Class java.net.URL

```
java.lang.Object
   |
   +----java.net.URL
```

---

public final class **URL**
extends Object

Class URL represents a Uniform Reference Locator −− a reference to an object on the World Wide Web. This is a constant object, once it is created its fields cannot be changed.

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Constructors

- **URL**

```
public URL(String protocol,
           String host,
           int port,
           String file) throws MalformedURLException
```

Creates an absolute URL from the specified protocol, host, port and file.

Parameters:

protocol − the protocol to use
host − the host to connect to
port − the port at that host to connect to
file − the file on that host

Throws: MalformedURLException
If an unknown protocol is found.

- **URL**

```
public URL(String protocol,
           String host,
           String file) throws MalformedURLException
```

Creates an absolute URL from the specified protocol, host, and file. The port number used will be the default for the protocol.

Parameters:

protocol – the protocol to use
host – the host to connect to
file – the file on that host

Throws: MalformedURLException

If an unknown protocol is found.

o **URL**

```
public URL(String spec) throws MalformedURLException
```

Creates a URL from the unparsed absolute URL.

Parameters:

spec – the URL String to parse

o **URL**

```
public URL(URL context,
           String spec) throws MalformedURLException
```

Creates a URL from the unparsed URL in the context of the specified context. If spec is an absolute URL, cool, otherwise, parse it in terms of the context. Context may be null (indicating no context).

Parameters:

context – the context to parse the URL to.
spec – the URL String to parse

Throws: MalformedURLException

If the protocol is equal to null.

Methods

o **set**

```
protected void set(String protocol,
                   String host,
                   int port,
                   String file,
                   String ref)
```

Sets the fields of the URL. This is not a public method so that only URLStreamHandlers can modify URL fields. URLs are otherwise constant. REMIND: this method will be moved to URLStreamHandler

Parameters:

protocol – the protocol to use
host – the host name to connecto to
port – the protocol port to connect to
file – the specified file name on that host

ref – the reference

- **getPort**

```
public int getPort()
```

Gets the port number. Returns –1 if the port is not set.

- **getProtocol**

```
public String getProtocol()
```

Gets the protocol name.

- **getHost**

```
public String getHost()
```

Gets the host name.

- **getFile**

```
public String getFile()
```

Gets the file name.

- **getRef**

```
public String getRef()
```

Gets the ref.

- **equals**

```
public boolean equals(Object obj)
```

Compares two URLs.
Parameters:
obj – the URL to compare against.
Returns:
true if and only if they are equal, false otherwise.
Overrides:
equals in class Object

- **hashCode**

```
public int hashCode()
```

Creates an integer suitable for hash table indexing.

Overrides:
hashCode in class Object

o **sameFile**

```
public boolean sameFile(URL other)
```

Compares two URLs, excluding the "ref" fields: sameFile is true if the true references the same remote object, but not necessarily the same subpiece of that object.
Parameters:
other – the URL to compare against.
Returns:
true if and only if they are equal, false otherwise.

o **toString**

```
public String toString()
```

Converts to a human–readable form.
Returns:
the textual representation.
Overrides:
toString in class Object

o **toExternalForm**

```
public String toExternalForm()
```

Reverses the parsing of the URL.
Returns:
the textual representation of the fully qualified URL (ie. after the context and canonicalization have been applied).

o **openConnection**

```
public URLConnection openConnection() throws IOException
```

Creates (if not already in existance) a URLConnection object that contains a connection to the remote object referred to by the URL. Invokes the appropriate protocol handler. Failure is indicated by throwing an exception.
Throws: IOException
If an I/O exception has occurred.
See Also:
URLConnection

o **openStream**

```
public final InputStream openStream() throws IOException
```

Opens an input stream.
Throws: IOException
If an I/O exception has occurred.

o **getContent**

```
public final Object getContent() throws IOException
```

Gets the contents from this opened connection.
Throws: IOException
If an I/O exception has occurred.

o **setURLStreamHandlerFactory**

```
public static synchronized void setURLStreamHandlerFactory(URLStreamHandlerFactory fac)
```

Sets the URLStreamHandler factory.
Parameters:
fac – the desired factory
Throws: Exception
If the factory has already been defined.