

1.7 ROUTE PARAMETERS

Router parameters are dynamic values that are used to pass information through URLs, typically in web applications. They are commonly used in frameworks like Express (Node.js), React Router (for client-side routing), and others.

There are two main types of router parameters:

1. **Route Parameters (Path Parameters):** These are part of the URL path and are typically represented by a colon (:) followed by a variable name.

For example:

- In Express (Node.js):

```
app.get('/user/:id', (req, res) => {  
  const userId = req.params.id;  
  res.send(`User ID is ${userId}`);  
});
```
- In React Router:

```
<Route path="/user/:id" component={User} />
```

Here, :id is a route parameter that can be accessed in your route handler.

2. **Query Parameters:** These are passed in the URL after a ? symbol and typically come in key-value pairs, like ?key=value. They are often used for filtering or pagination. For example:

- In Express:

```
app.get('/search', (req, res) => {  
  const query = req.query.q; // Retrieves value of 'q'  
  res.send(`Searching for: ${query}`);  
});
```
- In React Router:

```
// The query string could look like /search?q=example  
const queryParams = new URLSearchParams(location.search);  
const query = queryParams.get('q');
```

Both types allow developers to manage dynamic content and handle user input more efficiently in their web applications.