RESTful API Development:

<https://www.tutorialspoint.com/restful/restful_introduction.htm>

**Jersey Framework** is used to create RESTful Web Services. Jersey framework implements **JAX-RS 2.0** API, which is a standard specification to create RESTful Web Services. (Jersey, a reference implementation of JAX-RS 2.0 by Oracle)

**REST** stands for **RE**presentational **S**tate **T**ransfer. REST is a web standards based architecture and uses HTTP Protocol for data communication. It revolves around resources where every component is a resource and a resource is accessed by a common interface using HTTP standard methods.

HTTP Methods

The following HTTP methods are most commonly used in a REST based architecture.

* **GET** − Provides a read only access to a resource.
* **PUT** − Used to create a new resource.
* **DELETE** − Used to remove a resource.
* **POST** − Used to update an existing resource or create a new resource.
* **OPTIONS** − Used to get the supported operations on a resource.

**RESTful Web Services - Java (JAX-RS)**

**JAX-RS** stands for JAVA API for RESTful Web Services

<https://www.tutorialspoint.com/restful/restful_jax_rs.htm>

## **Specifications**

Following are the most commonly used annotations to map a resource as a web service resource.

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| **Sr.No.** | **Annotation & Description** |
| 1 | **@Path**  Relative path of the resource class/method. |
| 2 | **@GET**  HTTP Get request, used to fetch resource. |
| 3 | **@PUT**  HTTP PUT request, used to create resource. |
| 4 | **@POST**  HTTP POST request, used to create/update resource. |
| 5 | **@DELETE**  HTTP DELETE request, used to delete resource. |
| 6 | **@HEAD**  HTTP HEAD request, used to get status of method availability. |
| 7 | **@Produces**  States the HTTP Response generated by web service. For example, APPLICATION/XML, TEXT/HTML, APPLICATION/JSON etc. |
| 8 | **@Consumes**  States the HTTP Request type. For example, application/x-www-formurlencoded to accept form data in HTTP body during POST request. |
| 9 | **@PathParam**  Binds the parameter passed to the method to a value in path. |
| 10 | **@QueryParam**  Binds the parameter passed to method to a query parameter in the path. |
| 11 | **@MatrixParam**  Binds the parameter passed to the method to a HTTP matrix parameter in path. |
| 12 | **@HeaderParam**  Binds the parameter passed to the method to a HTTP header. |
| 13 | **@CookieParam**  Binds the parameter passed to the method to a Cookie. |
| 14 | **@FormParam**  Binds the parameter passed to the method to a form value. |
| 15 | **@DefaultValue**  Assigns a default value to a parameter passed to the method. |
| 16 | **@Context**  Context of the resource. For example, HTTPRequest as a context. |