



# Problem 3: Messy React - with comments

## 1. Use of **any** type for blockchain parameter

```
const getPriority = (blockchain: any): number => {  
  switch (blockchain) {  
    case 'Osmosis':  
      return 100  
    case 'Ethereum':  
      return 50  
    case 'Arbitrum':  
      return 30  
    case 'Zilliqa':  
      return 20  
    case 'Neo':  
      return 20  
    default:  
      return -99  
  }  
}
```

Using any type defeats the purpose of TypeScript. We should use specific type if necessary:

```
const getPriority = (blockchain: string): number => { ... };
```

## 2. Improve the **getPriority()** function for more efficient and readable

By using an object for the mapping instead of a `switch` statement. This change can improve lookup performance and maintainability:

```
const priorities = {
  'Osmosis': 100,
  'Ethereum': 50,
  'Arbitrum': 30,
  'Zilliqa': 20,
  'Neo': 20
};

const getPriority = (blockchain: string): number => {
  return priorities[blockchain] ?? -99;
}
```

### 3. Redundant `if` Condition

The nested `if` statement when we filter balances can be combined for clarity and efficiency:

```
const sortedBalances = useMemo(() => {
  return balances.filter((balance: WalletBalance) => {
    const balancePriority = getPriority(balance.blockchain);
    return balancePriority > -99 && balance.amount <= 0;
  }).sort(
    // ....sort section
  );
}, [balances, prices]);
```

### 4. Missing Return Statement in `sort()` method

The `sort` comparator should always return a value, even when priorities are equal.

```
const sortedBalances = useMemo(() => {
  return balances.filter((balance: WalletBalance) => {
    //...filter section
  }).sort((lhs: WalletBalance, rhs: WalletBalance) => {
    const leftPriority = getPriority(lhs.blockchain);
    const rightPriority = getPriority(rhs.blockchain);
    if (leftPriority > rightPriority) {
      return -1;
    } else if (rightPriority > leftPriority) {
      return 1;
    }
    return 0;
  });
}, [balances, prices]);
```

## 5. Confusing use of `prices`

The dependency array includes `prices`, but `prices` is not used in the computation. If `prices` are not needed, they should be removed from the dependency array to avoid unnecessary re-computations.

## 6. Repeated Calculations

The mapping over `sortedBalances` to create `formattedBalances` and then mapping over `formattedBalances` to create `rows` can be combined into a single map operation to avoid iterating twice.

```
const rows = sortedBalances.map((balance: WalletBalance, index:
  const formatted = balance.amount.toFixed();
  const usdValue = prices[balance.currency] * balance.amount;
  return (
    <WalletRow
      className={classes.row}
      key={index}
      amount={balance.amount}
```

```
        usdValue={usdValue}  
        formattedAmount={formatted}  
      />  
    );  
  });
```