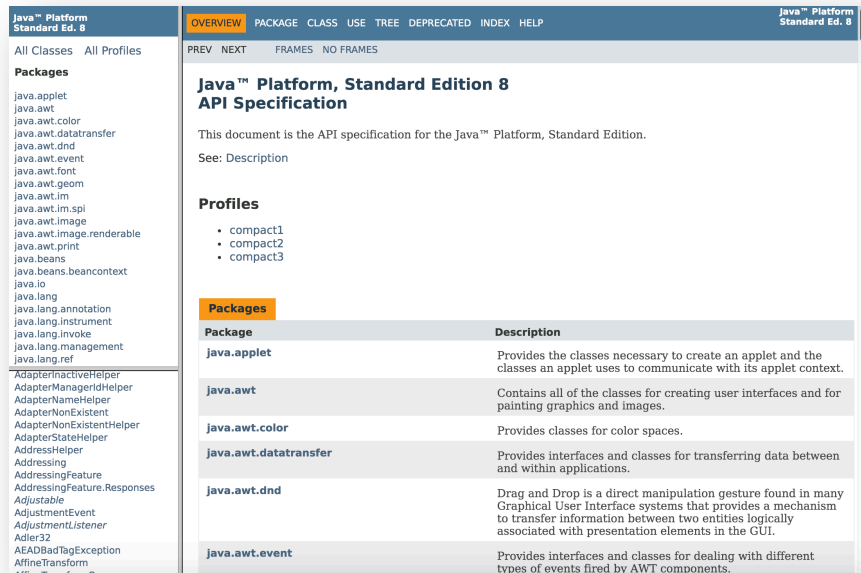
1. **InputReader** class

2. **Responder** class

3. **SupportSystem** class

# The Java class library (**API**)

- **API: Application Programmers' Interface**



- Thousands of **classes**.
- Tens of thousands of **methods**.
- Many useful classes that make life much easier.
- A competent Java programmer **must be able to work with the libraries**.
- Documentation of the Java libraries is in HTML format (generated using **javadoc** comments).
- Readable in a web browser.

# Using library classes - **import**

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- Classes from the library must be imported
  - using an **import** statement

```
import javax.swing.*;
```

```
import javax.swing.JOptionPane;
```

- exception are classes from *java.lang*
- They can then be used like classes from the current project.

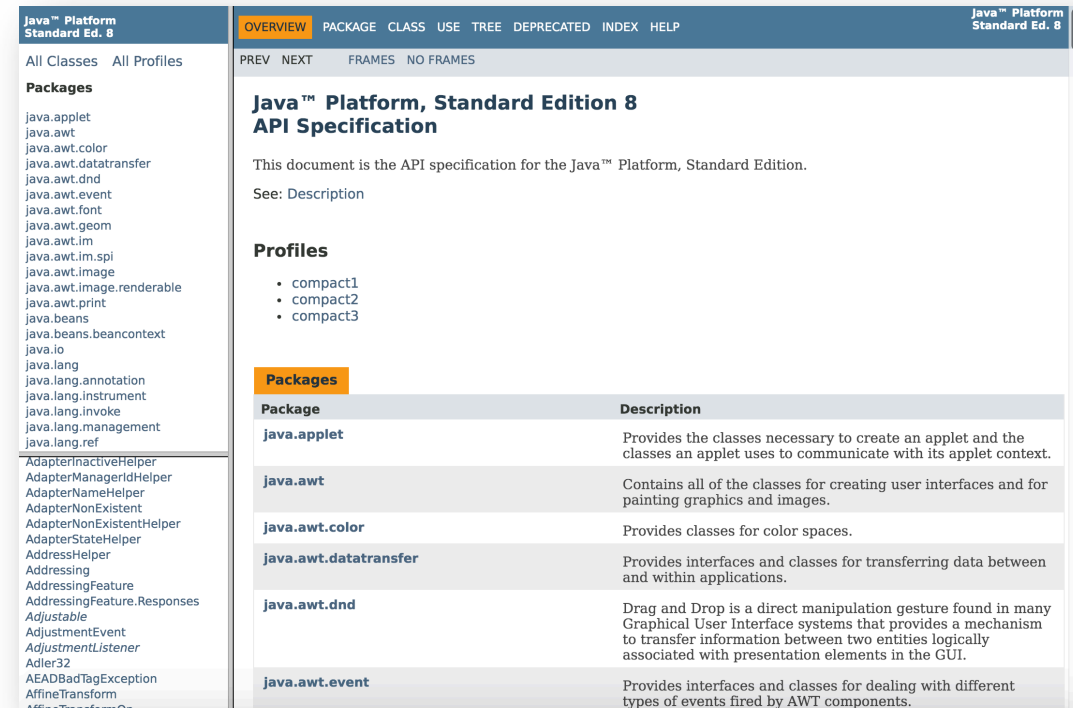
# Working with the library

You should:

- know some important packages/classes by name.
- know how to find out about other classes.

Remember:

- We only need to know the **interface**, not the **implementation**.
- **API** contains the **interface** description for all library classes.



The screenshot displays the Java Platform Standard Edition 8 API Specification website. The page is titled "Java™ Platform, Standard Edition 8 API Specification" and includes a navigation menu with options like "OVERVIEW", "PACKAGE", "CLASS", "USE", "TREE", "DEPRECATED", "INDEX", and "HELP". The main content area is divided into sections for "All Classes", "All Profiles", "Packages", and "Profiles". The "Packages" section is highlighted, showing a table with columns for "Package" and "Description".

| Package               | Description  |
|-----------------------|--|
| java.applet           | Provides the classes necessary to create an applet and the classes an applet uses to communicate with its applet context.  |
| java.awt              | Contains all of the classes for creating user interfaces and for painting graphics and images.   |
| java.awt.color        | Provides classes for color spaces.   |
| java.awt.datatransfer | Provides interfaces and classes for transferring data between and within applications.   |
| java.awt.dnd          | Drag and Drop is a direct manipulation gesture found in many Graphical User Interface systems that provides a mechanism to transfer information between two entities logically associated with presentation elements in the GUI. |
| java.awt.event        | Provides interfaces and classes for dealing with different types of events fired by AWT components.  |

# Topic List

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1. Recap of Library Classes (**Java's API**).

 **2. Interface Vs Implementation.**

3. Technical Support System **V1**:

– Overview of the System

– Three Classes:

1. **InputReader** class

2. **Responder** class

3. **SupportSystem** class

# Interface vs implementation

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*The documentation includes:*

- Class **name**;
- Class **description**;
- List of **constructors** and **methods**
- **Return values** and **parameters** for constructors and methods
- Description of the purpose of each constructor and method

➔ the *interface* of the class



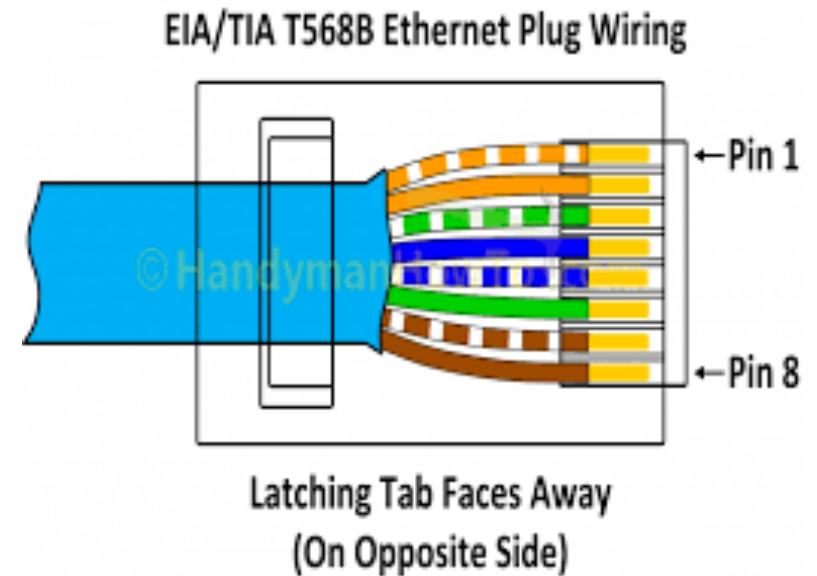


# Interface vs **implementation**

The documentation **does not** include

- private fields
  - (most fields are private)
- private methods
- the **bodies**
  - (source code) for each method

➔ the **implementation** of the class



| Cat5e Wire Diagram for T568B (Straight Through Cable) |                    |                      |                                      |                   |
|---|--------------------|----------------------|--------------------------------------|-------------------|
| RJ45 Pin #  | Wire Color (T568A) | Wire Diagram (T568A) | 10Base-T Signal<br>100Base-TX Signal | 1000Base-T Signal |
| 1   | White/Orange       |                      | Transmit+                            | BI_DA+            |
| 2   | Orange             |                      | Transmit-                            | BI_DA-            |
| 3   | White/Green        |                      | Receive+                             | BI_DB+            |
| 4   | Blue               |                      | Unused                               | BI_DC+            |
| 5   | White/Blue         |                      | Unused                               | BI_DC-            |
| 6   | Green              |                      | Receive-                             | BI_DB-            |
| 7   | White/Brown        |                      | Unused                               | BI_DD+            |
| 8   | Brown              |                      | Unused                               | BI_DD-            |

**Any  
Questions?**

