Online Test Applications

Version History:

Author	Shaik Ibrahim
Purpose	Online Test Applications
Date	December 15, 2021.
Version	13.1

Contents:

1. Project Modules:

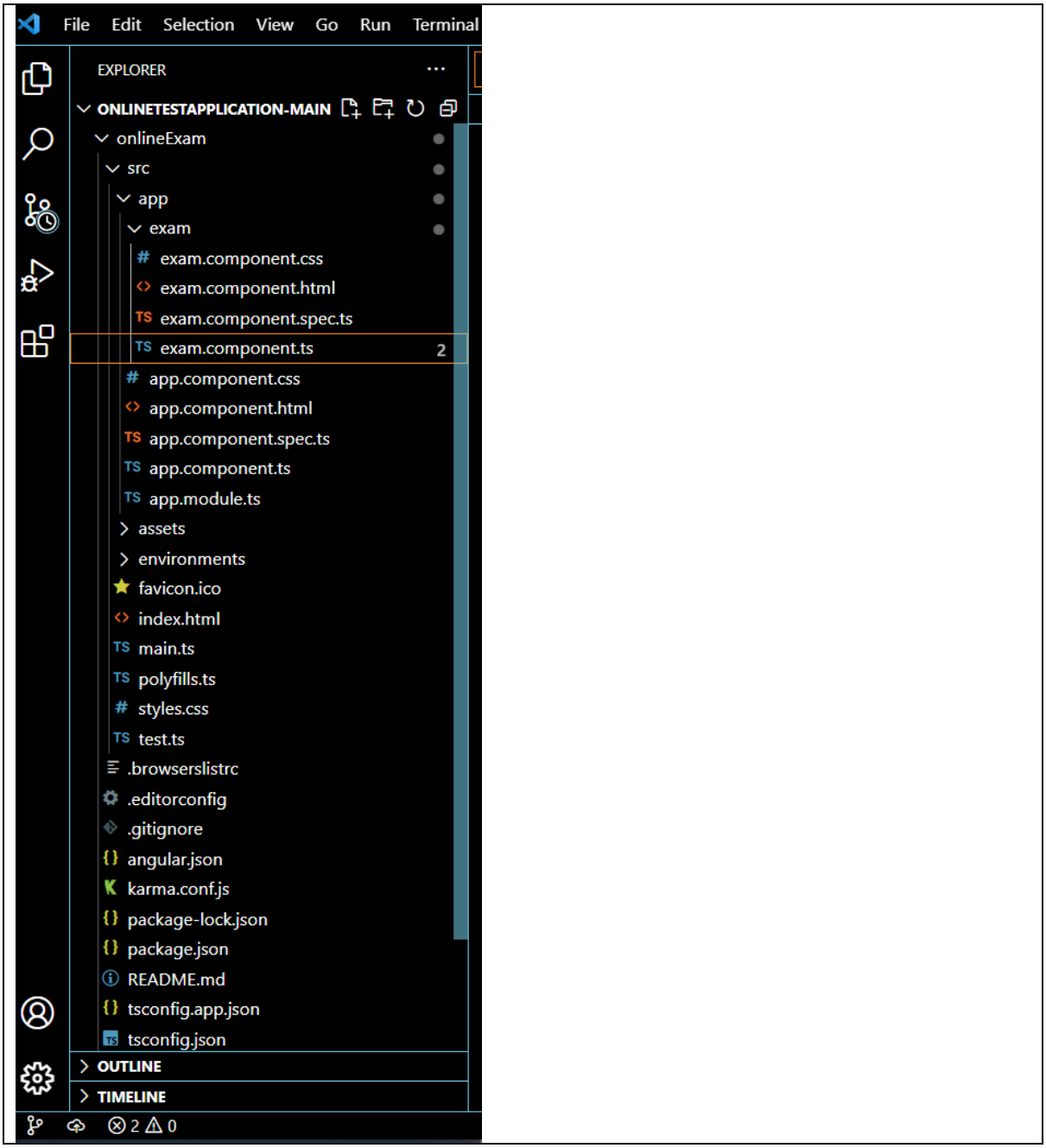
1. Node js.
2. Visual Studios.
3. Angular 13.3.1
4. Angular .json
5. HTML
6. Css
7. Java Scriot
8. karma configuration model.
9. Sql Data Base
10. PowerShell

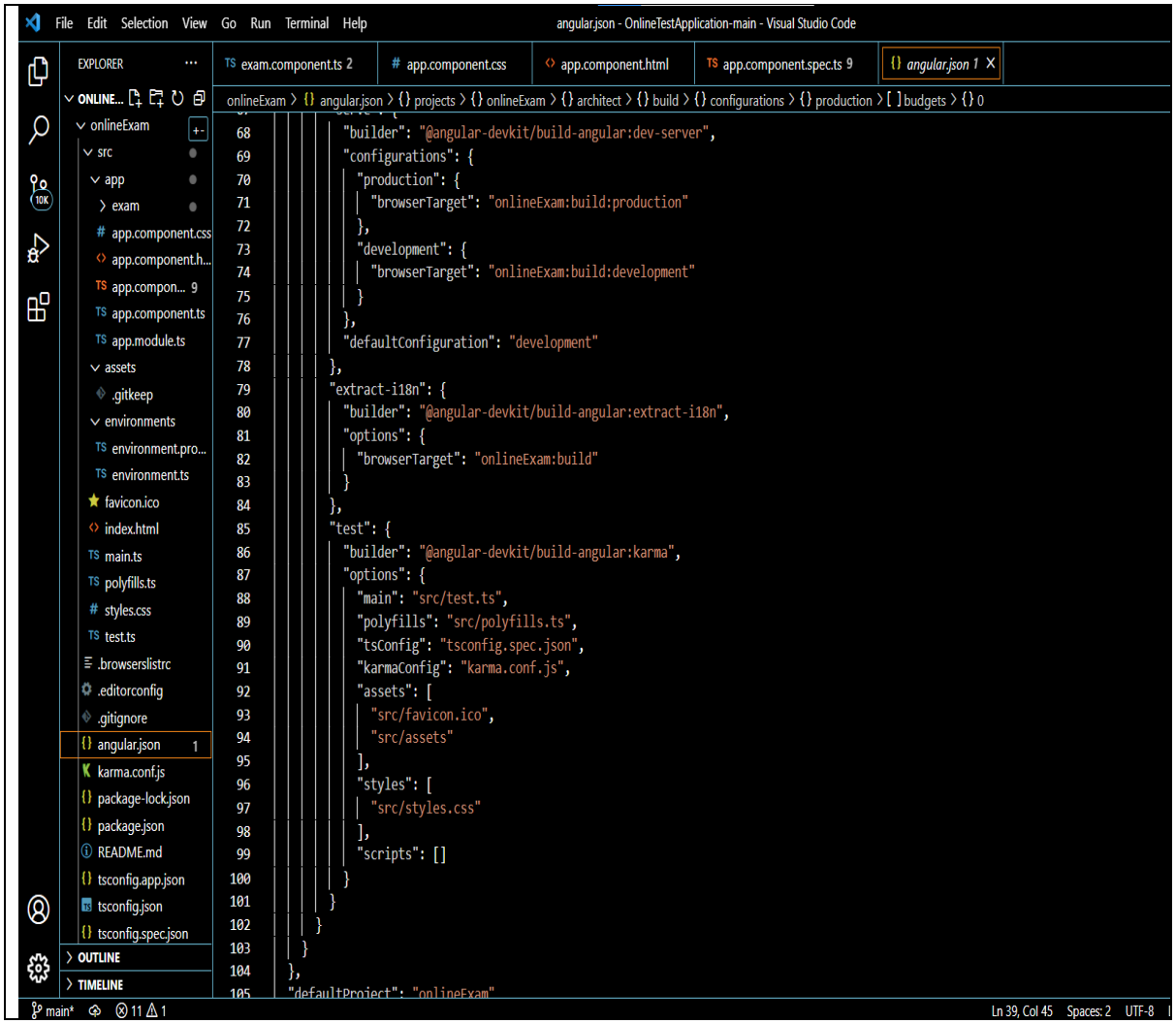
2. Git hub link:

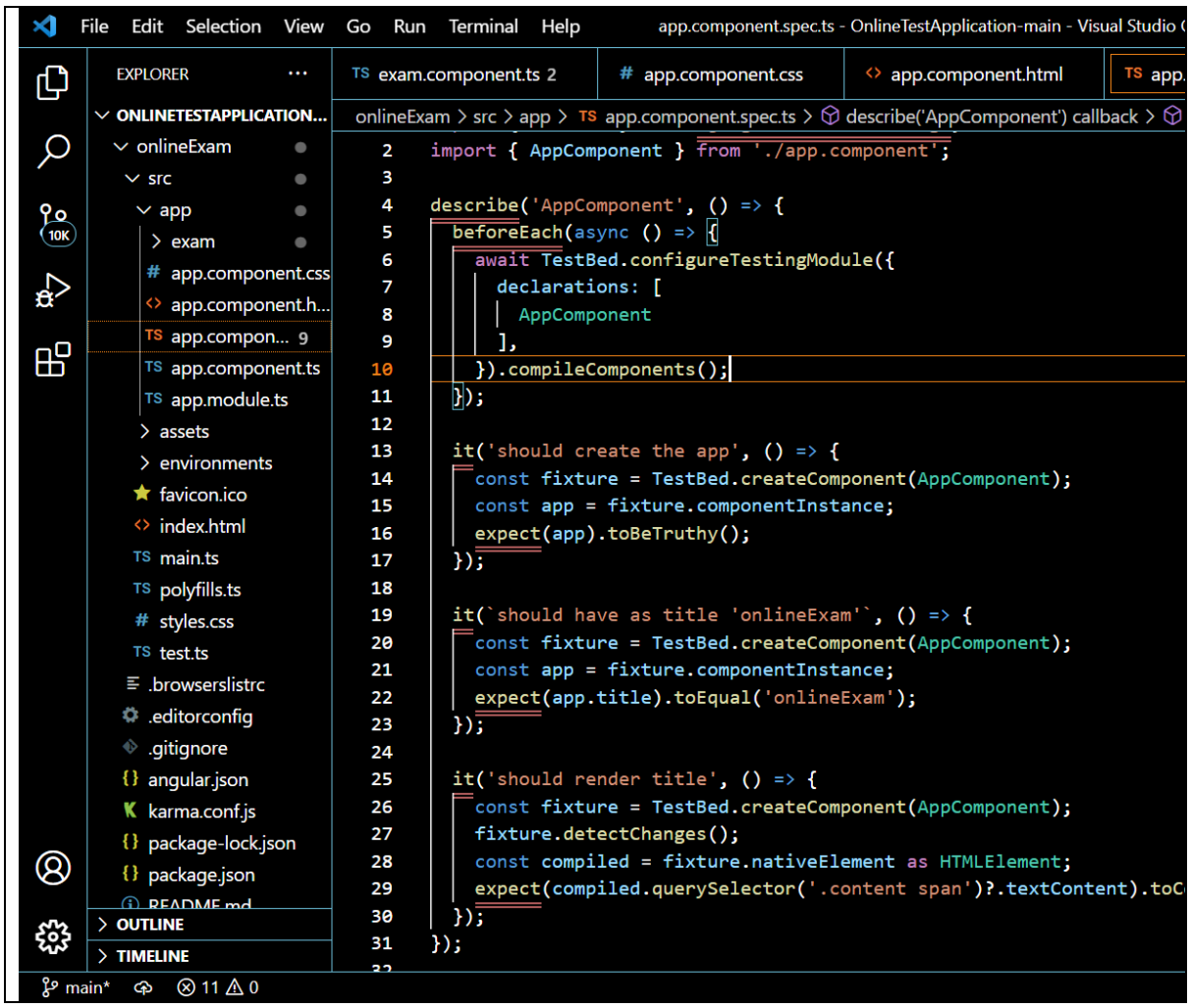
Repository name:	FourthPhaseProject
GitHub link	https://github.com/skibrahimsk/FourthPhaseProject.git

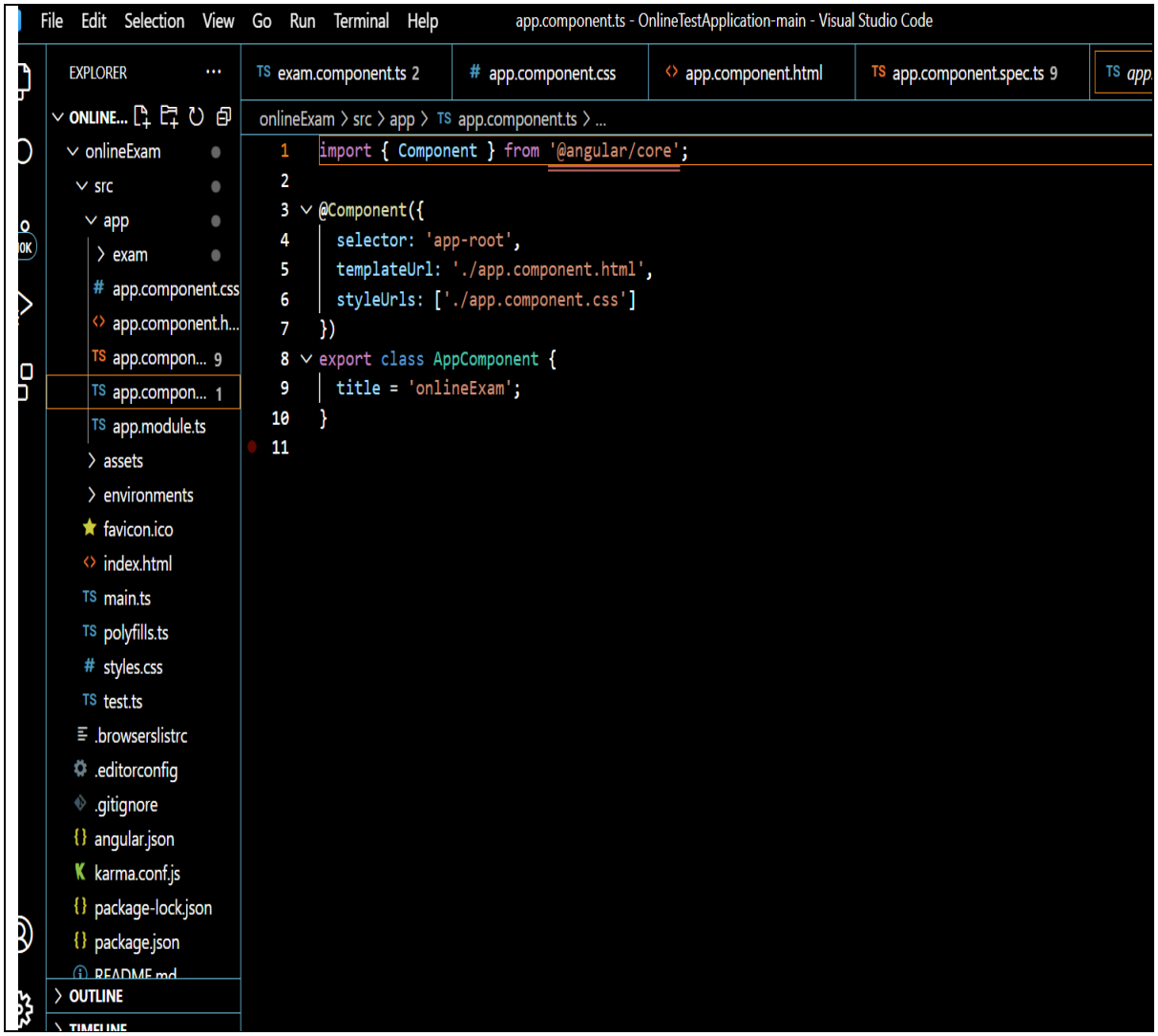
3. Project Code:

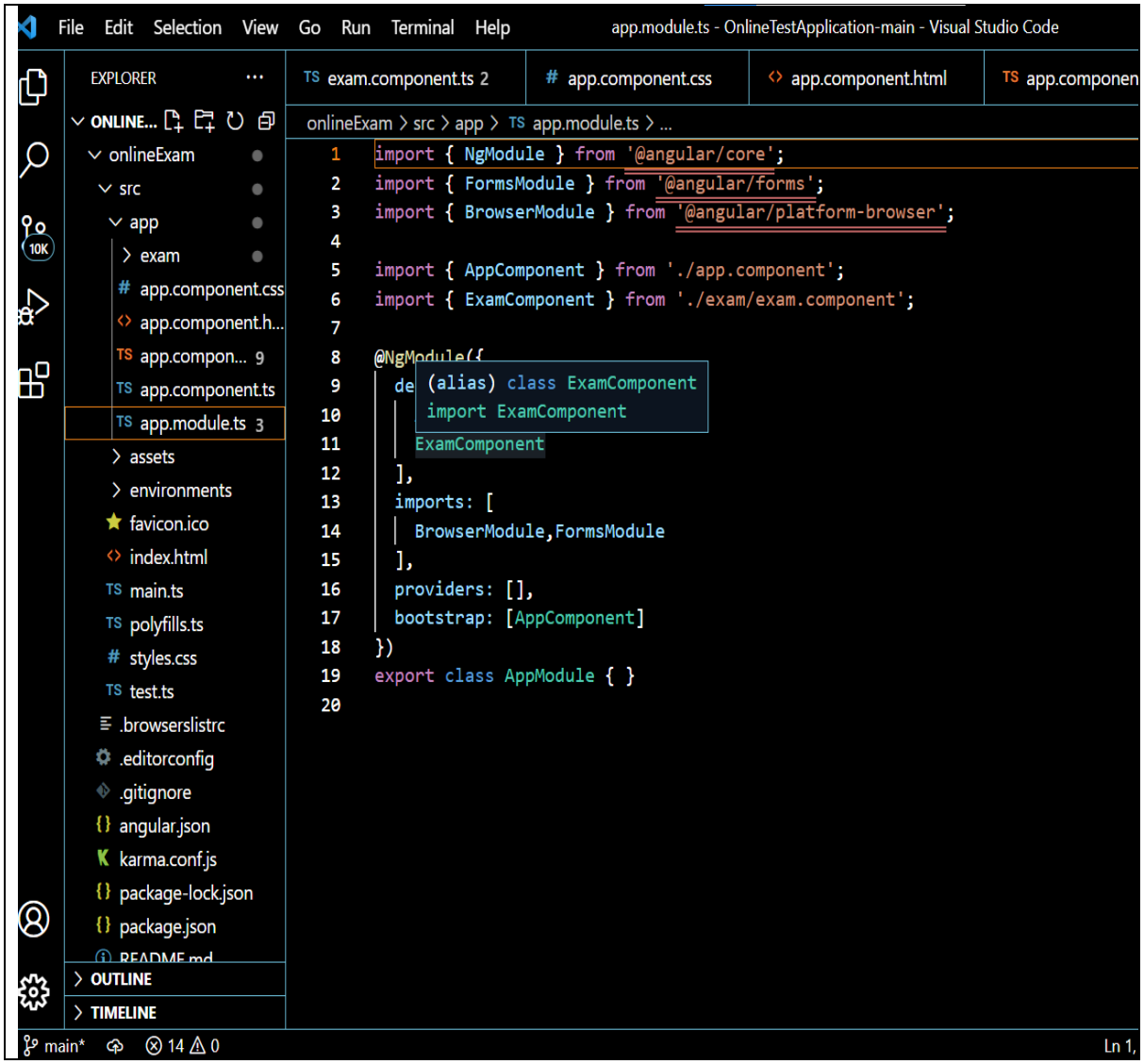
Folder Structure


File Edit Selection View Go Run Terminal
EXPLORER
ONLINETESTAPPLICATION-MAIN
onlineExam
src
app
exam
exam.component.css
exam.component.html
exam.component.spec.ts
exam.component.ts 2
app.component.css
app.component.html
app.component.spec.ts
app.component.ts
app.module.ts
assets
environments
favicon.ico
index.html
main.ts
polyfills.ts
styles.css
test.ts
.browserslistrc
.editorconfig
.gitignore
angular.json
karma.conf.js
package-lock.json
package.json
README.md
tsconfig.app.json
tsconfig.json
OUTLINE
TIMELINE
2 0

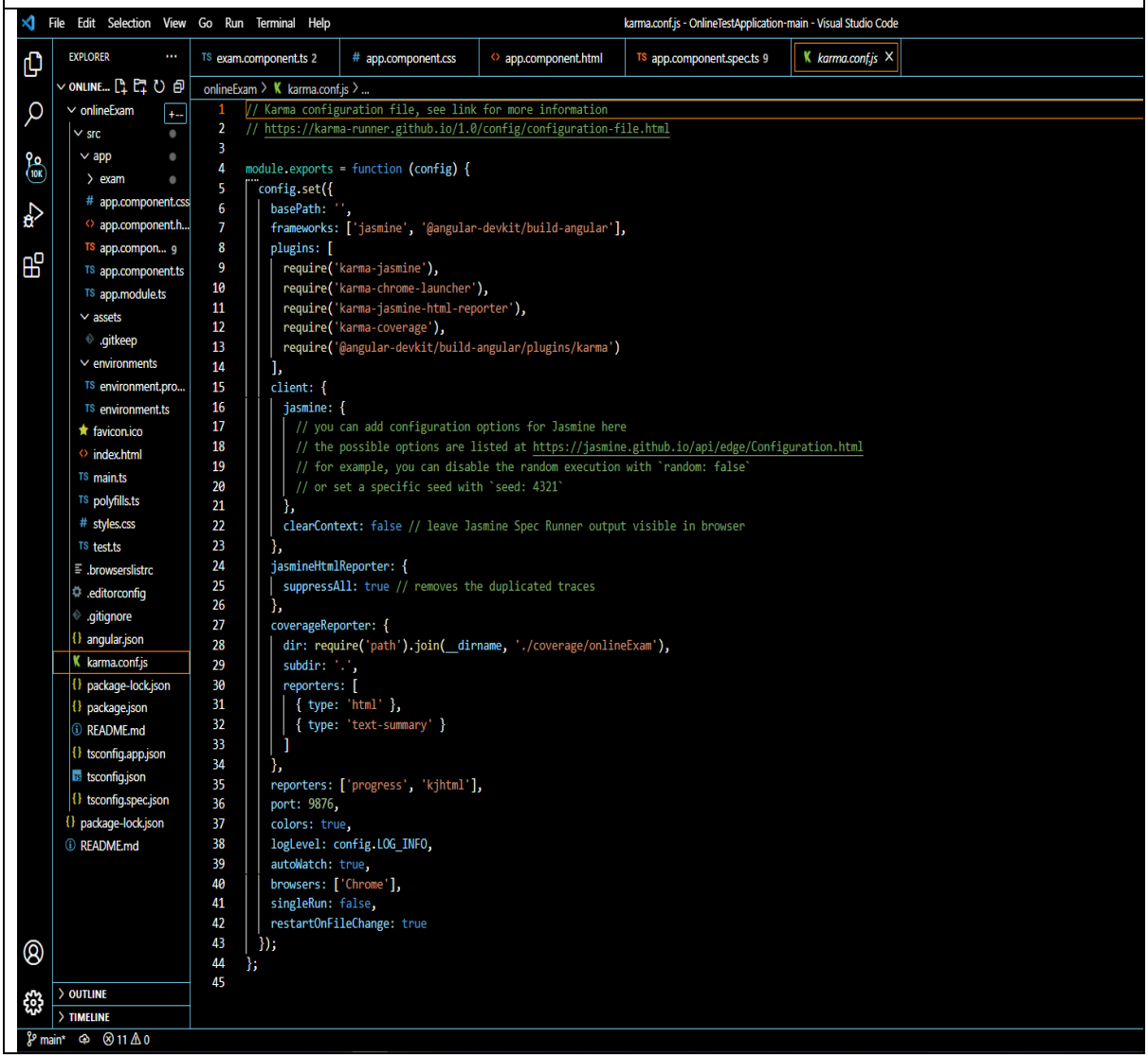

File Edit Selection View Go Run Terminal Help
angular.json - OnlineTestApplication-main - Visual Studio Code
EXPLORER
exam.component.ts 2
app.component.css
app.component.html
app.component.spec.ts 9
angular.json 1
onlineExam > {} angular.json > {} projects > {} onlineExam > {} architect > {} build > {} configurations > {} production > [ ] budgets > {} 0
"builder": "@angular-devkit/build-angular:dev-server",
"configurations": {
"production": {
"browserTarget": "onlineExam:build:production"
},
"development": {
"browserTarget": "onlineExam:build:development"
}
},
"defaultConfiguration": "development"
},
"extract-i18n": {
"builder": "@angular-devkit/build-angular:extract-i18n",
"options": {
"browserTarget": "onlineExam:build"
}
},
"test": {
"builder": "@angular-devkit/build-angular:karma",
"options": {
"main": "src/test.ts",
"polyfills": "src/polyfills.ts",
"tsConfig": "tsconfig.spec.json",
"karmaConfig": "karma.conf.js",
"assets": [
"src/favicon.ico",
"src/assets"
],
"styles": [
"src/styles.css"
],
"scripts": []
}
}
}
}
},
"defaultProject": "onlineExam"
onlineExam
src
app
exam
app.component.css
app.component.h...
app.compon... 9
app.component.ts
app.module.ts
assets
.gitkeep
environments
environment.pro...
environment.ts
favicon.ico
index.html
main.ts
polyfills.ts
styles.css
test.ts
.browserslistrc
.editorconfig
.gitignore
angular.json 1
karma.conf.js
package-lock.json
package.json
README.md
tsconfig.app.json
tsconfig.json
tsconfig.spec.json
OUTLINE
TIMELINE
main*
11 1
Ln 39, Col 45 Spaces: 2 UTF-8

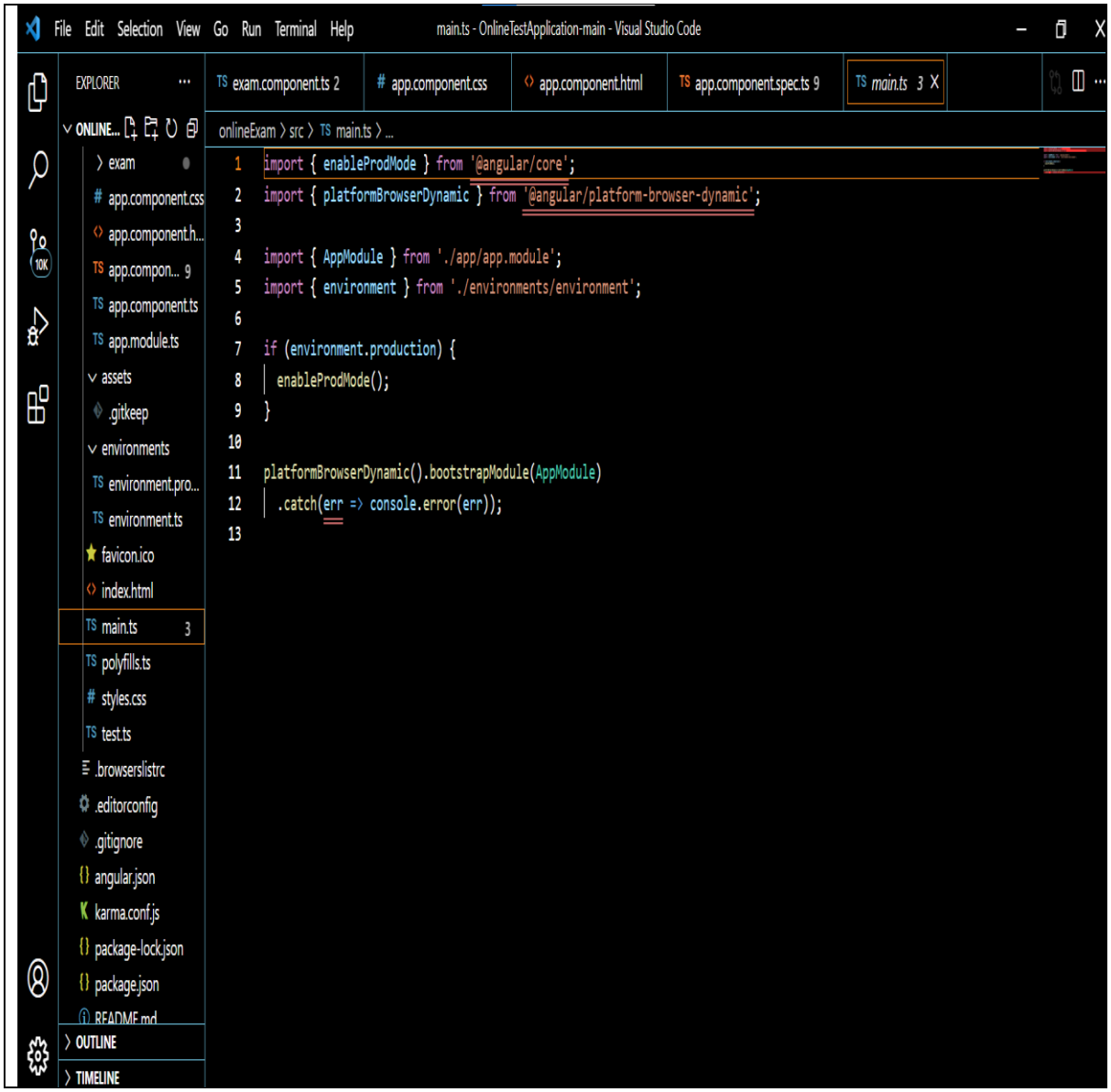

File Edit Selection View Go Run Terminal Help
app.component.spec.ts - OnlineTestApplication-main - Visual Studio
EXPLORER
ONLINETESTAPPLICATION...
onlineExam
src
app
exam
app.component.css
app.component.h...
app.compon... 9
app.component.ts
app.module.ts
assets
environments
favicon.ico
index.html
main.ts
polyfills.ts
styles.css
test.ts
.browserslistrc
.editorconfig
.gitignore
angular.json
karma.conf.js
package-lock.json
package.json
OUTLINE
TIMELINE
exam.component.ts 2
app.component.css
app.component.html
onlineExam > src > app > app.component.spec.ts > describe('AppComponent') callback >
import { AppComponent } from './app.component';
describe('AppComponent', () => {
beforeEach(async () => {
await TestBed.configureTestingModule({
declarations: [
AppComponent
],
}).compileComponents();
});
it('should create the app', () => {
const fixture = TestBed.createComponent(AppComponent);
const app = fixture.componentInstance;
expect(app).toBeTruthy();
});
it(`should have as title 'onlineExam'`, () => {
const fixture = TestBed.createComponent(AppComponent);
const app = fixture.componentInstance;
expect(app.title).toEqual('onlineExam');
});
it('should render title', () => {
const fixture = TestBed.createComponent(AppComponent);
fixture.detectChanges();
const compiled = fixture.nativeElement as HTMLElement;
expect(compiled.querySelector('.content span')?.textContent).toC
});
});
main*
11 0


File Edit Selection View Go Run Terminal Help
app.component.ts - OnlineTestApplication-main - Visual Studio Code
EXPLORER
ONLINE...
onlineExam
src
app
exam
app.component.css
app.component.h...
app.compon... 9
app.compon... 1
app.module.ts
assets
environments
favicon.ico
index.html
main.ts
polyfills.ts
styles.css
test.ts
.browserslistrc
.editorconfig
.gitignore
angular.json
karma.conf.js
package-lock.json
package.json
README.md
OUTLINE
TIMELINE
exam.component.ts 2
app.component.css
app.component.html
app.component.spec.ts 9
onlineExam > src > app > app.component.ts > ...
1 import { Component } from '@angular/core';
2
3 @Component({
4 selector: 'app-root',
5 templateUrl: './app.component.html',
6 styleUrls: ['./app.component.css']
7 })
8 export class AppComponent {
9 title = 'onlineExam';
10 }
11


File Edit Selection View Go Run Terminal Help
app.module.ts - OnlineTestApplication-main - Visual Studio Code
EXPLORER
exam.component.ts 2
app.component.css
app.component.html
app.componen
onlineExam > src > app > app.module.ts > ...
import { NgModule } from '@angular/core';
import { FormsModule } from '@angular/forms';
import { BrowserModule } from '@angular/platform-browser';
import { AppComponent } from './app.component';
import { ExamComponent } from './exam/exam.component';
@NgModule({
(alias) class ExamComponent
import ExamComponent
ExamComponent
],
imports: [
BrowserModule,FormsModule
],
providers: [],
bootstrap: [AppComponent]
})
export class AppModule { }
onlineExam
src
app
exam
app.component.css
app.component.h...
app.compon... 9
app.component.ts
app.module.ts 3
assets
environments
favicon.ico
index.html
main.ts
polyfills.ts
styles.css
test.ts
.browserslistrc
.editorconfig
.gitignore
angular.json
karma.conf.js
package-lock.json
package.json
OUTLINE
TIMELINE
main*
14 0
Ln 1,

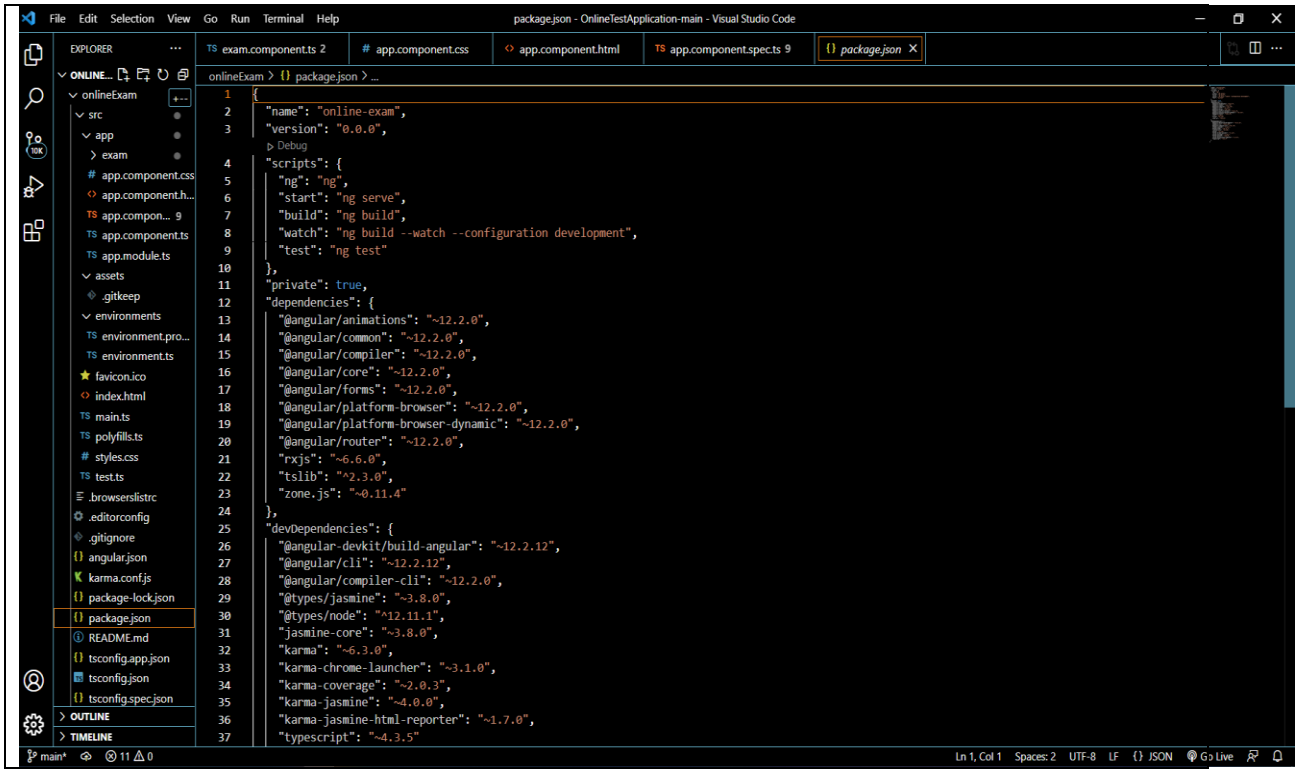
Karma.conf.js



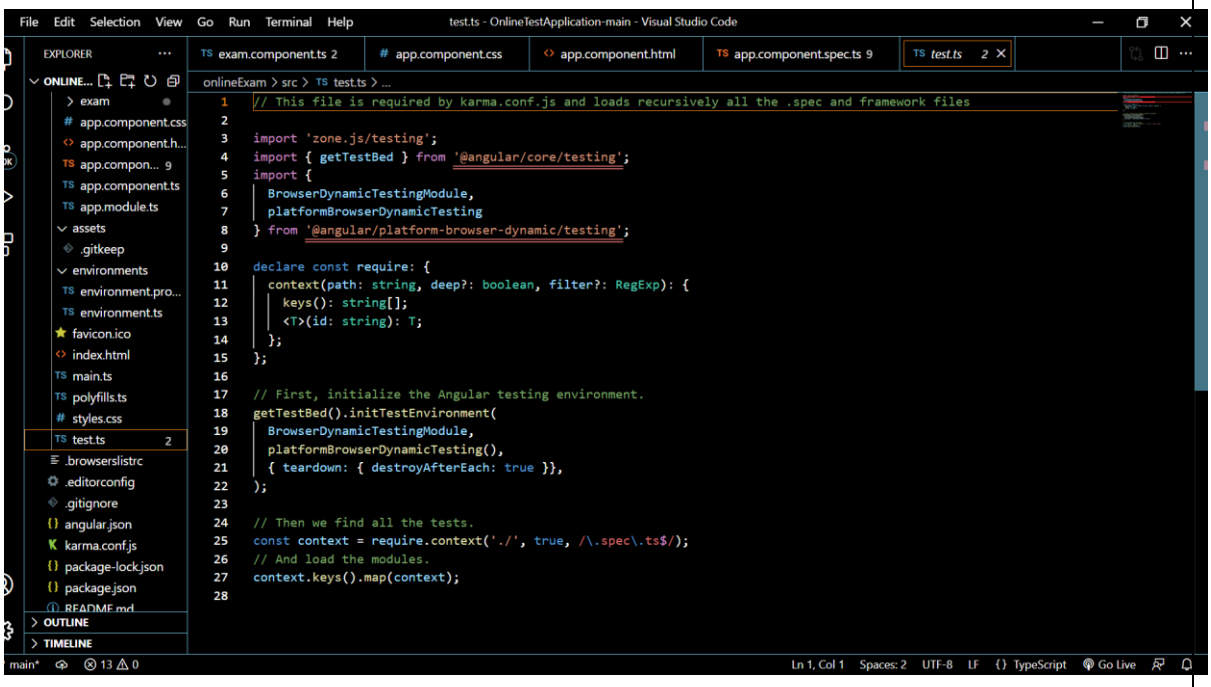


Package:

Package


File Edit Selection View Go Run Terminal Help
package.json - OnlineTestApplication-main - Visual Studio Code
EXPLORER
exam.component.ts 2
app.component.css
app.component.html
app.component.spec.ts 9
package.json
onlineExam > {} package.json > ...
{
"name": "online-exam",
"version": "0.0.0",
Debug
"scripts": {
"ng": "ng",
"start": "ng serve",
"build": "ng build",
"watch": "ng build --watch --configuration development",
"test": "ng test"
},
"private": true,
"dependencies": {
"@angular/animations": "~12.2.0",
"@angular/common": "~12.2.0",
"@angular/compiler": "~12.2.0",
"@angular/core": "~12.2.0",
"@angular/forms": "~12.2.0",
"@angular/platform-browser": "~12.2.0",
"@angular/platform-browser-dynamic": "~12.2.0",
"@angular/router": "~12.2.0",
"rxjs": "~6.6.0",
"tslib": "^2.3.0",
"zone.js": "~0.11.4"
},
"devDependencies": {
"@angular-devkit/build-angular": "~12.2.12",
"@angular/cli": "~12.2.12",
"@angular/compiler-cli": "~12.2.0",
"@types/jasmine": "~3.8.0",
"@types/node": "^12.11.1",
"jasmine-core": "~3.8.0",
"karma": "~6.3.0",
"karma-chrome-launcher": "~3.1.0",
"karma-coverage": "~2.0.3",
"karma-jasmine": "~4.0.0",
"karma-jasmine-html-reporter": "~1.7.0",
"typescript": "~4.3.5"
OUTLINE
TIMELINE
main*
Ln 1, Col 1 Spaces: 2 UTF-8 LF {} JSON Go Live

Test.ts


File Edit Selection View Go Run Terminal Help
test.ts - OnlineTestApplication-main - Visual Studio Code
EXPLORER
exam.component.ts 2
app.component.css
app.component.html
app.component.spec.ts 9
test.ts 2
onlineExam > src > test.ts > ...
// This file is required by karma.conf.js and loads recursively all the .spec and framework files
import 'zone.js/testing';
import { getTestBed } from '@angular/core/testing';
import {
BrowserDynamicTestingModule,
platformBrowserDynamicTesting
} from '@angular/platform-browser-dynamic/testing';
declare const require: {
context(path: string, deep?: boolean, filter?: RegExp): {
keys(): string[];
<T>(id: string): T;
};
};
// First, initialize the Angular testing environment.
getTestBed().initTestEnvironment(
BrowserDynamicTestingModule,
platformBrowserDynamicTesting(),
{ teardown: { destroyAfterEach: true }},
);
// Then we find all the tests.
const context = require.context('./', true, /\.spec\.ts$/);
// And load the modules.
context.keys().map(context);
OUTLINE
TIMELINE
main*
Ln 1, Col 1 Spaces: 2 UTF-8 LF {} TypeScript Go Live

tsconfig.json

```
{
  "extends": "./tsconfig.json",
  "compilerOptions": {
    "outDir": "./out-tsc/app",
    "types": []
  },
  "files": [
    "src/main.ts",
    "src/polyfills.ts"
  ],
  "include": [
    "src/**/*.d.ts"
  ]
}
```

tsconfig.json

```
{
  "compileOnSave": false,
  "compilerOptions": {
    "baseUrl": "./",
    "outDir": "./dist/out-tsc",
    "forceConsistentCasingInFileNames": true,
    "strict": true,
    "noImplicitReturns": true,
    "noFallthroughCasesInSwitch": true,
    "sourceMap": true,
    "declaration": false,
    "downlevelIteration": true,
    "experimentalDecorators": true,
    "moduleResolution": "node",
    "importHelpers": true,
    "target": "es2017",
    "module": "es2020",
    "lib": [
      "es2018",
      "dom"
    ]
  },
  "angularCompilerOptions": {
    "enableI18nLegacyMessageIdFormat": false,
    "strictInjectionParameters": true,
    "strictInputAccessModifiers": true,
    "strictTemplates": true
  }
}
```

Tsconfig/spec

```
/* To learn more about this file see: https://angular.io/config/tsconfig. */
{
  "extends": "./tsconfig.json",
  "compilerOptions": {
    "outDir": "./out-tsc/spec",
    "types": [
      "jasmine"
    ]
  },
  "files": [
    "src/test.ts",
    "src/polyfills.ts"
  ],
  "include": [
    "src/**/*.spec.ts",
    "src/**/*.d.ts"
  ]
}
```

}

Index.html

```
<!doctype html>
<html lang="en">
<head>
```

```
  <meta charset="utf-8">
  <title>OnlineExam</title>
  <base href="/">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link rel="icon" type="image/x-icon" href="favicon.ico">
  <link rel="stylesheet"
href="https://cdn.jsdelivr.net/npm/bootstrap@4.6.1/dist/css/bootstrap.min.cs
s" integrity="sha384-
zCbKRCUGaJDkqS1kPbPd7TveP5iyJE0EjAuZQTgFLD2ylzuqKfdKlfG/eSrtxUkn"
crossorigin="anonymous">
</head>
<body>
  <app-root></app-root>
</body>
</html>
```

Exam.component

```
import { Component, OnInit } from '@angular/core';
import { NgForm } from '@angular/forms';

@Component({
  selector: 'app-exam',
  templateUrl: './exam.component.html',
  styleUrls: ['./exam.component.css']
})
export class ExamComponent implements OnInit {

  correctAns:number=0;
  incorrectAns:number=0;
  submitted:boolean=false;
  flag:boolean=false;
  Attempt:string[]=[];


  constructor() { }

  ngOnInit(): void {

  }
  questions=[
    {"question":"1000+1=
_________","op":["10001","1001","1000","100001"],"ans":"1001","attempt":null
},
```

```
    {"question":"1000-500 =
_________","op":["500","501","502","503"],"ans":"500","attempt":null},
    {"question":"5+5 =
_________","op":["10","55","25","50"],"ans":"10","attempt":null},
    {"question":"10 + 90 =
_________","op":["1090","19","90","100"],"ans":"100","attempt":null},
    {"question":"30+ 70 =
_________","op":["100","101","10","10"],"ans":"100","attempt":null},
    {"question":"1000-1=
_________","op":["999","1001","1000","100001"],"ans":"999","attempt":null},
    {"question":"1000/1=
_________","op":["100","1001","1000","101"],"ans":"1000","attempt":null},
    {"question":"1000*1=
_________","op":["100","1001","1000","10001"],"ans":"1000","attempt":null},
    {"question":"100+1=
_________","op":["101","1001","1000","100001"],"ans":"101","attempt":null},
    {"question":"10+1=
_________","op":["11","1001","1000","101"],"ans":"11","attempt":null}
    ]


  checkAnswer(selected:NgForm){

    console.log(selected.value);
    for(let x=0;x<10;x++){

    let ans1=this.questions[x].ans;
    this.questions[x].attempt=selected.value[x+1];
    if(selected.value[x+1]==ans1){

      this.correctAns++;
    }
    else{
      this.incorrectAns++;
    }
  }
  this.flag=true;

  }

  Review(){
    this.submitted=true;
  }

}
```

Exam.component

```
import { ComponentFixture, TestBed } from '@angular/core/testing';

import { ExamComponent } from './exam.component';

describe('ExamComponent', () => {
  let component: ExamComponent;
  let fixture: ComponentFixture<ExamComponent>;

  beforeEach(async () => {
    await TestBed.configureTestingModule({
      declarations: [ ExamComponent ]
    })
    .compileComponents();
  });

  beforeEach(() => {
    fixture = TestBed.createComponent(ExamComponent);
    component = fixture.componentInstance;
    fixture.detectChanges();
  });

  it('should create', () => {
    expect(component).toBeTruthy();
  });
});
```

Exam Component.html

```
<div class="container ">
    <h1 class="text-center p-3 mb-2 bg-success text-white">Basic MCQ
Test</h1>
    <form #selected="ngForm" (ngSubmit)="checkAnswer(selected)">
    <div *ngFor="let q of questions;let i=index">
        <p>{{i+1}} ) {{q.question}}</p>
        <div *ngFor="let o of q.op">
```

```
            <input type="radio" name="{{i+1}}" value="{{o}}" ngModel>{{o}}
        </div><br>
    </div>
    <input type="submit" class="btn btn-success" value="submit">
</form>
<br>
    <div class="card text-center"  *ngIf="flag">
        <div class="card-header">
          EXAM RESULT
        </div>
        <div class="card-body">
          <h5 class="card-title">Correct ANSWER={{correctAns}}</h5>
          <h5 class="card-title">Incorrect ANSWER={{incorrectAns}}</h5>
          <input type="button" value="Review" (click)="Review()" class="btn
btn-primary" ><br><br>
        </div>

      </div>
<br><br>


<div *ngIf="submitted">
    <h6>Review the correct Answer of all the question and your attemps!</h6>
    <table  border="2" class="table table-striped text-center">
        <thead class="thead-dark">
            <tr>
              <!-- <th scope="col">#</th> -->
              <th scope="col">Question</th>
              <th scope="col">CorrectAns</th>
              <th scope="col">Attempted</th>
            </tr>
        </thead>
          <tbody>
            <!-- <div *ngFor="let n of questions;">
                <tr>
                    <td></td>
                    <td>{{n.ans}}</td>
                    <td>{{n.attempt}}</td>
                </tr>

            </div> -->
            <tr *ngFor="let n of questions;">

                <td>{{n.question}}</td>
                <td>{{n.ans}}</td>
                <td>{{n.attempt}}</td>
              </tr>
          </tbody>
```

```
    </table>
</div>
</div>
```

4. Sprint Work.

1. Sprint:1:

- Created Project Folder .
- Added to Visual Studio.
- Created Entity.

5. Sprint:2:

- Created index.html.
- Created main file.
- Created HTML files.

6. Sprint:3:

- Created property files.
- Created OnlineTestApplication angular.json.
- Pushed the code to the repository.

ThankYou.