DATA ANALYTICS AND INSIGHTS

COURSE : ANGULAR

"ONLINE TEST APPLICATION"

SUBMITTED BY

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SUBMITTED TO

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ACKNOWLEDGEMENT

LIST OF FIGURES

Problem Statement:

Description

The Online Test Application system creates an application that enables users to provide online tests, review them, and display the results.

System Details

This system contains three main modules: Quiz, Review, and Result. The quiz section of the online test application accepts the questions in JSON format. The JSON file can be easily shared from the server in the pre-defined format. The application renders the test at the client-side. The "Review and display result" section allows users to declare the results immediately. You can simply call another JSON with the answers in it and evaluate and display the results immediately.

Basic definitions and Background

Angular:

Angular is an application design framework and development platform for creating efficient and sophisticated single-page apps.

Angular is a development platform, built on TypeScript. As a platform, Angular includes:

- A component-based framework for building scalable web applications
- A collection of well-integrated libraries that cover a wide variety of features, including routing, forms management, client-server communication, and more
- A suite of developer tools to help you develop, build, test, and update your code

With Angular, you're taking advantage of a platform that can scale from single-developer projects to enterprise-level applications. Angular is designed to make updating as easy as possible, so you can take advantage of the latest developments with a minimum of effort. Best of all, the Angular ecosystem consists of a diverse group of over 1.7 million developers, library authors, and content creators.

Angular CLI:

The Angular CLI is a command-line interface tool that you use to initialize, develop, scaffold, and maintain Angular applications directly from a command shell.

npm install -g @angular/cli

Angular Material:

Angular Material is a UI component library for Angular JS developers. Angular Material components help in constructing attractive, consistent, and functional web pages and web applications while adhering to modern web design principles like browser portability, device independence, and graceful degradation. It helps in creating faster, beautiful, and responsive websites. It is inspired by the Google Material Design.

```
npm install angular-material
```

Components:

Components are the building blocks that compose an application. A component includes a TypeScript class with a @Component() decorator, an HTML template, and styles. The @Component() decorator specifies the following Angular-specific information:

- A CSS selector that defines how the component is used in a template. HTML elements in your template that match this selector become instances of the component.
- An HTML template that instructs Angular how to render the component.
- An optional set of CSS styles that define the appearance of the template's HTML elements.

The following is a minimal Angular component.

import { Component } from '@angular/core';

@Component({

  selector: 'hello-world',

  template: `

    <h2>Hello World</h2>

    <p>This is my first component!</p>

    `,

})

export class HelloWorldComponent {

  // The code in this class drives the component's behavior.

}

To use this component, you write the following in a template:

When Angular renders this component, the resulting DOM looks like this:

```
<hello-world> <h2>Hello World</h2> <p>This is my first
component!</p></hello-world>
```

Templates:

Every component has an HTML template that declares how that component renders. You define this template either inline or by file path.

Angular extends HTML with additional syntax that lets you insert dynamic values from your component. Angular automatically updates the rendered DOM when your component's state changes. One application of this feature is inserting dynamic text, as shown in the following example.

```
<p>{{ message }}</p>
```

The value for message comes from the component class:

import { Component } from '@angular/core';

@Component ({

  selector: 'hello-world-interpolation',

  templateUrl: './hello-world-interpolation.component.html'

})

export class HelloWorldInterpolationComponent {

 message = 'Hello, World!';

}

Applications:

The **I-Quiz** is a computer angular test which measures job applicants on critical areas like technical and job specific domain skills, thus helping recruiters identify the suitability of a candidate.

Some key numbers about the I-Quiz:
Since inception, more than 2 million students have successfully taken the I-Quiz.
Every month, more than 1.5 lakh interview calls go out based on a student's I-Quiz score.

Design Methodology (UML Representations)
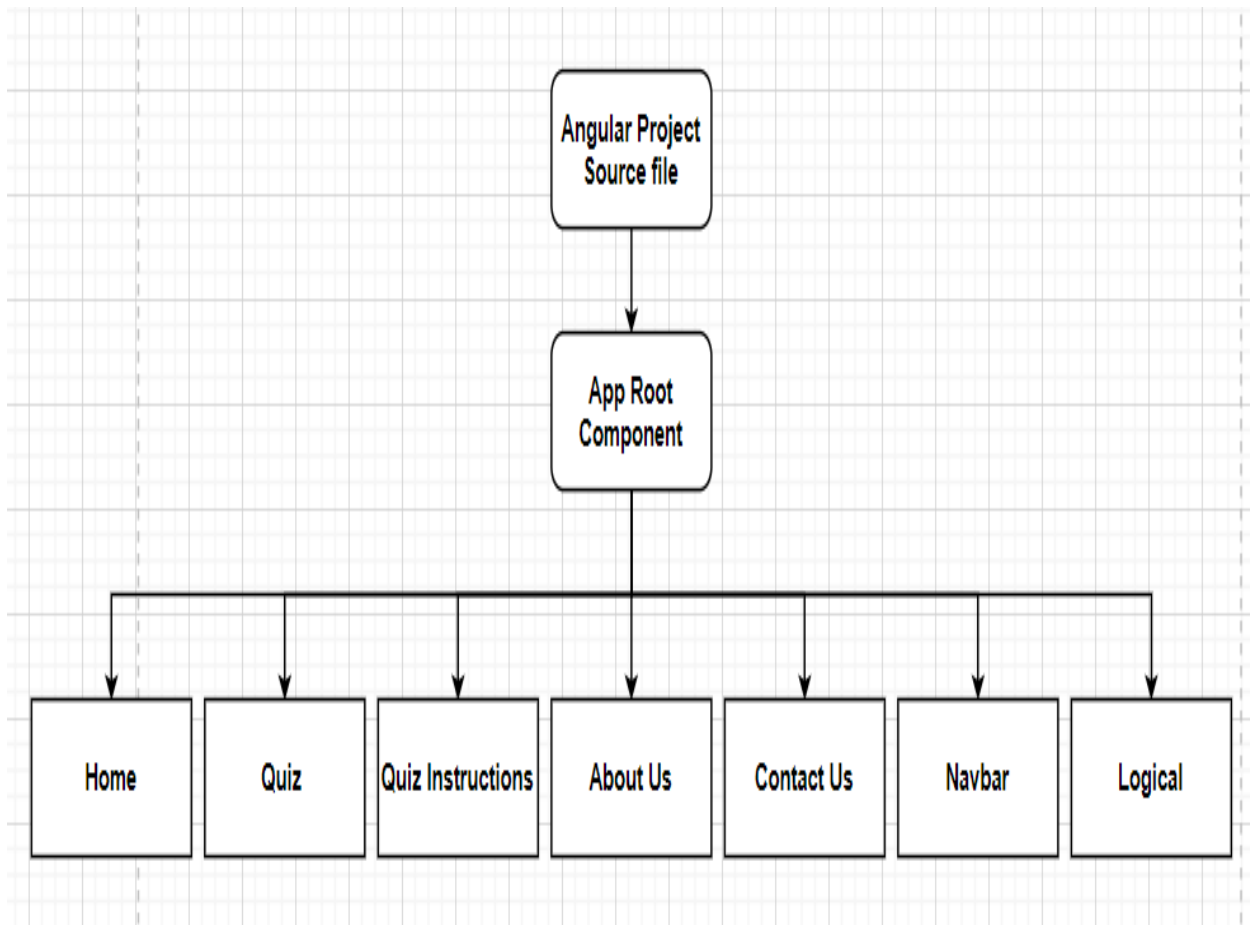
Figure 1. Design methodology

The above diagram describes the project name, app root folder and the individual components which are created in the project.

Components:

Home : Its display the home page, which consists of app logo and details.

Quiz : It display the Quiz page, which describes Questions, Options and final score.

Quiz Instructions : This components describes the instruction pages which are required to take the quiz.

About Us : It describes the I-Quiz application vision and mission.

Contact Us : This component is allow the users to post a set of questions or leave a message regarding any problem or feedback.

Navbar : Navbar component describes the navbar. It is designed using angular material.

Logical: Logical Component describes the logic of quiz component.

Tools and frameworks used:

1. **Visual Studio Code:**

   Visual Studio Code is one of the free source code editors used for Linux, Windows, and macOS. Several features are supported by Visual Studio Code, such as syntax highlighting, snippets, embedded Git, intelligent code completion, and code refactoring. The users have the option to change the keyboard shortcuts, themes, preferences. Moreover, the user can add extensions to enhance the functionality of it. The Visual Studio Code was released on the VSCode repositor of GitHub.

2. **Angular Material:**

   Angular Material is a **UI component library** for Angular JS developers. Angular Material components help in constructing attractive, consistent, and functional web pages and web applications while adhering to modern web design principles like browser portability, device independence, and graceful degradation.

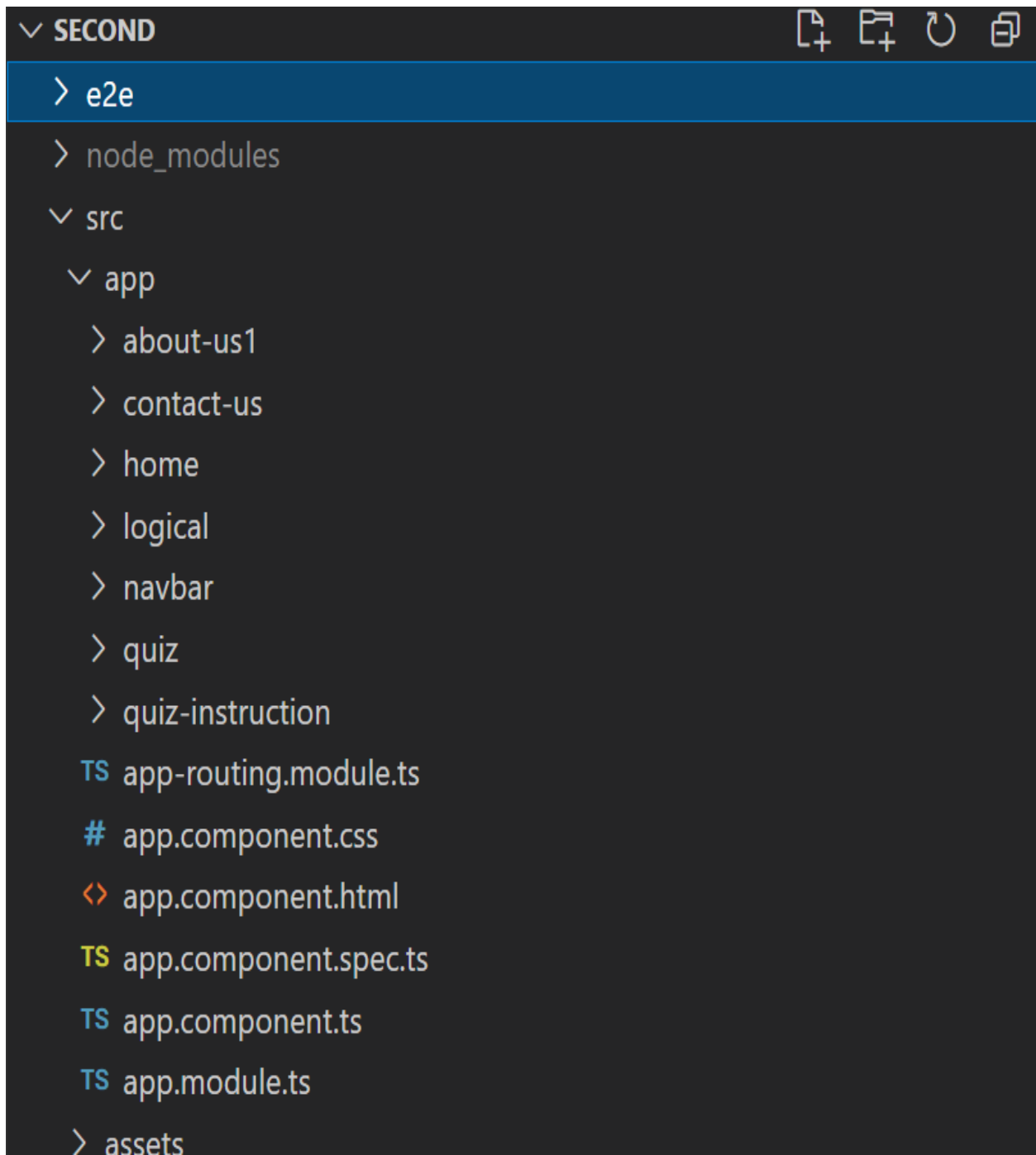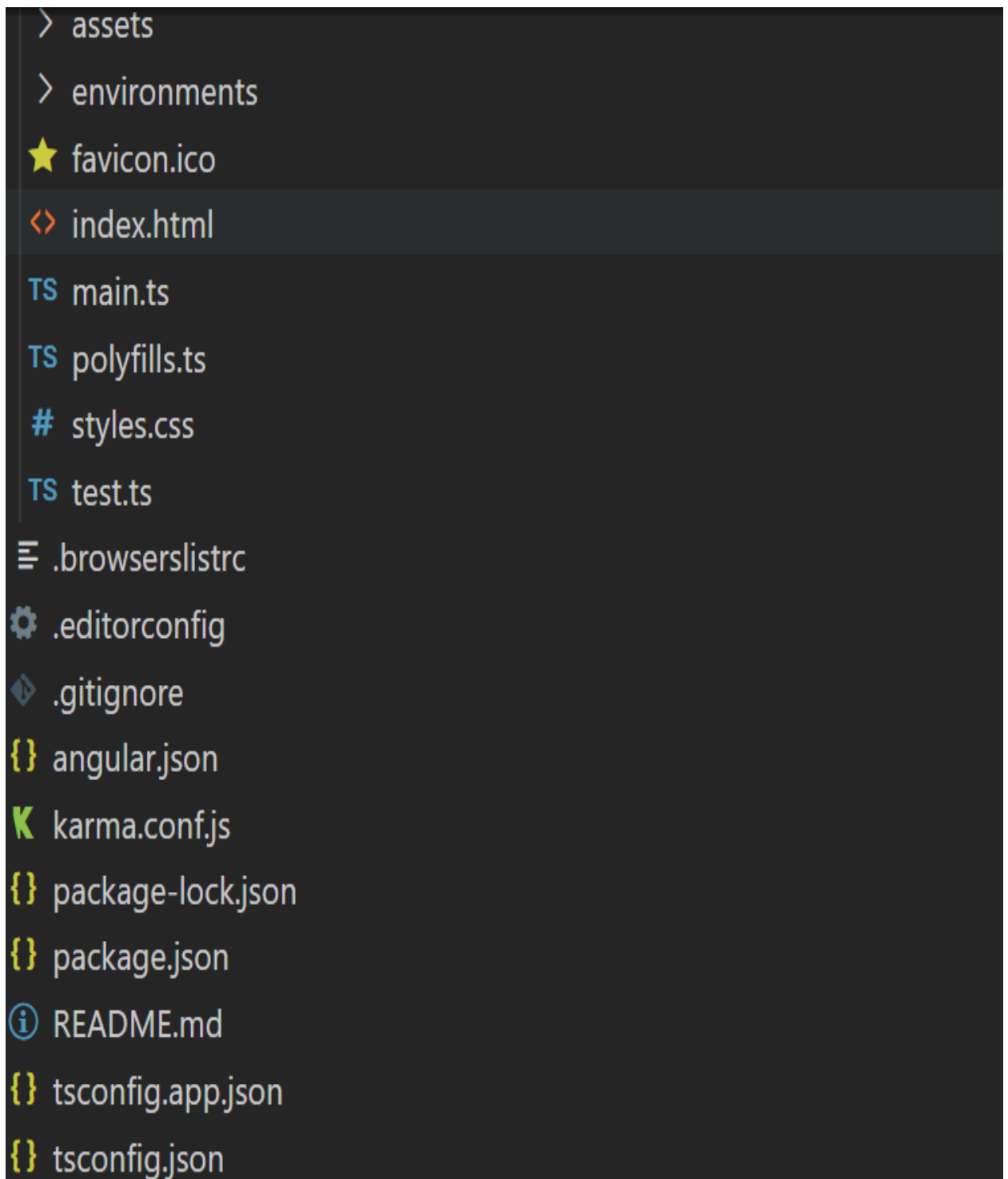**Visual Studio Code Project Files:**

Figure 2. Files of Visual Studio Code

> assets

> environments

★ favicon.ico

<> index.html

TS main.ts

TS polyfills.ts

styles.css

TS test.ts

≡ .browserslistrc

⚙ .editorconfig

◈ .gitignore

{} angular.json

K karma.conf.js

{} package-lock.json

{} package.json
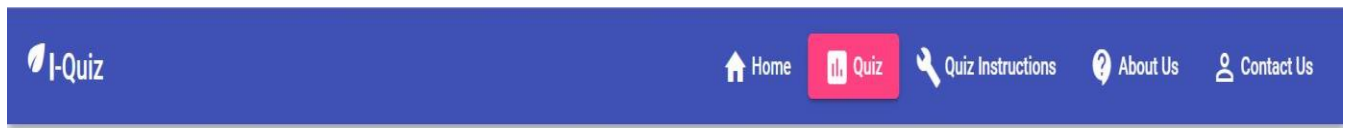
ⓘ README.md

{} tsconfig.app.json

{} tsconfig.json

Figure 3. Files of Visual Studio Code

Results and Observations

Figure 4. Navigation bar

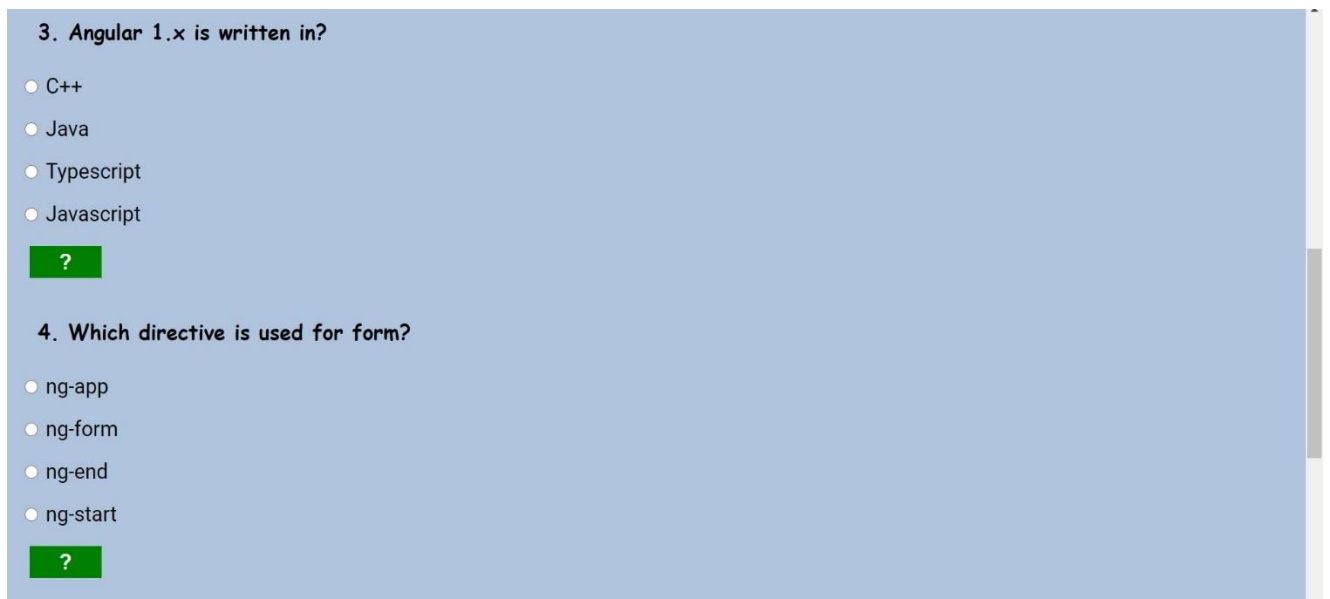The above diagram describe the application navigation bar.

Figure 5. Home page

The above figure describes the home page with logo and content.

Figure 6. Quiz Tab (Questions)

The above figure represents the questions in quiz tab.

Figure 7. Quiz Tab (Questions)

The above figure represents the questions in quiz tab.

4. Which directive is used for form?

○ ng-app

○ ng-form

○ ng-end

○ ng-start

?

5. Angular directives are used in?

○ Model

○ Module

○ View

○ Controller

?

Figure 8. Quiz Tab (Questions)

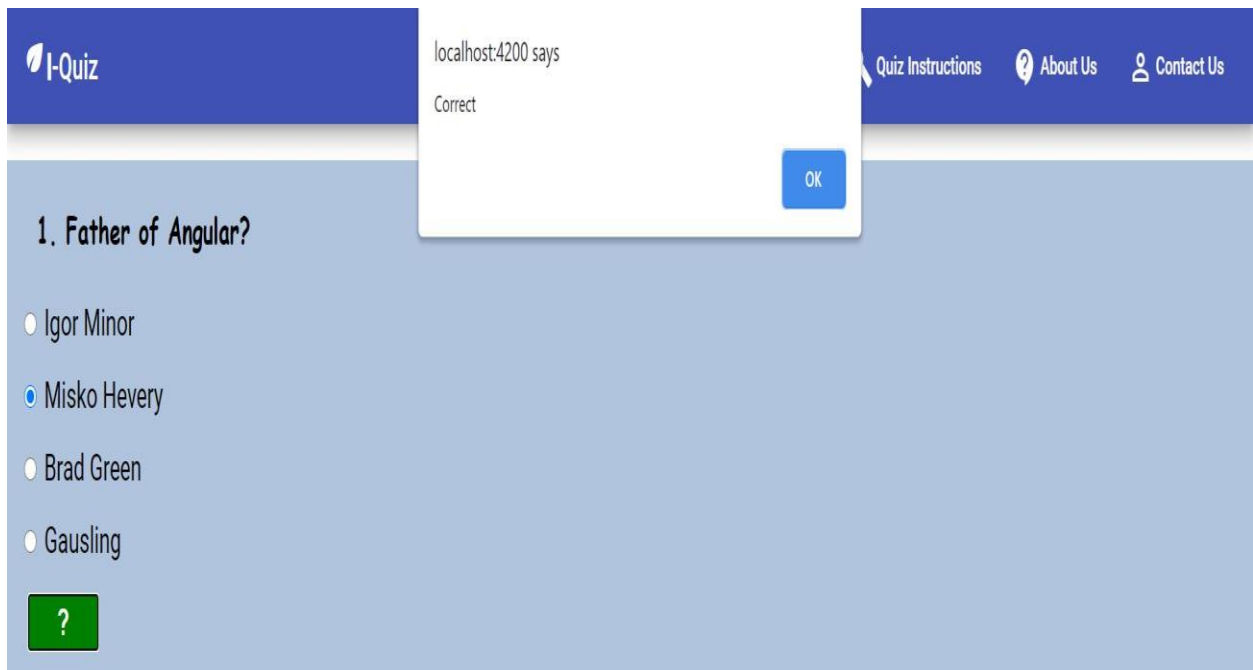The above figure represents the questions in quiz tab.

Get Score

Your final Score is : 0 / 5

Your percentage is : ***** 0 *****
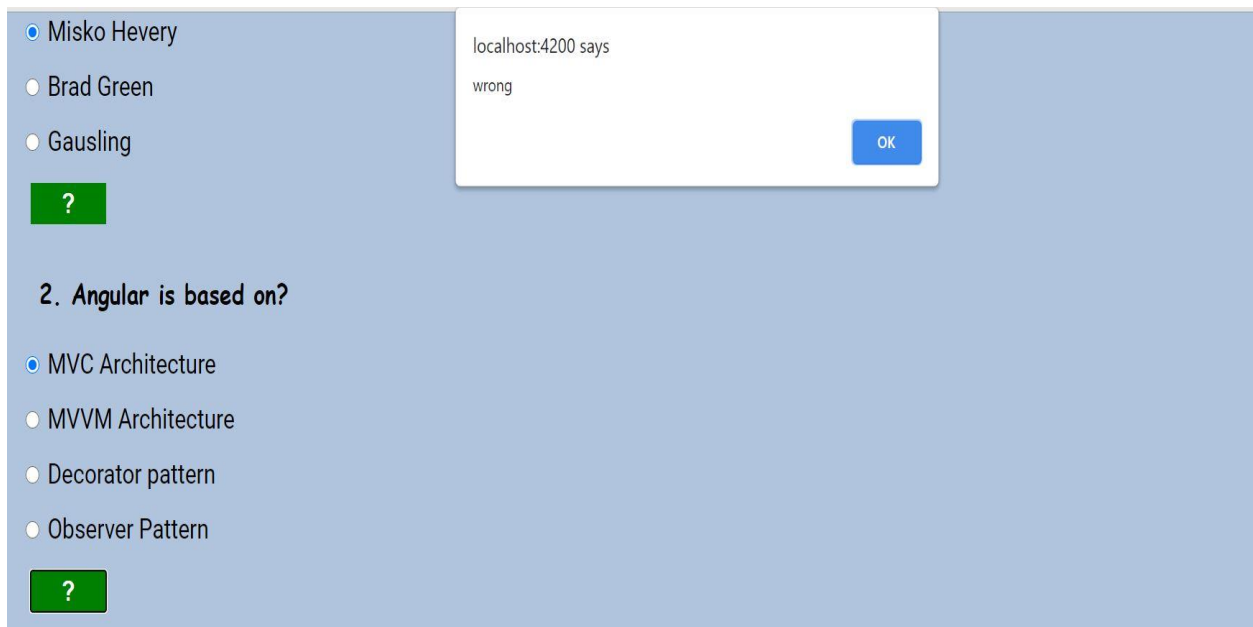
Come Back Again :)

Figure 9. Quiz Tab (Final Score)

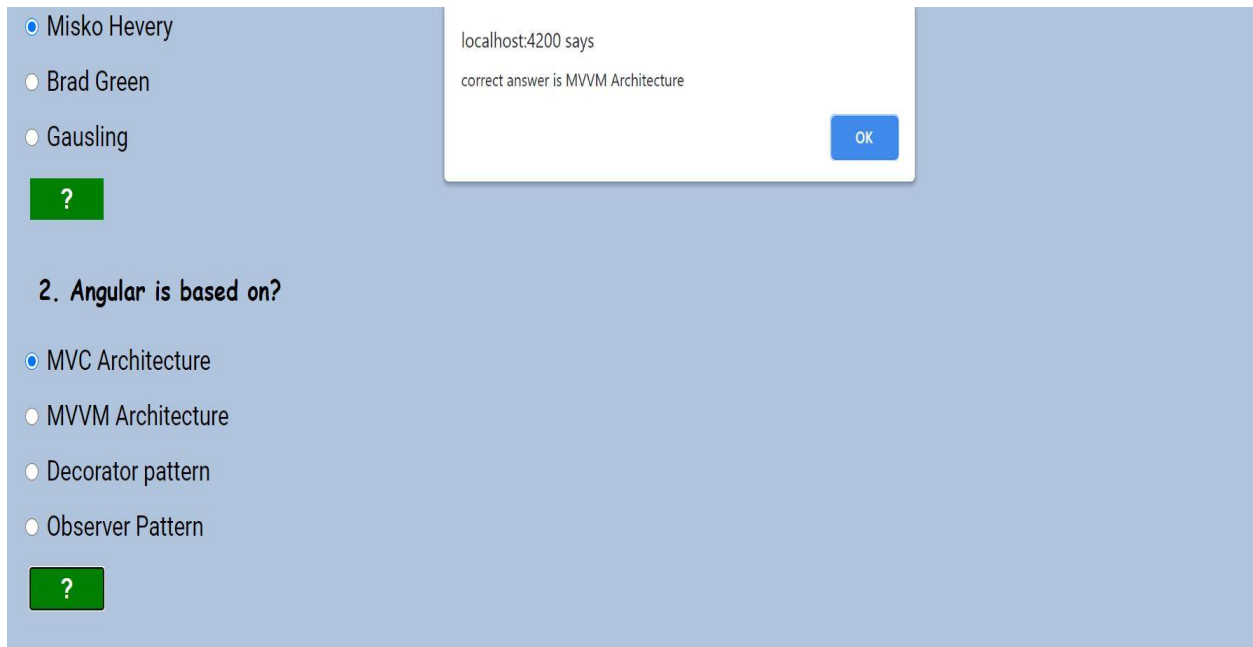The above figure represents the final score and percentage of a user.

Figure 10. Correct Answer

The above figure represents that, users chosen correct answer

Figure 11. Wrong Answer

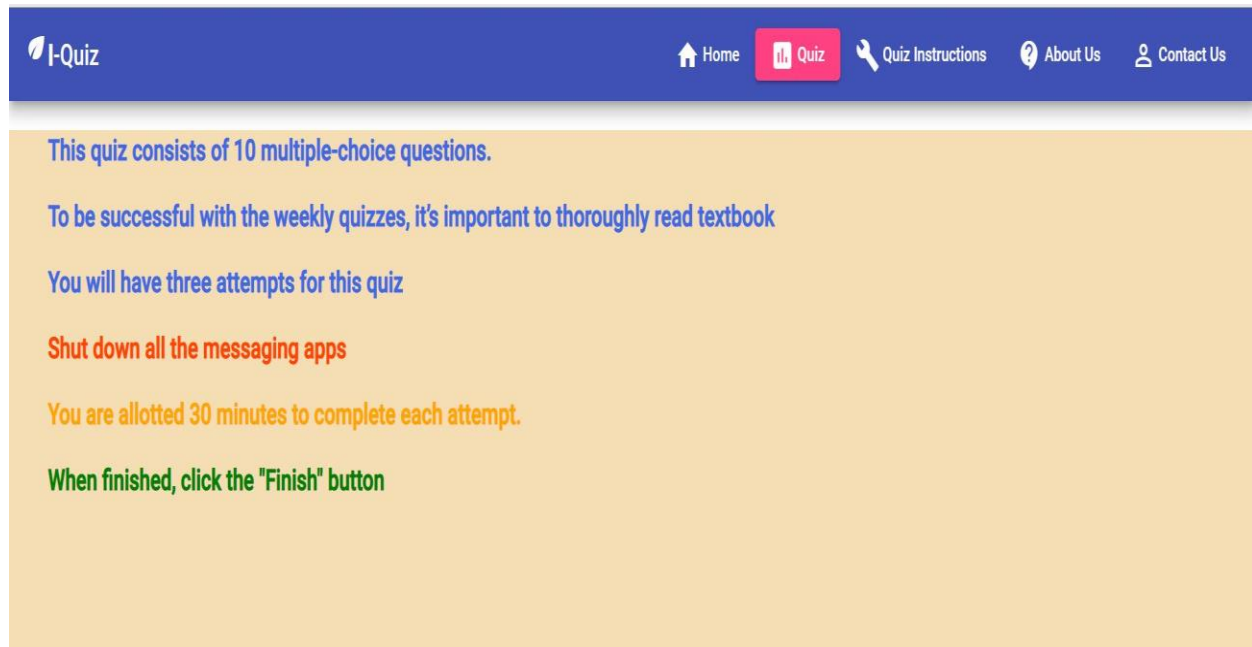The above figure represents that, users chosen wrong answer.

Figure 12. Correct Answer suggestion

The above figure represents, if the user chosen wrong answer, an alert box will display with correct answer.
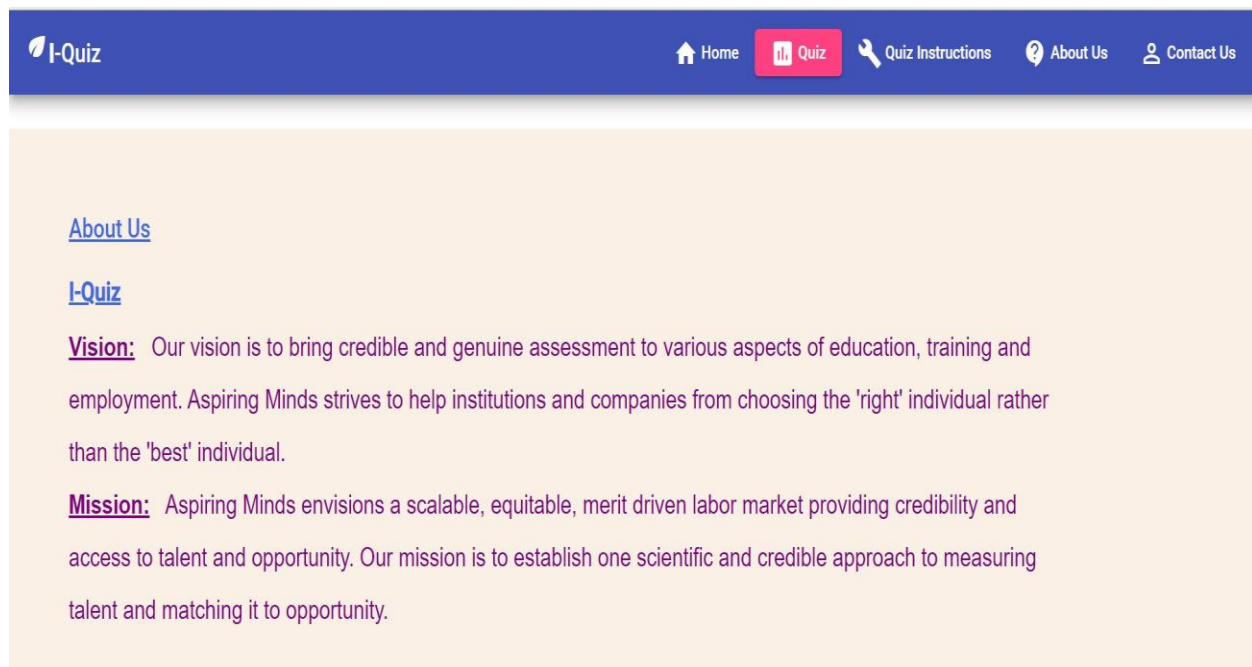

Figure 13. Final Score

The above figure describes the final score and percentage scored in quiz

Figure 14. Quiz Instructions

The above figure describes the quiz instructions

Figure 15. About Us Page

The above figure presents the details of vision and mission of quiz app.

Mission: Aspiring Minds envisions a scalable, equitable, merit driven labor market providing credibility and access to talent and opportunity. Our mission is to establish one scientific and credible approach to measuring talent and matching it to opportunity.
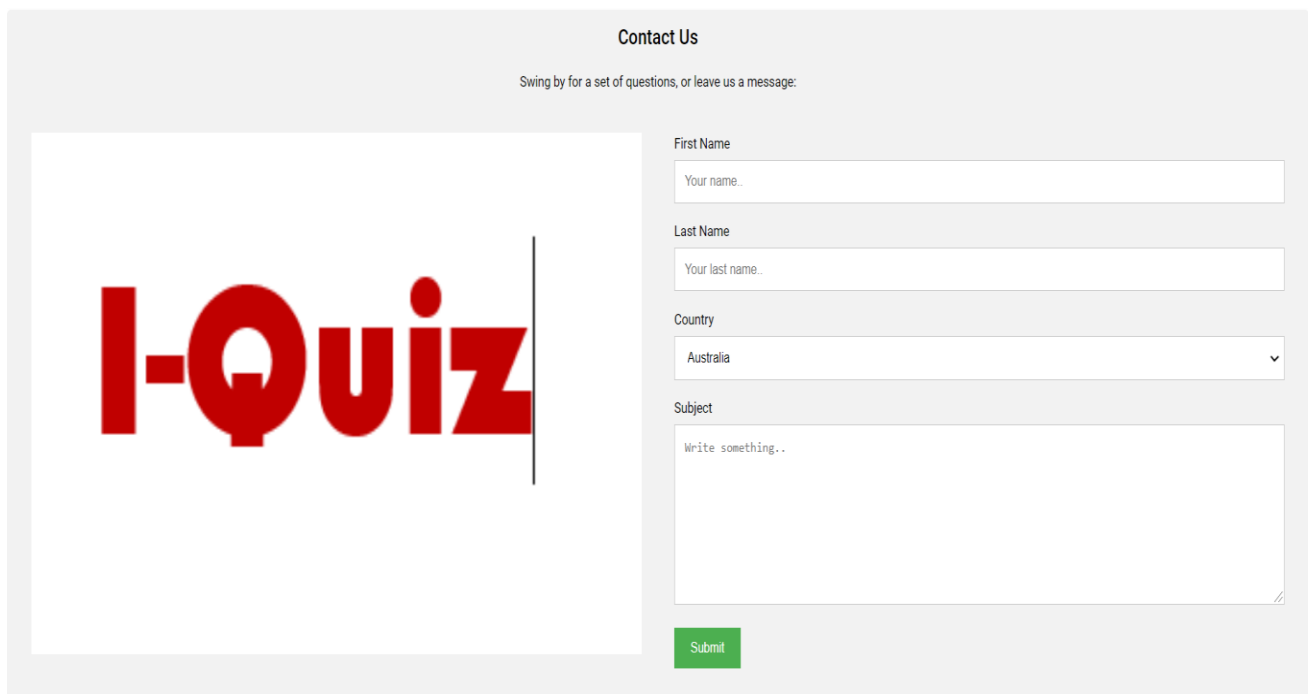
Quiz App: I-Quiz

Position : World's No 1 Platform

Users : 100000+

Countries : India, USA

Figure 16. About Us Page

The above figure represents the details of quiz app.

Contact Us

Swing by for a set of questions, or leave us a message:

First Name

Your name..

Last Name

Your last name..

Country

Australia

Subject

Write something..

Submit

Figure 17. About Us Page

The above figure describes the contact us page to leave us a message or post a question