



10-4 如何实现类组件渲染的源码

资源

1. 类组件

React TSX

```
class ClassComponent extends Component {  
  render() {  
    return (  
      <div>  
        <h3>ClassComponent</h3>  
      </div>  
    );  
  }  
}
```

定义 Component

ReactBaseClasses.ts

TypeScript

```
export function Component(props: any) {
  this.props = props;
}

Component.prototype.isReactComponent = {};
```

render 阶段

beginWork

ReactFiberBeginWork.ts

TypeScript

```
// 类组件
function updateClassComponent(current: Fiber | null, workInProgress: F
  const { type, pendingProps } = workInProgress;

  const instance = new type(pendingProps);
  workInProgress.stateNode = instance;

  const children = instance.render();

  reconcileChildren(current, workInProgress, children);
  return workInProgress.child;
}
```

创建 Fiber

ReactFiber.ts

TypeScript

```
function shouldConstruct(Component: Function) {
  const prototype = Component.prototype;
  return !!((prototype && prototype.isReactComponent));
}

// 根据 TypeAndProps 创建fiber
export function createFiberFromTypeAndProps(
```

```

type: any,
key: null | string,
pendingProps: any
) {
  let fiberTag: WorkTag = IndeterminateComponent;
  if (typeof type === "function") {
    if (shouldConstruct(type)) {
      fiberTag = ClassComponent;
    }
  }
  if (isStr(type)) {
    // 原生标签
    fiberTag = HostComponent;
  } else if (type === REACT_FRAGMENT_TYPE) {
    fiberTag = Fragment;
  }

  const fiber = createFiber(fiberTag, pendingProps, key);
  fiber.elementType = type;
  fiber.type = type;
  return fiber;
}

```

completeWork

8 changed files		@@ -1,6 +1,12 @@	
<input checked="" type="checkbox"/>	examples/src/main.tsx	1	1
<input checked="" type="checkbox"/>	examples/which-react.ts	2	2
<input checked="" type="checkbox"/>	packages/react-reconciler/src/ReactFiber.ts	3	3
<input checked="" type="checkbox"/>	packages/react-reconciler/src/ReactFiberBeginWork.ts	4	4
<input checked="" type="checkbox"/>	packages/react-reconciler/src/ReactFiberCompleteWork.ts	5	5
<input checked="" type="checkbox"/>	packages/react/index.ts	6	6
<input checked="" type="checkbox"/>	packages/react/src/index.ts	7	7
<input checked="" type="checkbox"/>	packages/react/src/ReactBaseClasses.ts	8	8
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```

import { isNum, isStr } from "shared/utils";
import { Fiber } from "../ReactInternalTypes";
- import { Fragment, HostComponent, HostRoot, HostText } from "../ReactWorkTags";
+ import {
+   ClassComponent,
+   Fragment,
+   HostComponent,
+   HostRoot,
+   HostText,
+ } from "../ReactWorkTags";

export function completeWork(
  current: Fiber | null,
  @@ -9,6 +15,7 @@ export function completeWork(
    const newProps = workInProgress.pendingProps;
    switch (workInProgress.tag) {
      case Fragment:
+     case ClassComponent:
      case HostRoot: {
        return null;
      }
    }
  }

```

