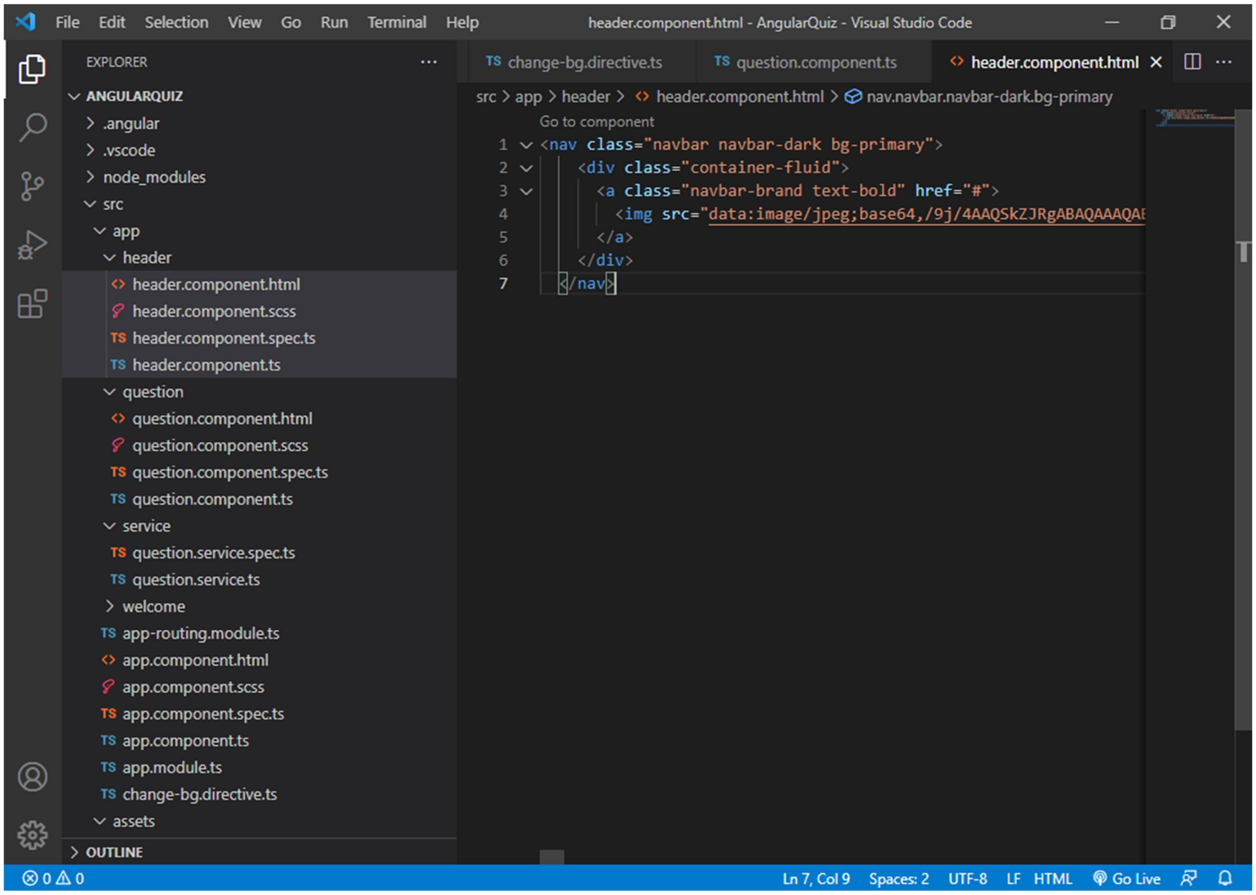
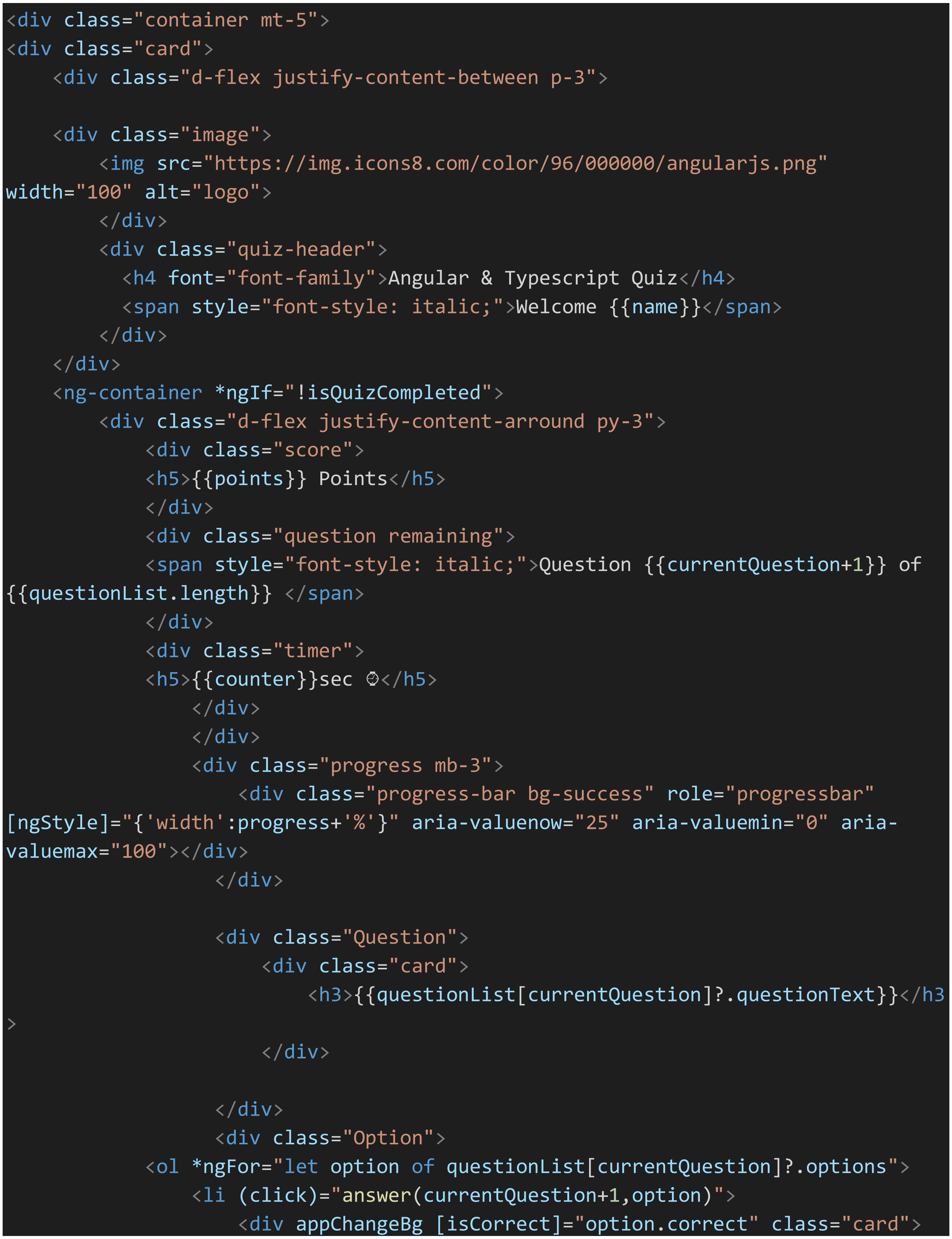
Header.component.html



```html
<nav class="navbar navbar-dark bg-primary">
  <div class="container-fluid">
    <a class="navbar-brand text-bold" href="#">
      <img src="data:image/jpeg;base64,/9j/4AAQSkZJRgABAQAAAQAE
    </a>
  </div>
</nav>
```

Questions.component.html

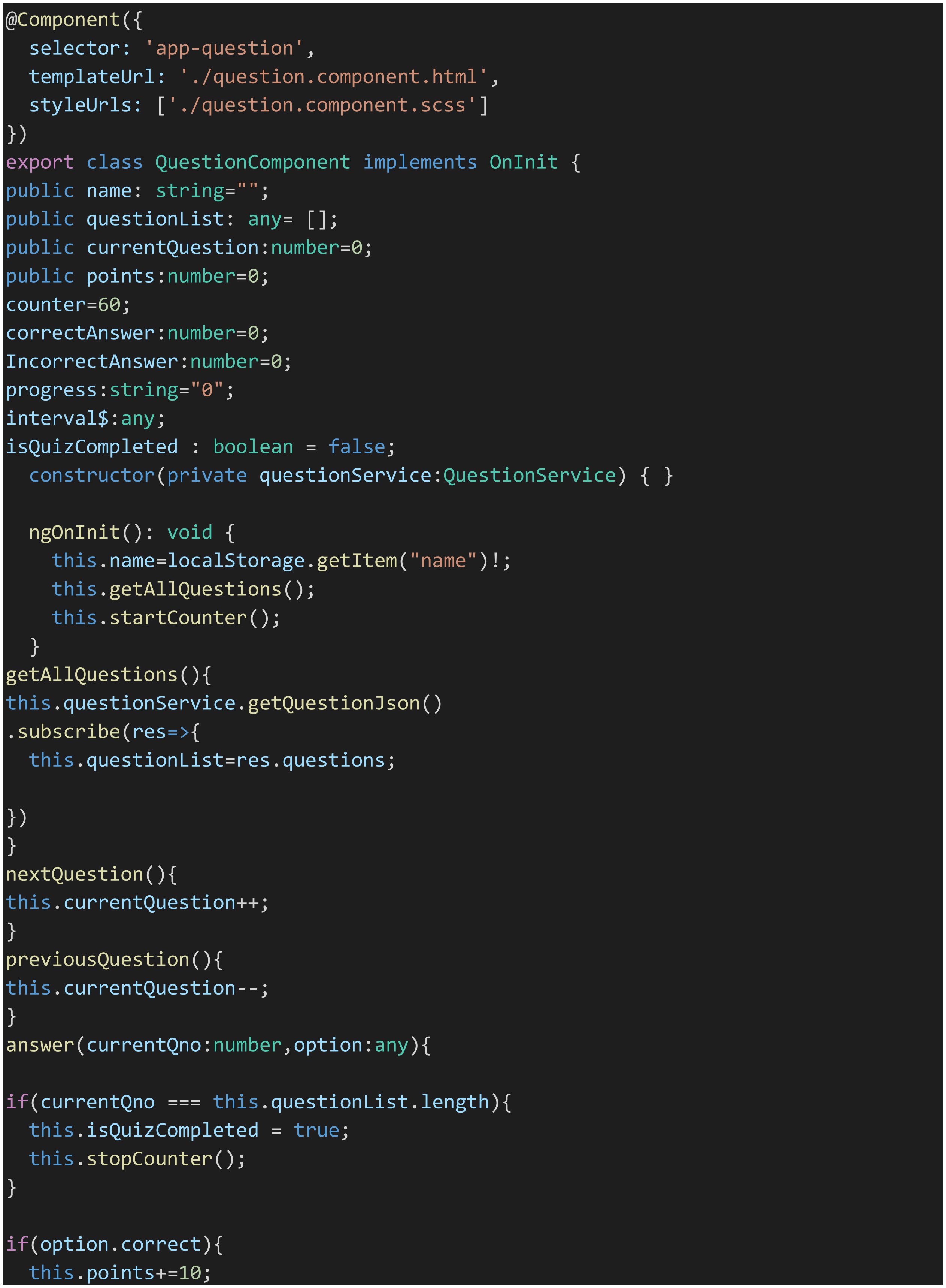


```html
<div class="container mt-5">
<div class="card">
    <div class="d-flex justify-content-between p-3">

    <div class="image">
        <img src="https://img.icons8.com/color/96/000000/angularjs.png"
width="100" alt="logo">
        </div>
        <div class="quiz-header">
          <h4 font="font-family">Angular & Typescript Quiz</h4>
          <span style="font-style: italic;">Welcome {{name}}</span>
        </div>
    </div>
    <ng-container *ngIf="!isQuizCompleted">
        <div class="d-flex justify-content-arround py-3">
            <div class="score">
            <h5>{{points}} Points</h5>
            </div>
            <div class="question remaining">
            <span style="font-style: italic;">Question {{currentQuestion+1}} of
{{questionList.length}} </span>
            </div>
            <div class="timer">
            <h5>{{counter}}sec ⌚</h5>
                </div>
                </div>
                <div class="progress mb-3">
                    <div class="progress-bar bg-success" role="progressbar"
[ngStyle]="{'width':progress+'%'}" aria-valuenow="25" aria-valuemin="0" aria-
valuemax="100"></div>
                  </div>

                  <div class="Question">
                      <div class="card">
                          <h3>{{questionList[currentQuestion]?.questionText}}</h3
>

                      </div>

                  </div>
                  <div class="Option">
            <ol *ngFor="let option of questionList[currentQuestion]?.options">
                <li (click)="answer(currentQuestion+1,option)">
                    <div appChangeBg [isCorrect]="option.correct" class="card">
```

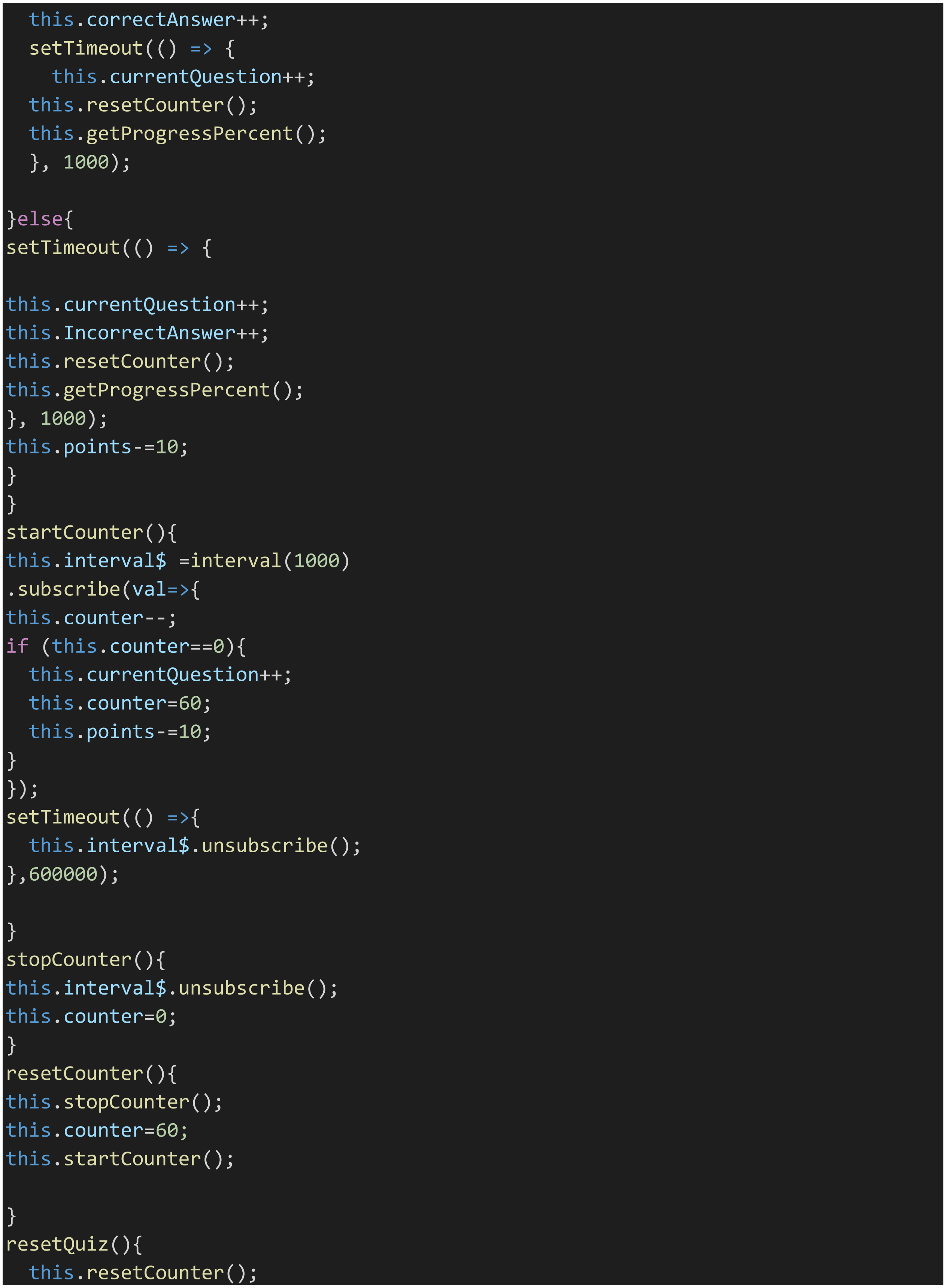
```
                        {{option.text}}
                    </div>
                    </li>
            </ol>
                  </div>
                  <div class="d-flex justify-content-between p-3">
                      <button [disabled]="currentQuestion==0" class="btn"
(click)="previousQuestion()"><i class="fa text-primary fa-chevron-left fa-3x"
aria-hidden="true"></i></button>
                      <button class="btn" (click)="resetQuiz()"><i class="fa
text-primary fa-refresh fa-3x" aria-hidden="true"></i></button>
                      <button class="btn"(click)="nextQuestion()"><i class="fa
text-primary fa-chevron-right fa-3x" aria-hidden="true"></i></button>
                  </div>

    </ng-container>
    <ng-container *ngIf="isQuizCompleted" >
        <div class="row d-flex justify-content-between">
            <img style="width: 50%;" class="img-fluid col-sm-12 mx-auto"
src="https://previews.123rf.com/images/rashadashurov/rashadashurov1909/rashadashurov190903486/130223025-result-icon-simple-element-illustration-result-concept-symbol-design-can-be-used-for-web.jpg" width="100" alt="logo">
        <div class="result text-center col-md-6 col-sm-12">
    <h3>Congratulations!!! <br>You have completed the Quiz. <br>Below is your
scorecard:</h3>
    <p>Total Questions attempted:{{questionList.length}}</p>
    <p>Total Correct Questions answered:{{correctAnswer}}</p>
    <p>Total wrong Questions answered:{{IncorrectAnswer}}</p>
    <p>Your Score:{{points}} Points</p>
    </div>
</div>
    </ng-container>
```

Question.component.ts

```
import { Component, OnInit } from '@angular/core';
import { QuestionService } from '../service/question.service';
import { interval } from 'rxjs';
```



```
@Component({
  selector: 'app-question',
  templateUrl: './question.component.html',
  styleUrls: ['./question.component.scss']
})
export class QuestionComponent implements OnInit {
public name: string="";
public questionList: any= [];
public currentQuestion:number=0;
public points:number=0;
counter=60;
correctAnswer:number=0;
IncorrectAnswer:number=0;
progress:string="0";
interval$:any;
isQuizCompleted : boolean = false;
  constructor(private questionService:QuestionService) { }

  ngOnInit(): void {
    this.name=localStorage.getItem("name")!;
    this.getAllQuestions();
    this.startCounter();
  }
getAllQuestions(){
this.questionService.getQuestionJson()
.subscribe(res=>{
  this.questionList=res.questions;

})
}
nextQuestion(){
this.currentQuestion++;
}
previousQuestion(){
this.currentQuestion--;
}
answer(currentQno:number,option:any){

if(currentQno === this.questionList.length){
  this.isQuizCompleted = true;
  this.stopCounter();
}

if(option.correct){
  this.points+=10;
```



```
  this.correctAnswer++;
  setTimeout(() => {
    this.currentQuestion++;
  this.resetCounter();
  this.getProgressPercent();
  }, 1000);

}else{
setTimeout(() => {

this.currentQuestion++;
this.IncorrectAnswer++;
this.resetCounter();
this.getProgressPercent();
}, 1000);
this.points-=10;
}
}
startCounter(){
this.interval$ =interval(1000)
.subscribe(val=>{
this.counter--;
if (this.counter==0){
  this.currentQuestion++;
  this.counter=60;
  this.points-=10;
}
});
setTimeout(() =>{
  this.interval$.unsubscribe();
},600000);

}
stopCounter(){
this.interval$.unsubscribe();
this.counter=0;
}
resetCounter(){
this.stopCounter();
this.counter=60;
this.startCounter();

}
resetQuiz(){
  this.resetCounter();
  this.getAllQuestions();
  this.points=0;
  this.counter=60;
  this.currentQuestion=0;

}
getProgressPercent(){
  this.progress=((this.currentQuestion/this.questionList.length)*100).toString();
  return this.progress;
}
}
```

Welcome.component.html

```
<div class="container bg-light py-5">
<h1 class="display-5 fw-bold">Welcome To Quiz App</h1>
<p class="col-md-8 fs-4"> This Quiz will contains total 9 questions. Each
Questions carry 10 points.</p>
<h4>Rules:</h4>
<ol>
    <li>Correct Questions give you plus 10 points</li>
    <li>Correct Questions give you minus 10 points</li>
    <li>You will have 60 seconds to answer each question</li>
    <li>Refreshing the page will reset Quiz</li>
</ol>
<h1 style="font-family: cursive;text-align:center">All the Best!!</h1>
<div class="name col-md-4 my-3">
<label for="">Enter your name:</label>
<input #name type="text" class="form-control">
</div>
<button class="btn btn-primary btn-lg" routerLink="/question"
(click)="startQuiz()">Start the Quiz</button>
</div>
```

======================== ==============

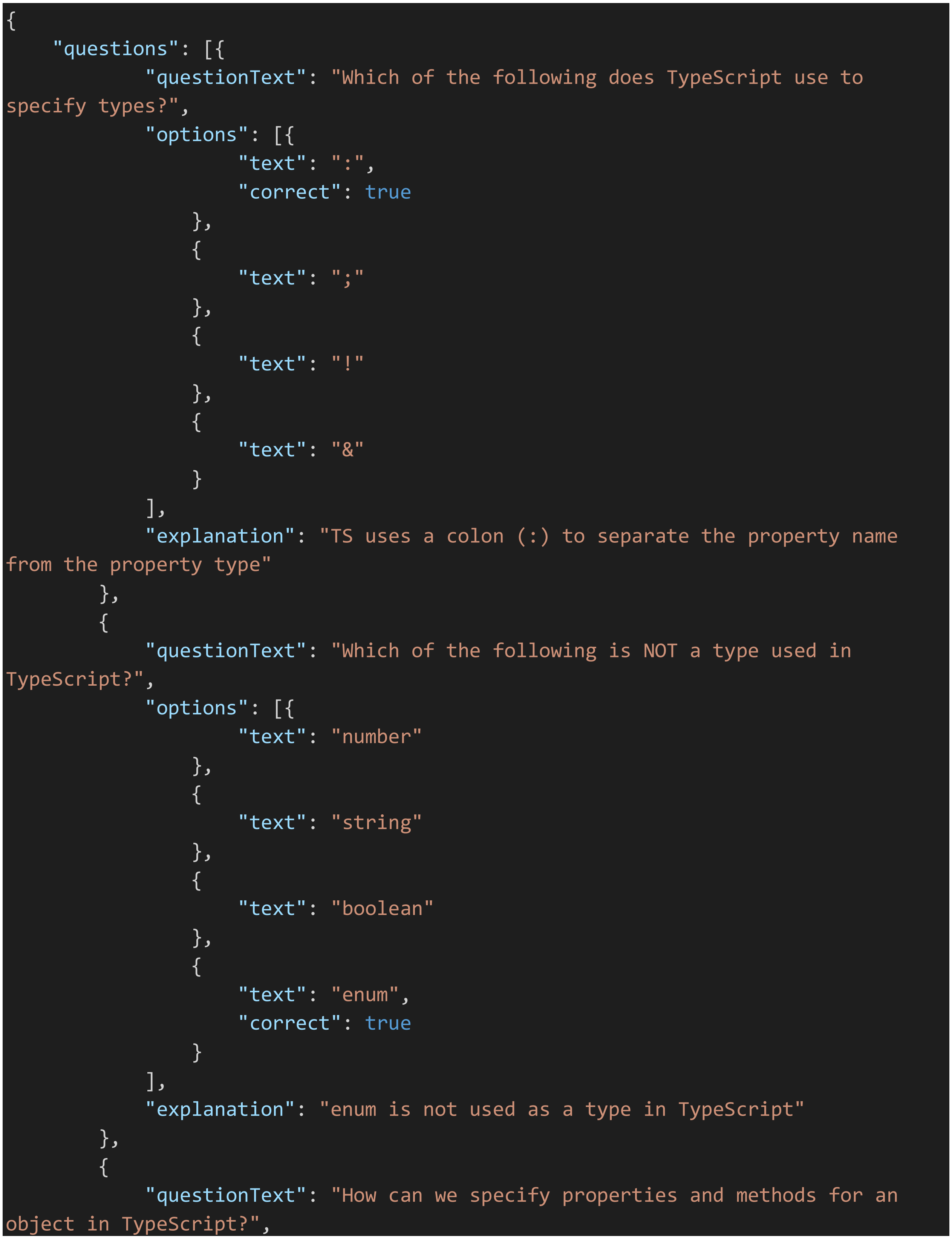
Welcome.component.ts

```
import { Component, OnInit,ViewChild,ElementRef } from '@angular/core';

@Component({
  selector: 'app-welcome',
  templateUrl: './welcome.component.html',
  styleUrls: ['./welcome.component.scss']
})
export class WelcomeComponent implements OnInit {
@ViewChild('name') nameKey!:ElementRef;
  constructor() { }

  ngOnInit(): void {
  }
  startQuiz(){
    localStorage.setItem("name",this.nameKey.nativeElement.value)
  }

}
```

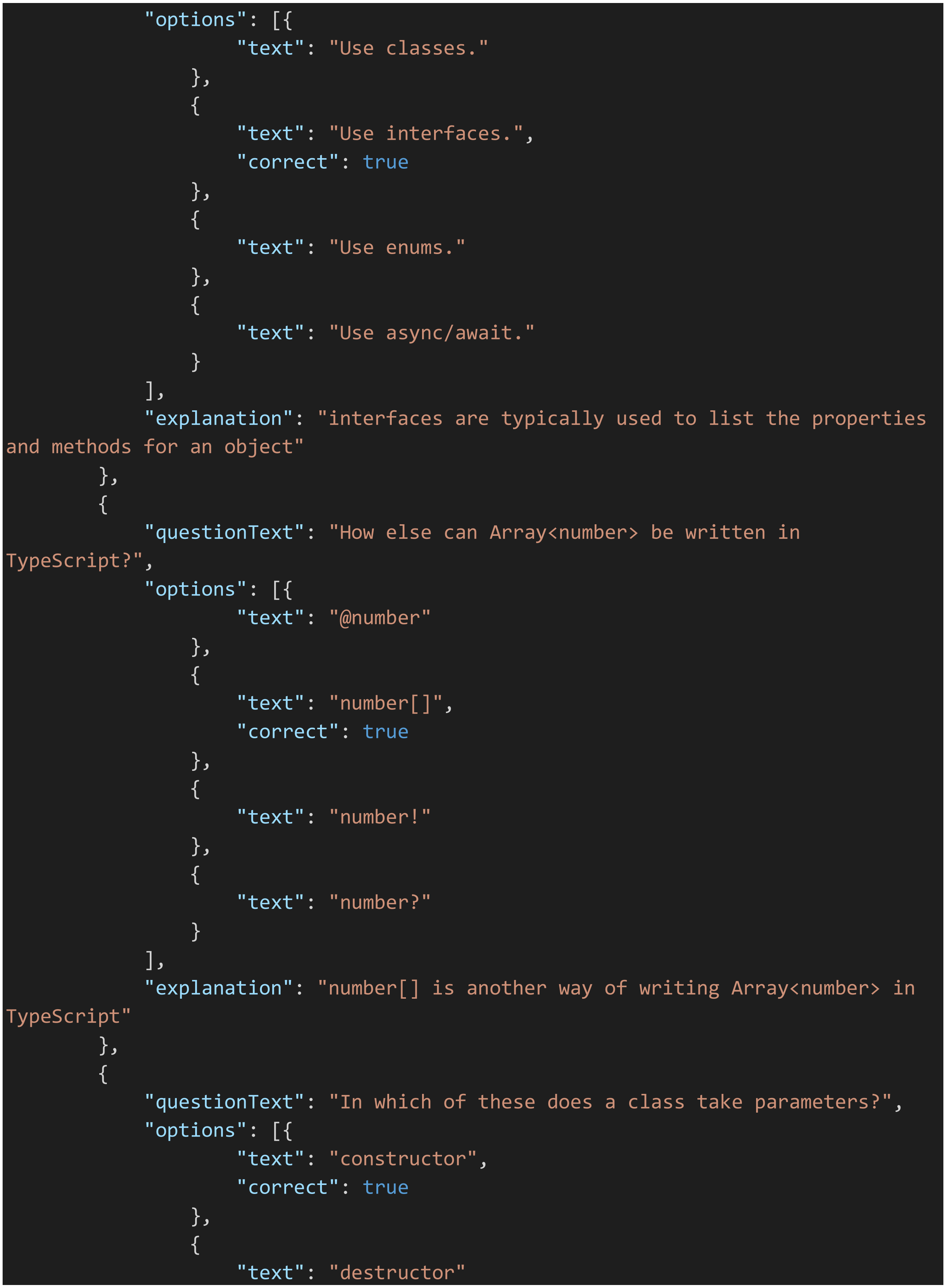
Change-bg.directive.ts

```
import { Directive, ElementRef, HostListener, Input, Renderer2 } from
'@angular/core';

@Directive({
  selector: '[appChangeBg]'
})
export class ChangeBgDirective {
@Input() isCorrect :Boolean =false;

  constructor(private el :ElementRef, private render :Renderer2) { }
@HostListener('click') answer(){
if(this.isCorrect){
this.render.setStyle(this.el.nativeElement,'background','green')
this.render.setStyle(this.el.nativeElement,'color','#fff')
this.render.setStyle(this.el.nativeElement,'border','2px solid grey')
}
else{
  this.render.setStyle(this.el.nativeElement,'background','red')
  this.render.setStyle(this.el.nativeElement,'color','#fff')
  this.render.setStyle(this.el.nativeElement,'border','2px solid grey')
}
}
}
```

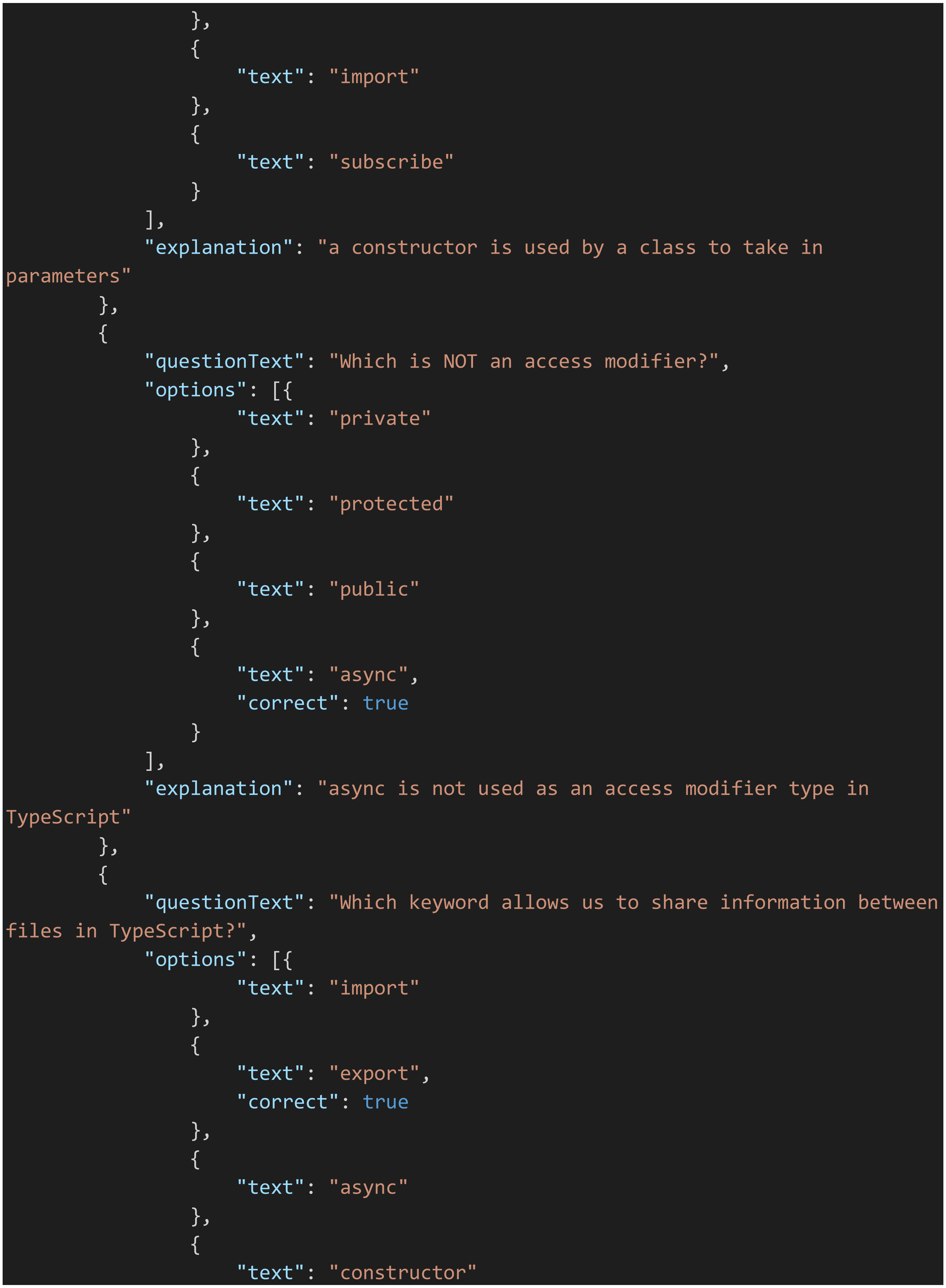
Questions.json



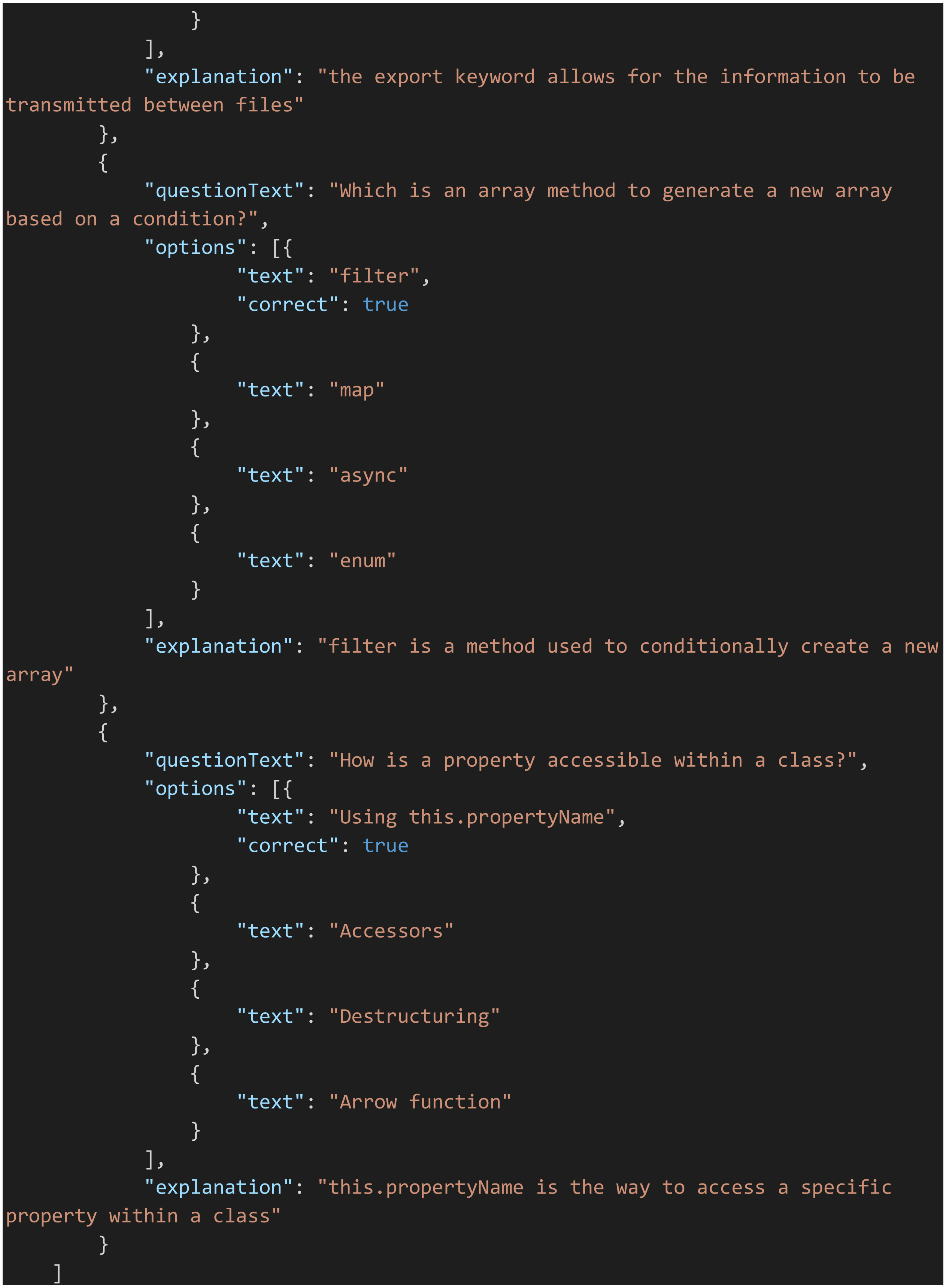
```
{
    "questions": [{
            "questionText": "Which of the following does TypeScript use to specify types?",
            "options": [{
                    "text": ":",
                    "correct": true
                },
                {
                    "text": ";"
                },
                {
                    "text": "!"
                },
                {
                    "text": "&"
                }
            ],
            "explanation": "TS uses a colon (:) to separate the property name from the property type"
        },
        {
            "questionText": "Which of the following is NOT a type used in TypeScript?",
            "options": [{
                    "text": "number"
                },
                {
                    "text": "string"
                },
                {
                    "text": "boolean"
                },
                {
                    "text": "enum",
                    "correct": true
                }
            ],
            "explanation": "enum is not used as a type in TypeScript"
        },
        {
            "questionText": "How can we specify properties and methods for an object in TypeScript?",
```



```
            "options": [{
                    "text": "Use classes."
                },
                {
                    "text": "Use interfaces.",
                    "correct": true
                },
                {
                    "text": "Use enums."
                },
                {
                    "text": "Use async/await."
                }
            ],
            "explanation": "interfaces are typically used to list the properties
and methods for an object"
        },
        {
            "questionText": "How else can Array<number> be written in
TypeScript?",
            "options": [{
                    "text": "@number"
                },
                {
                    "text": "number[]",
                    "correct": true
                },
                {
                    "text": "number!"
                },
                {
                    "text": "number?"
                }
            ],
            "explanation": "number[] is another way of writing Array<number> in
TypeScript"
        },
        {
            "questionText": "In which of these does a class take parameters?",
            "options": [{
                    "text": "constructor",
                    "correct": true
                },
                {
                    "text": "destructor"
```



```
                },
                {
                    "text": "import"
                },
                {
                    "text": "subscribe"
                }
            ],
            "explanation": "a constructor is used by a class to take in
parameters"
        },
        {
            "questionText": "Which is NOT an access modifier?",
            "options": [{
                    "text": "private"
                },
                {
                    "text": "protected"
                },
                {
                    "text": "public"
                },
                {
                    "text": "async",
                    "correct": true
                }
            ],
            "explanation": "async is not used as an access modifier type in
TypeScript"
        },
        {
            "questionText": "Which keyword allows us to share information between
files in TypeScript?",
            "options": [{
                    "text": "import"
                },
                {
                    "text": "export",
                    "correct": true
                },
                {
                    "text": "async"
                },
                {
                    "text": "constructor"
```



```
                }
            ],
            "explanation": "the export keyword allows for the information to be transmitted between files"
        },
        {
            "questionText": "Which is an array method to generate a new array based on a condition?",
            "options": [{
                    "text": "filter",
                    "correct": true
                },
                {
                    "text": "map"
                },
                {
                    "text": "async"
                },
                {
                    "text": "enum"
                }
            ],
            "explanation": "filter is a method used to conditionally create a new array"
        },
        {
            "questionText": "How is a property accessible within a class?",
            "options": [{
                    "text": "Using this.propertyName",
                    "correct": true
                },
                {
                    "text": "Accessors"
                },
                {
                    "text": "Destructuring"
                },
                {
                    "text": "Arrow function"
                }
            ],
            "explanation": "this.propertyName is the way to access a specific property within a class"
        }
    ]
```

```
}
```