

WEB APP DEVELOPMENT WITH REACTJS (INT252)

Lecture 16: Programmatic Navigation & useNavigate

Unit IV – Routing & Advanced Concepts

Syllabus Mapping:

- Programmatic navigation
- useNavigate hook
- Navigation based on logic

Target Learner: Beginner → Intermediate

Why Programmatic Navigation Is Needed

So far we navigated using:

- <Link> clicks

But real apps need:

- Redirect after login
- Navigation after form submit
- Conditional redirects

What is Programmatic Navigation?

Navigation controlled by:

- JavaScript logic
- Not user clicking links

useNavigate Hook

`useNavigate` allows React to:

- Change routes using code

Importing useNavigate

```
import { useNavigate } from 'react-router-dom';
```

Basic useNavigate Syntax

```
const navigate = useNavigate();
```

Simple Navigation Example

```
function Home() {
  const navigate = useNavigate();

  return (
    <button onClick={() => navigate('/about')}>
      Go to About
    </button>
  );
}
```

Navigation Flow (Visual)

Button Click



`navigate('/path')`



URL changes



New component renders

Redirect After Login Example

```
function Login() {
  const navigate = useNavigate();

  function handleLogin() {
    // authentication logic
    navigate('/dashboard');
  }

  return <button onClick={handleLogin}>Login</button>;
}
```

Navigate with Conditions

```
if (isAuthenticated) {  
  navigate('/home');  
}
```

Navigate Back & Forward

```
navigate(-1); // back  
navigate(1); // forward
```

Replace Navigation (No History)

```
navigate('/login', { replace: true });
```

Used for logout

useNavigate vs Link

Link	useNavigate
User clicks	Code logic
Static	Dynamic

Common Beginner Mistakes

- ✗ Calling navigate outside component
- ✗ Using useNavigate without Router
- ✗ Infinite redirects

Practice Exercises

1. Navigate on button click
2. Redirect after condition
3. Navigate back using button

Answers – Practice Exercises

```
<button onClick={() => navigate('/home')}>Home</button>
```

```
isLoggedIn && navigate('/dashboard');
```

```
<button onClick={() => navigate(-1)}>Back</button>
```

Key Takeaways

- `useNavigate` enables code-based routing
- Used for redirects and logic
- Essential for authentication flows

Next Lecture

Lecture 17: Context API – Global State Management

Unit V – State Management & Advanced React