Adapter Pattern

Context:

You want to change the interface of an existing class (the adaptee) to a different interface.

Forces:

You want to be able to use a variety of objects to provide some functionality, without changing the application. But, the objects have different interfaces.

Readers as Adapters

InputStreamreads input as bytes.

```
int b = inputStream.read( );
```

InputStreamReader interprets the input as characters.

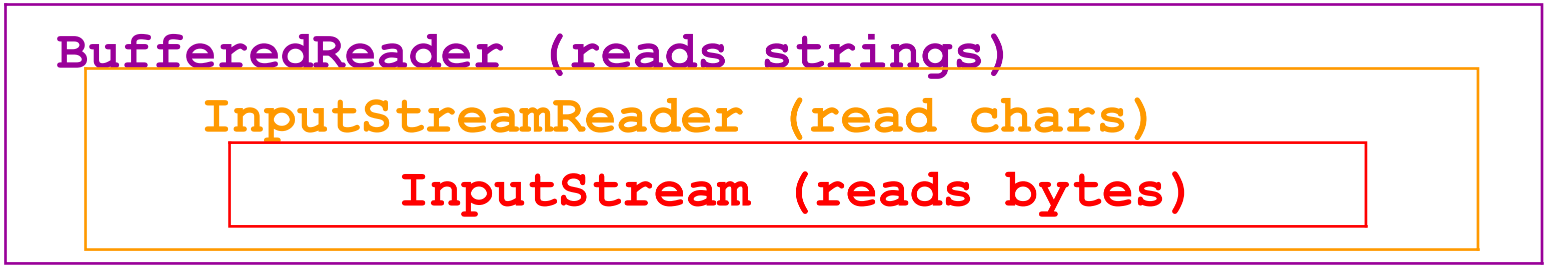
```
InputStreamReader reader
 = new InputStreamReader( inputStream );
char c = (char) reader.read( );
```

BufferedReader groups the characters into lines

```
BufferedReader bufReader
 = new BufferedReader( reader );
String line = bufReader.readLine( );
```

Adapter *wraps* a component

```
InputStream instream =
  new FileInputStream( "filename" );
InputStreamReader reader =
  new InputStreamReader( instream );
BufferedReader bufReader =
  new BufferedReader( reader );
String line = bufReader.readLine( );
```



BufferedReader (reads strings)

InputStreamReader (read chars)

InputStream (reads bytes)

"Adapters" in Swing

A MouseListener (interface) requires you to implement 5 methods.

If you only want to use 1 method, you must write 4 empty methods.