

The background features three vertical stripes on the left: a wide pink one, a narrower blue one, and a medium-width beige one. On the right side, there are two rectangular areas filled with a grid of small, light pink dots.

WHAT ARE KEYS IN REACT?

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- **Unique identifiers for list elements in React.**
- **Help React identify and manage elements efficiently.**

WHY USE KEYS?

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Performance Optimization

- Minimize unnecessary re-renders.
- Enable React to update only the changed elements.

State Management

- Maintain the state of components correctly during updates.
- Prevent bugs related to input fields and component states.



HOW KEY WORKS

● Key Mechanism

- React compares keys between renders to determine which items have changed.
- Keys must be stable and unique among siblings.

EXAMPLE OF KEYS IN ACTION

- **WITH KEYS**

```
{items.map(item => ( <li key={item.id}>{item.name}</li> ))}
```

- **WITHOUT KEYS**

```
{items.map(item => ( <li>{item.name}</li> ))}
```

DIFFERENCES IN BEHAVIOR

● WITH KEYS

- Efficient rendering: Only updated elements re-rendered.
- Correct state retention.

● WITHOUT KEYS

- Potential performance issues: Entire list may re-render.
- State confusion: Input values may not match items correctly.

BEST PRACTICES FOR KEYS

Use Unique Identifiers

- Prefer stable IDs from your data source.

Keep Keys Consistent

- Ensure keys remain the same between renders unless the item itself changes.

CONCLUSION

Keys are crucial for performance and state management in React.

Always use keys for lists to optimize rendering and prevent bugs.



The background features three vertical stripes on the left: a wide pink stripe, a medium blue stripe, and a narrow beige stripe. The right side of the image is a light beige background with two rectangular areas of small, light pink dots in the top right and bottom right corners.

THANK YOU