

# Render complex todo item

1. Issue with complex markup
2. Solution using `<template>` tag

## 1. Issue with complex markup

It's ok to use `document.createElement` for simple markup:

```
<li>Learn Javascript</li>
```

```
function createTodoElement(todo) {  
  const liElement = document.createElement('li');  
  liElement.textContent = todo.title;  
  return liElement;  
}
```

but what if the markup is complicated like this or even more

```
<li>  
  <div class="todo alert alert-secondary" role="alert">  
    <div class="d-flex justify-content-between align-items-center">  
      <p class="todo__title mb-0">TODO TITLE</p>  
      <div class="todo__actions">  
        <button type="button" class="btn btn-success mark-as-done">  
          Finish  
        </button>  
        <button type="button" class="btn btn-danger remove">  
          Remove  
        </button>  
      </div>  
    </div>  
  </div>  
</li>
```

## Todo List

Learn Javascript

Finish

Remove

Learn ReactJS

Finish

Remove

Source: <https://codesandbox.io/p/sandbox/js-todo-list-template-unxue?file=%2Findex.html>

## 2. Solution using `<template>` tag

1. Using `<template>` tag
2. Clone the template content
3. Change the text content + attach events if needed

```
<template id="todoTemplate">
  <li>
    <div class="todo alert alert-secondary" role="alert">
      <div class="d-flex justify-content-between align-items-center">
        <p class="todo__title mb-0">TODO TITLE</p>
        <div class="todo__actions">
          <button type="button" class="btn btn-success mark-as-done">
            Finish
          </button>
          <button type="button" class="btn btn-danger remove">
            Remove
          </button>
        </div>
      </div>
    </div>
  </li>
</template>;
```

```
function createTodoElement(todo) {
  const todoTemplate = document.getElementById("todoTemplate");
  if (!todoTemplate) return;
  // clone the li element
  const todoElement = todoTemplate.content.firstElementChild.cloneNode(true);
  // find and update title
  const todoTitleElement = todoElement.querySelector(".todo__title");
  if (todoTitleElement) todoTitleElement.textContent = todo.title;
  // TODO: attach events to buttons
  return todoElement;
}
```

### Tham khảo

- <https://developer.mozilla.org/en-US/docs/Web/HTML/Element/template>
- <https://developer.mozilla.org/en-US/docs/Web/API/DocumentFragment>