



# **SNS COLLEGE OF TECHNOLOGY**

**Coimbatore-35  
An Autonomous Institution**

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## **DEPARTMENT OF MCA**

**I YEAR II SEM**

### **23CAT606 – Java Programming**

**UNIT III – NETWORKING AND I/O PACKAGES**



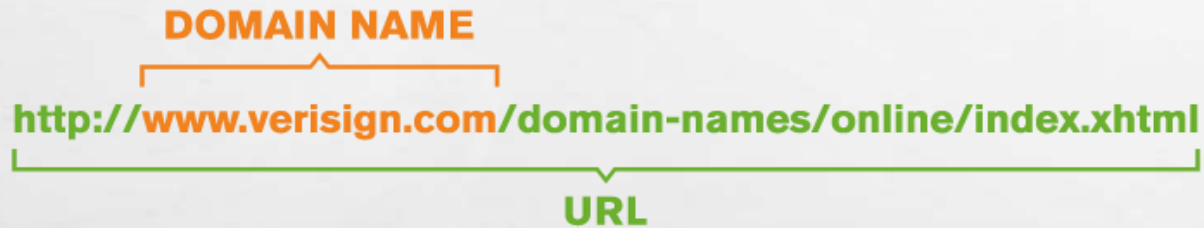
**Topic 16: URL**





# INTRODUCTION: URL

A domain name is part of a URL, which stands for Uniform Resource Locator. User can see the visual difference in the following example:



In order for computer networks and servers to “talk to one another,” computers rely on a language made up of numbers and letters called an IP address. Every device that connects to the internet has a unique IP address and looks something like this:

**22.231.113.64 or 3ffe:1900:4545:3:200:f8ff:fe21:67cf**



# URL IN JAVA

The **Java URL** class represents an URL. URL is an acronym for Uniform Resource Locator. It points to a resource on the World Wide Web. For example:

A URL contains many information:

**1.Protocol:** In this case, http is the protocol.

**2.Server name or IP Address:** In this case, [www.google.com](http://www.google.com) is the server name.

**3.Port Number:** It is an optional attribute. If we write `http://www.google.com:80/sonoojaiswal/`, 80 is the port number. If port number is not mentioned in the URL, it returns -1.

**4.File Name or directory name:** In this case, `index.jsp` is the file name.





# CONSTRUCTORS OF JAVA URL CLASS

1. **URL(String spec):** Creates an instance of a URL from the String representation.
2. **URL(String protocol, String host, int port, String file):** Creates an instance of a URL from the given protocol, host, port number, and file.
3. **URL(String protocol, String host, int port, String file, URLStreamHandler handler):** Creates an instance of a URL from the given protocol, host, port number, file, and handler.
4. **URL(String protocol, String host, String file):** Creates an instance of a URL from the given protocol name, host name, and file name.
5. **URL(URL context, String spec):** Creates an instance of a URL by parsing the given spec within a specified context.
6. **URL(URL context, String spec, URLStreamHandler handler):** Creates an instance of a URL by parsing the given spec with the specified handler within a given context.



# COMMONLY USED METHODS OF JAVA URL CLASS

Method	Description
<code>public String getProtocol()</code>	it returns the protocol of the URL.
<code>public String getHost()</code>	it returns the host name of the URL.
<code>public String getPort()</code>	it returns the Port Number of the URL.
<code>public String getFile()</code>	it returns the file name of the URL.
<code>public String getAuthority()</code>	it returns the authority of the URL.
<code>public String toString()</code>	it returns the string representation of the URL.
<code>public String getQuery()</code>	it returns the query string of the URL.
<code>public String getDefaultPort()</code>	it returns the default port of the URL.
<code>public URLConnection openConnection()</code>	it returns the instance of URLConnection i.e. associated with this URL.
<code>public boolean equals(Object obj)</code>	it compares the URL with the given object.
<code>public Object getContent()</code>	it returns the content of the URL.
<code>public String getRef()</code>	it returns the anchor or reference of the URL.
<code>public URI toURI()</code>	it returns a URI of the URL.



# EXAMPLE OF JAVA URL CLASS

```
//URLDemo.java
```

```
1. import java.net.*;
2. public class URLDemo{
3. public static void main(String[] args){
4. try{
5. URL url=new URL("http://www.javatpoint.com/java-tutorial");
6. System.out.println("Protocol: "+url.getProtocol());
7. System.out.println("Host Name: "+url.getHost());
8. System.out.println("Port Number: "+url.getPort());
9. System.out.println("File Name: "+url.getFile());
10. }catch(Exception e){System.out.println(e);}
11. }
12. }
```

Output:

Protocol: http

Host Name: [www.javatpoint.com](http://www.javatpoint.com)

Port Number: -1

File Name: /java-tutorial



# EXAMPLE OF JAVA URL CLASS

```
1.import java.net.*;
2.public class URLLDemo{
3.public static void main(String[] args){
4.try{
5.URL url=new URL("https://www.google.com/search?q=javatpoint&oq=javatpoint&sourceid=chrome&ie=UTF-8");
6.System.out.println("Protocol: "+url.getProtocol());
7.System.out.println("Host Name: "+url.getHost());
8.System.out.println("Port Number: "+url.getPort());
9.System.out.println("Default Port Number: "+url.getDefaultPort());
10.System.out.println("Query String: "+url.getQuery());
11.System.out.println("Path: "+url.getPath());
12.System.out.println("File: "+url.getFile());
13. }catch(Exception e){System.out.println(e);} } }
```

Output:  
Protocol: https  
Host Name: [www.google.com](https://www.google.com)  
Port Number: -1  
Default Port Number: 443  
Query String:  
q=javatpoint&oq=javatpoint&sourceid=chrome&ie=UTF-8  
Path: /search  
File:  
/search?q=javatpoint&oq=javatpoint&sourceid=chrome&ie=UTF-8



# JAVA URLCONNECTION CLASS

The **Java URLConnection** class represents a communication link between the URL and the application. This class can be used to read and write data to the specified resource referred by the URL.

How to get the object of URLConnection class

```
1.public URLConnection openConnection()throws IOException{ }
```

```
1.import java.io.*;  
2.import java.net.*;  
3.public class URLConnectionExample {  
4.public static void main(String[] args){  
5. try{  
6. URL url=new URL("http://www.javatpoint.com/java-tutorial");  
7. URLConnection urlcon=url.openConnection();  
8. InputStream stream=urlcon.getInputStream();  
9.int i;  
10.while((i=stream.read())!=-1){  
11. System.out.print((char)i);  
12. }  
13. }catch(Exception e){ System.out.println(e);}  
14. }  
15. }
```





# Reference

1. Herbert Schildt “ The Complete Reference Java 2, 8<sup>th</sup> edition , Tata McGraw Hill, 2011
2. Ralph Bravaco, Shai Simonson, “Java Programming: From the Ground up Tata McGraw Hill, 2012
3. <https://www.javatpoint.com>

