

1. What is URL? Give an example of a URL that shows each components of URL. Diagrammatic representation is more preferred.

A Uniform Resource Locator (URL) is the web address used to access resource on the internet, such as a webpage, image or file.

Components of URL

- i. Scheme: Specifies the protocol used to access the resource. (eg: http, https, ftp)
- ii. Host: The domain name or IP address of the server where the resource is located. (eg: www.example.com)
- iii. Port: This is optional. It specified the port number on the server (eg: :80 for http, :443 for https)
- iv. Path: The location of the resource on the server (eg: /path /to/resource)
- v. Query: This field also optional. A string of parameters passed to the server. (eg: ?key1=value1&key2=value2)
- vi. Fragment: A reference to a specific section within the resource. (eg: #section1)

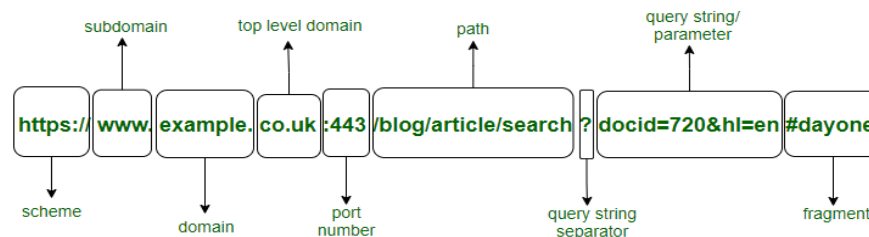
Example:

<https://www.example.com:443/path/to/resource?key1=value1&key2=value2#section1>

Diagrammatic Representation:

Parts of a URL

URL : <https://www.example.co.uk:443/blog/article/search?docid=720&hl=en#dayone>



2. URLs and URIs with example for each. Can all URLs be URIs? Why?

The differences are:

URL	URI
URL is used to describe the identity of an item.	URI provides a technique for defining the identity of an item.
URL links a web page, a component of a web page or a program on a web page with the help of accessing methods like protocols.	URI is used to distinguish one resource from other regardless of the method used.
URL provides the details about what type of protocol is to be used.	URI doesn't contains the protocol specification.
URL is a type of URI.	URI is the superset of URL.
It comprises of protocol, domain, path, hash, and so on.	It comprises of scheme, authority, path, query and many more.

Examples:

- i. URI: urn:isbn:978-3-16-148410-0
 - This is a Uniform Resource Name (URN) that uniquely identifies a book by its International Standard Book Number (ISBN). It does not provide a location to access the book but uniquely identifies it.
- ii. URL: https://www.example.com/path/to/resource
 - This is a URL that specifies the protocol (https), the domain (www.example.com), and the path (/path/to/resource). It provides a specific way to access the resource on the internet.

Yes, all URLs can be considered URIs because URLs are a subset of URIs. This is because:

- Identification: Both URLs and URIs serve the purpose of identifying a resource. URLs do this by providing a location and access method.
- Specificity: While all URLs specify a location, not all URIs specify a location (eg: URNS like urn:isbn: 978-3-16-148410-0)