

# 动态规划

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最长递增子序列

## 资源

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## 开始学习

### Vue源码调试

1. 下载vue3: `git clone https://github.com/vuejs/vue-next.git`
2. 在vue-next下安装依赖: `yarn --ignore-scripts`
3. 生成sourcemap文件, package.json  
`"dev": "node scripts/dev.js --sourcemap"`
4. 编译: `yarn dev`

生成结果:

packages\vue\dist\vue.global.js

packages\vue\dist\vue.global.js.map

5. 调试范例代码: `yarn serve`
6. 在vue/examples下创建patch.html

```
<div id="app">
  <button v-on:click="add">{{count}}</button>

  <ul>
    <li v-for="item in state.arr" :key="item">{{item}}</li>
  </ul>

</div>

<script src="../../dist/vue.global.js"></script>
<!-- <script src="http://unpkg.com/vue@next"></script> -->

<script>
  const {
```

```

    createApp,
    ref,
    reactive
  } = Vue
  const app = createApp({
    setup() {
      const count = ref(0)
      const state = reactive({
        arr: [0, 1, 2, 3, 4]
      })
      const add = () => {
        count.value++
        if (count.value % 2) {
          state.arr = [1, 3, 2, 5]
        } else {
          state.arr = [0, 1, 2, 3, 4]
        }
      }

      return {
        count,
        add,
        state
      }
    }
  }).mount('#app')
</script>

```

7. 打开地址: <http://localhost:5000/packages/vue/examples/patch>

## patch VS diff

### 最长递增子序列

场景: Vue中更新阶段, 新老虚拟dom的diff的时候, 如果有节点移动, 那么此时可以计算下dom节点中最长递增子序列, 减少move, 确保对dom的操作影响到最小。

```

function getSequence(arr: number[]): number[] {
  const p = arr.slice()
  const result = [0]
  let i, j, u, v, c
  const len = arr.length
  for (i = 0; i < len; i++) {
    const arrI = arr[i]
    if (arrI !== 0) {
      j = result[result.length - 1]
      if (arr[j] < arrI) {
        p[i] = j
        result.push(i)
        continue
      }
    }
    u = 0
    v = result.length - 1

```

```
while (u < v) {  
    c = (u + v) >> 1  
    if (arr[result[c]] < arrI) {  
        u = c + 1  
    } else {  
        v = c  
    }  
}  
if (arrI < arr[result[u]]) {  
    if (u > 0) {  
        p[i] = result[u - 1]  
    }  
    result[u] = i  
}  
}  
}  
u = result.length  
v = result[u - 1]  
while (u-- > 0) {  
    result[u] = v  
    v = p[v]  
}  
return result  
}
```

