Angular Coding Round - Mock Test

1. Debug the Code

The following component fails to update the view when a value changes. Identify and fix the issue.

```
@Component({
  selector: 'app-counter',
  template: '{{ count }}'
})
export class CounterComponent {
  count = 0;

  constructor() {
    setTimeout(() => {
      this.count++;
    }, 1000);
  }
}
```

Task: Why doesn't the view update after 1 second? How would you fix it?

2. Implement Reactive Form Validation

Create a reactive form with email and password fields. Password must be at least 8 characters.

Task: Write the TypeScript code to create the form and handle validation.

3. Optimize ngFor with trackBy

You have a list of users rendered using *ngFor. The list updates frequently.

Task: Modify the template to use trackBy to improve performance.

4. Fix Memory Leak

The component subscribes to an observable but memory usage increases over time.

```
ngOnInit() {
  this.subscription = this.myService.getData().subscribe(data => {
    this.data = data;
  });
}
```

Task: Fix the memory leak in this component.

5. Lazy Load a Module

You have a ReportsModule that should only load when the user navigates to '/reports'.

Task: Write the route configuration to lazy load ReportsModule.