RestTemplate Methods in Spring Boot

RestTemplate provides an easy way to interact with RESTful APIs in Spring Boot.

Below are the major HTTP methods supported by RestTemplate, with code examples:

1. GET Methods:

   - getForObject(): Fetches the response body directly as an object (e.g., String or a custom class).

   - getForEntity(): Fetches the full HTTP response (body, headers, status).

   Example:

   String getUrl = "https://jsonplaceholder.typicode.com/posts/1";

   String getResponse = restTemplate.getForObject(getUrl, String.class);

   ResponseEntity<String> getEntityResponse = restTemplate.getForEntity(getUrl, String.class);

2. POST Methods:

   - postForObject(): Sends data and gets the response body directly.

   - postForEntity(): Sends data and gets the full HTTP response.

   - postForLocation(): Sends data and gets the location (URI) of the created resource.

   Example:

   String postUrl = "https://jsonplaceholder.typicode.com/posts";

   String newPost = "{"title": "foo", "body": "bar", "userId": "1"}";

   ResponseEntity<String> postResponse = restTemplate.postForEntity(postUrl, newPost, String.class);

   URI postLocation = restTemplate.postForLocation(postUrl, newPost);

3. PUT Method:

- put(): Updates a resource; no response is returned.

Example:

String putUrl = "https://jsonplaceholder.typicode.com/posts/1";

String updatedPost = "{"id": "1", "title": "updated", "body": "updated body", "userId": "1"}";

restTemplate.put(putUrl, updatedPost);

4. DELETE Method:

- delete(): Deletes a resource; no response is returned.

Example:

String deleteUrl = "https://jsonplaceholder.typicode.com/posts/1";

restTemplate.delete(deleteUrl);

5. HEAD Method:

- headForHeaders(): Fetches only the HTTP headers of a resource.

Example:

HttpHeaders headers = restTemplate.headForHeaders(baseUrl);

6. OPTIONS Method:

- optionsForAllow(): Gets the allowed HTTP methods for a resource.

Example:

ResponseEntity<?> optionsResponse = restTemplate.optionsForAllow(baseUrl);

7. Exchange Method:

   - exchange(): Allows you to specify any HTTP method and include headers, body, and more.

   Example:

   ResponseEntity<String> exchangeResponse = restTemplate.exchange(getUrl, HttpMethod.GET, null, String.class);