

🐞 Bug 1: Loop Output Issue

```
for (let i = 0; i <= customers.length; i++) {  
    console.log(customers[i].name);  
}
```

🔍 Hint: Array index & loop condition

```
for (let i = 0; i < customers.length; i++) {  
  
    console.log(customers[i].name);  
}
```

🐞 Bug 2: filter() Not Working

```
const activeCustomers = customers.filter((c) => {  
    c.active === true;  
});
```

🔍 Hint: Return value

```
const activeCustomers = customers.filter((c) => c.active === true);
```

🐞 Bug 3: Premium Increase Logic Broken

```
const updatedPremiums = customers.map((c) => {  
    if (c.age >= 50) {  
        c.premium = c.premium * 1.1;  
    }  
});
```

🔍 Hint: map return & immutability

```
const updatedPremiums = customers.map((c) => {  
  
    if (c.age >= 50) return { ...c, premium: c.premium * 1.1 };  
  
    return c;  
});
```

🐞 Bug 4: Wrong Total Premium Calculation

```
const totalPremium = customers.reduce((total, c) => {  
    total + c.premium;  
}, 0);
```

🔍 Hint: reduce return

```
const totalPremium = customers.reduce((total, c) => {  
  
    return total + c.premium;  
}, 0);
```

Bug 5: Template Literal Not Printing

```
console.log("Customer ${customers[0].name} has policy  
${customers[0].policy}");
```

 Hint: Quotes type

```
console.log(`Customer ${customers[0].name} has policy ${customers[0].policy}`);
```

Bug 6: Policy Count Incorrect

```
const policyCount = customers.reduce((count, c) => {  
  count.policy = (count.policy || 0) + 1;  
  return count;  
}, {});
```

 Hint: Dynamic object key

```
const policyCount = customers.reduce((count, c) => {  
  
  count[c.policy] = (count[c.policy] || 0) + 1;  
  
  return count;  
  
}, {});
```

Bug 7: Risk Level Always Undefined

```
const customersWithRisk = customers.map((c) => {  
  let riskLevel;  
  if (c.age < 35) riskLevel = "Low";  
  if (c.age <= 50) riskLevel = "Medium";  
  else riskLevel = "High";  
  return { ...c, riskLevel };  
});
```

 Hint: Condition chaining

```
const customersWithRisk = customers.map((c) => {  
  
  let riskLevel;  
  if (c.age < 35) riskLevel = "Low";  
  else if (c.age <= 50) riskLevel = "Medium";  
  else riskLevel = "High";  
  return { ...c, riskLevel };  
  
});
```

🐞 Bug 8: Active vs Inactive Count Wrong

```
let active = 0,  
    inactive = 0;  
  
for (const c in customers) {  
    if (c.active) active++;  
    else inactive++;  
}
```

🔍 Hint: for...in vs for...of

```
let active = 0, inactive = 0;
```

```
for (const c of customers) {  
    if (c.active) active++;  
    else inactive++;  
}
```

🐞 Bug 9: Arrow Function Syntax Error

```
const getLifeCustomers = () =>  
    customers.filter((c) => c.policy === "Life").map((c) =>  
        c.name);
```

🔍 Hint: Arrow function return

```
const getLifeCustomers = () =>  
    customers  
        .filter((c) => c.policy === "Life")  
        .map((c) => c.name);
```

🐞 Bug 10: Sorting Mutates Original Array

```
const sortedCustomers = customers.sort((a, b) => b.premium -  
    a.premium);
```

🔍 Hint: Array mutation

```
const sortedCustomers = [...customers].sort((a, b) => b.premium - a.premium);
```