

Project report on

ONLINE TEST APPLICATION

This document contains sections for:

- [Sprint planning and Task completion](#)
- [Core concepts used in project](#)
- [Flow of the Application.](#)
- [Demonstrating the product capabilities, appearance, and user interactions.](#)
- [Unique Selling Points of the Application](#)
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The code for this project is hosted at <https://github.com/surekhaitgithub/Newcodingboard.git>

The project is developed by Duggasani Naga Surekha.

Sprints planning and Task completion:

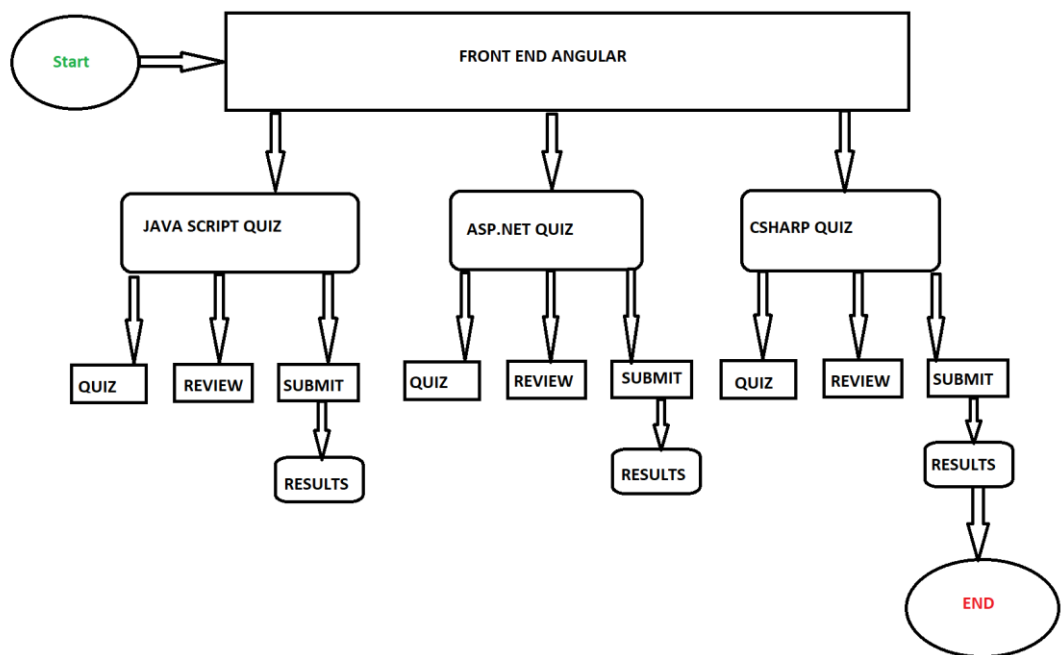
The project is planned to be completed in 2 sprint. Tasks assumed to be completed in the sprints are:

- Creating the flow of the application
- Initializing git repository to track changes as development progresses.
- Writing the code to fulfill the requirements of the project.
- Testing the code with different kinds of User input
- Pushing code to GitHub.
- Creating this specification document highlighting application capabilities, appearance, and user interactions.

Technologies Used:

- HTML5
- CSS3
- Bootstrap5
- Angular
- JSON
- TypeScript
- VsCode(Editor)

Flow of the Application:



Project Users Stories : (Agile and Scrum)

The project is planned to be completed in 2 sprints. Tasks assumed to be completed in the sprint are:

- Creating the flow of the application
- Initializing git repository to track changes as development progresses.
- Writing the code to fulfill the requirements of the project.
- Testing the code program with different kinds of User input
- Pushing code to GitHub.

- 1) As an admin I can Set up a master list of all the different topics quizzes.
- 2) As an admin I can Set up a master list of all the questions in different topics.
- 3) As an admin I can Set up a timer for the quiz.
- 4) Manage the questions in the topics which I have prepared.
- 5) User can able to navigate the questions in the quiz from first to last and can able to review and submit the answers.
- 6) User can able to see the solutions for the quiz once they have submitted.

Sprint 1

- 1) Start the quiz with in the 3 quiz's.
- 2) Take one quiz and start the test.
- 3) Get the results Finally.

Sprint 2

- 1) Make the UI manage the users.
- 2) Push the code to the GitHub.

Demonstrating the product capabilities, appearance, and user interactions:

To demonstrate the product capabilities, below are the sub-sections configured to highlight appearance and user interactions for the project:

Step 1: Creating a new project in visual studio code.

- Open visual studio code
 - Go to File -> Open folder -> Create new project -> Next.
 - Type in any project name and click on “Finish.”
 - Select your project and go to Terminal -> npm install -> npm start -> or ng serve .
-
- **Step 2:**

Html files:

Index.html

Js files:

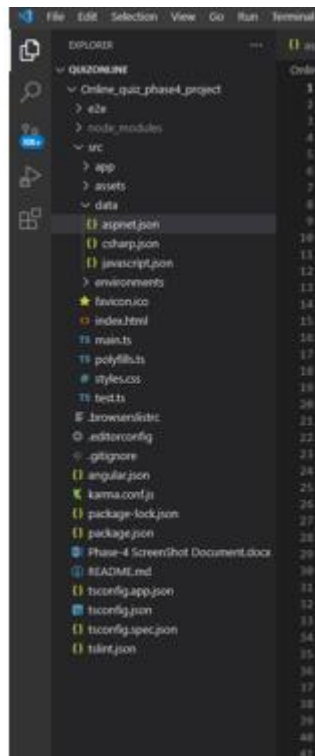
aspnet.json
csharp.json
javascript.json

css files:

style.css

Step 3:

- 1 Creating the project in visual studio code.**



2.Update the required data in the data folder in `aspnet.json`, `csharp.json`, `javascript.json`.

`aspnet.json`:

```
{
  "id": 1,
  "name": "Asp.Net Quiz",
  "description": "Asp.Net Quiz (contains webform, mvc, web API, etc.)",
  "questions": [
    {
      "id": 1010,
      "name": "Which of the following utilities can be used to compile managed assemblies into processor-specific native code?",
      "questionTypeId": 1,
      "options": [
        {
          "id": 1055,
          "questionId": 1010,
          "name": "gacutil",
          "isAnswer": false
        },
        {
          "id": 1056,
          "questionId": 1010,
          "name": "ngen",
          "isAnswer": true
        }
      ]
    }
  ]
}
```

```

    },
    {
        "id": 1057,
        "questionId": 1010,
        "name": "sn",
        "isAnswer": false
    },
    {
        "id": 1058,
        "questionId": 1010,
        "name": "dumpbin",
        "isAnswer": false
    }
],
"questionType": {
    "id": 1,
    "name": "Multiple Choice",
    "isActive": true
}
},
{
    "id": 1011,
    "name": "Which of the following .NET components can be used to
remove unused references from the managed heap?",
    "questionTypeId": 1,
    "options": [
        {
            "id": 1055,
            "questionId": 1010,
            "name": "Common Language Infrastructure",
            "isAnswer": false
        },
        {
            "id": 1057,
            "questionId": 1010,
            "name": "CLR",
            "isAnswer": false
        },
        {
            "id": 1056,
            "questionId": 1010,
            "name": "Garbage Collector",
            "isAnswer": true
        },
        {
            "id": 1058,
            "questionId": 1010,
            "name": "Class Loader",

```

```

        "isAnswer": false
    }
},
"questionType": {
    "id": 1,
    "name": "Multiple Choice",
    "isActive": true
}
},
{
    "id": 1012,
    "name": "Which of the following assemblies can be stored in Global
Assembly Cache?",
    "questionTypeId": 1,
    "options": [
        {
            "id": 1055,
            "questionId": 1010,
            "name": "Shared Assemblies",
            "isAnswer": true
        },
        {
            "id": 1057,
            "questionId": 1010,
            "name": "Private Assemblies",
            "isAnswer": false
        },
        {
            "id": 1056,
            "questionId": 1010,
            "name": "Public Assemblies",
            "isAnswer": false
        },
        {
            "id": 1058,
            "questionId": 1010,
            "name": "Protected Assemblies",
            "isAnswer": false
        }
    ],
    "questionType": {
        "id": 1,
        "name": "Multiple Choice",
        "isActive": true
    }
},
{
    "id": 1013,

```

```

        "name": "Code that targets the Common Language Runtime is known
as",
        "questionTypeId": 1,
        "options": [
            {
                "id": 1055,
                "questionId": 1010,
                "name": "Managed Code",
                "isAnswer": true
            },
            {
                "id": 1057,
                "questionId": 1010,
                "name": "Unmanaged",
                "isAnswer": false
            },
            {
                "id": 1056,
                "questionId": 1010,
                "name": "Distributed",
                "isAnswer": false
            },
            {
                "id": 1058,
                "questionId": 1010,
                "name": "Legacy",
                "isAnswer": false
            }
        ],
        "questionType": {
            "id": 1,
            "name": "Multiple Choice",
            "isActive": true
        }
    },
    {
        "id": 1014,
        "name": "Which of the following is the root of the .NET type
hierarchy?",
        "questionTypeId": 1,
        "options": [
            {
                "id": 1055,
                "questionId": 1010,
                "name": "System.Root",
                "isAnswer": false
            },
            {

```

```

        "id": 1057,
        "questionId": 1010,
        "name": "System.Parent",
        "isAnswer": false
    },
    {
        "id": 1056,
        "questionId": 1010,
        "name": "System.Type",
        "isAnswer": false
    },
    {
        "id": 1058,
        "questionId": 1010,
        "name": "System.Object",
        "isAnswer": true
    }
],
"questionType": {
    "id": 1,
    "name": "Multiple Choice",
    "isActive": true
}
},
{
    "id": 1015,
    "name": "An alternative way of displaying text on web page
using?",
    "questionTypeId": 1,
    "options": [
        {
            "id": 1055,
            "questionId": 1010,
            "name": "asp:listitem",
            "isAnswer": false
        },
        {
            "id": 1057,
            "questionId": 1010,
            "name": "asp:button",
            "isAnswer": false
        },
        {
            "id": 1056,
            "questionId": 1010,
            "name": "asp:label",
            "isAnswer": true
        }
    ],

```



```

        {
            "id": 1058,
            "questionId": 1010,
            "name": "None of the above",
            "isAnswer": false
        }
    ],
    "questionType": {
        "id": 1,
        "name": "Multiple Choice",
        "isActive": true
    }
},
{
    "id": 1016,
    "name": "Which of the following object is not an ASP component?",
    "questionTypeId": 1,
    "options": [
        {
            "id": 1055,
            "questionId": 1010,
            "name": "Counter",
            "isAnswer": false
        },
        {
            "id": 1056,
            "questionId": 1010,
            "name": "LinkCounter",
            "isAnswer": true
        },
        {
            "id": 1057,
            "questionId": 1010,
            "name": "AdRotator",
            "isAnswer": false
        },
        {
            "id": 1058,
            "questionId": 1010,
            "name": "File Access",
            "isAnswer": false
        }
    ],
    "questionType": {
        "id": 1,
        "name": "Multiple Choice",
        "isActive": true
    }
}

```

```

    },
    {
        "id": 1017,
        "name": "Which of the following control is used to validate that
two fields are equal?",
        "questionTypeId": 1,
        "options": [
            {
                "id": 1055,
                "questionId": 1010,
                "name": "CompareValidator",
                "isAnswer": false
            },
            {
                "id": 1056,
                "questionId": 1010,
                "name": "equals() method",
                "isAnswer": true
            },
            {
                "id": 1057,
                "questionId": 1010,
                "name": "RegularExpressionValidator",
                "isAnswer": false
            },
            {
                "id": 1058,
                "questionId": 1010,
                "name": "RequiredFieldValidator",
                "isAnswer": false
            }
        ],
        "questionType": {
            "id": 1,
            "name": "Multiple Choice",
            "isActive": true
        }
    },
    {
        "id": 1018,
        "name": "How do you get information from a form that is submitted
using the ?",
        "questionTypeId": 1,
        "options": [
            {
                "id": 1055,
                "questionId": 1010,
                "name": "Request.QueryString",

```

```

        "isAnswer": false
    },
    {
        "id": 1057,
        "questionId": 1010,
        "name": "Response.write",
        "isAnswer": false
    },
    {
        "id": 1056,
        "questionId": 1010,
        "name": "Request.Form",
        "isAnswer": true
    },
    {
        "id": 1058,
        "questionId": 1010,
        "name": "Response.writeln",
        "isAnswer": false
    }
],
"questionType": {
    "id": 1,
    "name": "Multiple Choice",
    "isActive": true
}
},
{
    "id": 1019,
    "name": "Which of the following is not a member of ADODBCommand
object?",
    "questionTypeId": 1,
    "options": [
        {
            "id": 1055,
            "questionId": 1010,
            "name": "ExecuteScalar",
            "isAnswer": true
        },
        {
            "id": 1056,
            "questionId": 1010,
            "name": "ExecuteStream",
            "isAnswer": false
        },
        {
            "id": 1057,
            "questionId": 1010,

```

```

        "name": "Open",
        "isAnswer": false
    },
    {
        "id": 1058,
        "questionId": 1010,
        "name": "ExecuteReader",
        "isAnswer": false
    }
],
"questionType": {
    "id": 1,
    "name": "Multiple Choice",
    "isActive": true
}
}
]
}

```

Csharp.json:

```

{
    "id": 2,
    "name": "C# and .Net Framework",
    "description": "C# and .Net Quiz (contains C#, .Net Framework, Linq,
etc.)",
    "config": {
        "shuffleQuestions": true,
        "showPager": false,
        "allowBack": true,
        "autoMove": true
    },
    "questions": [
        {
            "id": 1010,
            "name": "Which of the following converts a type to a 64-bit
integer in C#?",
            "questionTypeId": 1,
            "options": [
                {
                    "id": 1055,
                    "questionId": 1010,
                    "name": "ToSbyte",
                    "isAnswer": false
                },
                {
                    "id": 1056,
                    "questionId": 1010,

```

```

        "name": "ToSingle",
        "isAnswer": false
    },
    {
        "id": 1057,
        "questionId": 1010,
        "name": "ToInt32",
        "isAnswer": false
    },
    {
        "id": 1058,
        "questionId": 1010,
        "name": "ToInt64",
        "isAnswer": true
    }
],
"questionType": {
    "id": 1,
    "name": "Multiple Choice",
    "isActive": true
}
},
{
    "id": 1011,
    "name": "Which of the following preprocessor directive allows to
create a compound conditional directive, along with #if in C#?",
    "questionTypeId": 1,
    "options": [
        {
            "id": 1055,
            "questionId": 1010,
            "name": "elif",
            "isAnswer": false
        },
        {
            "id": 1056,
            "questionId": 1010,
            "name": "CLR",
            "isAnswer": false
        },
        {
            "id": 1057,
            "questionId": 1010,
            "name": "define",
            "isAnswer": false
        },
        {
            "id": 1058,

```

```

        "questionId": 1010,
        "name": "else",
        "isAnswer": true
    },
    {
        "id": 1058,
        "questionId": 1010,
        "name": " if",
        "isAnswer": false
    }
],
"questionType": {
    "id": 1,
    "name": "Multiple Choice",
    "isActive": true
}
},
{
    "id": 1012,
    "name": "Which of the following can be used to define the member
of a class externally?",
    "questionTypeId": 1,
    "options": [
        {
            "id": 1055,
            "questionId": 1010,
            "name": ":",
            "isAnswer": false
        },
        {
            "id": 1057,
            "questionId": 1010,
            "name": "::",
            "isAnswer": true
        },
        {
            "id": 1056,
            "questionId": 1010,
            "name": "#",
            "isAnswer": false
        },
        {
            "id": 1058,
            "questionId": 1010,
            "name": "none of the mentioned",
            "isAnswer": false
        }
    ]
},

```

```

        "questionType": {
            "id": 1,
            "name": "Multiple Choice",
            "isActive": true
        }
    },
    {
        "id": 1013,
        "name": "Which of the following gives the correct count of the
constructors that a class can define?",
        "questionTypeId": 1,
        "options": [
            {
                "id": 1055,
                "questionId": 1010,
                "name": "Any number",
                "isAnswer": true
            },
            {
                "id": 1057,
                "questionId": 1010,
                "name": " 1",
                "isAnswer": false
            },
            {
                "id": 1056,
                "questionId": 1010,
                "name": "2",
                "isAnswer": false
            },
            {
                "id": 1058,
                "questionId": 1010,
                "name": "None of the above",
                "isAnswer": false
            }
        ],
        "questionType": {
            "id": 1,
            "name": "Multiple Choice",
            "isActive": true
        }
    },
    {
        "id": 1014,
        "name": "What is the correct name of a method which has the same
name as that of class and used to destroy objects?",
        "questionTypeId": 1,

```

```

"options": [
  {
    "id": 1055,
    "questionId": 1010,
    "name": "Destructor",
    "isAnswer": true
  },
  {
    "id": 1057,
    "questionId": 1010,
    "name": "Constructor.",
    "isAnswer": false
  },
  {
    "id": 1056,
    "questionId": 1010,
    "name": "Finalize()",
    "isAnswer": false
  },
  {
    "id": 1058,
    "questionId": 1010,
    "name": "End",
    "isAnswer": false
  }
],
"questionType": {
  "id": 1,
  "name": "Multiple Choice",
  "isActive": true
}
},
{
  "id": 1015,
  "name": "What is #include <stdio.h>?",
  "questionTypeId": 1,
  "options": [
    {
      "id": 1055,
      "questionId": 1010,
      "name": "Inclusion directive",
      "isAnswer": false
    },
    {
      "id": 1057,
      "questionId": 1010,
      "name": "Preprocessor directive",
      "isAnswer": true
    }
  ]
}

```



```

    },
    {
        "id": 1056,
        "questionId": 1010,
        "name": " File inclusion directive",
        "isAnswer": false
    },
    {
        "id": 1058,
        "questionId": 1010,
        "name": "None of the above",
        "isAnswer": false
    }
],
"questionType": {
    "id": 1,
    "name": "Multiple Choice",
    "isActive": true
}
},
{
    "id": 1016,
    "name": "The C-preprocessors are specified with _____
symbol.",
    "questionTypeId": 1,
    "options": [
        {
            "id": 1055,
            "questionId": 1010,
            "name": " $",
            "isAnswer": false
        },
        {
            "id": 1056,
            "questionId": 1010,
            "name": " #",
            "isAnswer": true
        },
        {
            "id": 1057,
            "questionId": 1010,
            "name": " ” ”",
            "isAnswer": false
        },
        {
            "id": 1058,
            "questionId": 1010,
            "name": "&",

```

```

        "isAnswer": false
    }
},
"questionType": {
    "id": 1,
    "name": "Multiple Choice",
    "isActive": true
}
},
{
    "id": 1017,
    "name": "scanf() is a predefined function in_____header file?",
    "questionTypeId": 1,
    "options": [
        {
            "id": 1055,
            "questionId": 1010,
            "name": "stdlib. h",
            "isAnswer": false
        },
        {
            "id": 1056,
            "questionId": 1010,
            "name": "stdio. h",
            "isAnswer": true
        },
        {
            "id": 1057,
            "questionId": 1010,
            "name": "ctype. h",
            "isAnswer": false
        },
        {
            "id": 1058,
            "questionId": 1010,
            "name": "stdarg. h",
            "isAnswer": false
        }
    ],
    "questionType": {
        "id": 1,
        "name": "Multiple Choice",
        "isActive": true
    }
},
{
    "id": 1018,

```

```

        "name": "When a C program is started, O.S environment is
responsible for opening file and providing pointer for that file?",
        "questionTypeId": 1,
        "options": [
            {
                "id": 1055,
                "questionId": 1010,
                "name": "Standard input.",
                "isAnswer": false
            },
            {
                "id": 1057,
                "questionId": 1010,
                "name": " Standard output.",
                "isAnswer": false
            },
            {
                "id": 1056,
                "questionId": 1010,
                "name": "Standard error.",
                "isAnswer": false
            },
            {
                "id": 1058,
                "questionId": 1010,
                "name": "All of the mentioned",
                "isAnswer": true
            }
        ],
        "questionType": {
            "id": 1,
            "name": "Multiple Choice",
            "isActive": true
        }
    },
    {
        "id": 1019,
        "name": "How many number of pointer (*) does C have against a
pointer variable declaration?",
        "questionTypeId": 1,
        "options": [
            {
                "id": 1055,
                "questionId": 1010,
                "name": " No limits",
                "isAnswer": true
            },
            {

```

```

        "id": 1056,
        "questionId": 1010,
        "name": " 7",
        "isAnswer": false
    },
    {
        "id": 1057,
        "questionId": 1010,
        "name": "127",
        "isAnswer": false
    },
    {
        "id": 1058,
        "questionId": 1010,
        "name": "255",
        "isAnswer": false
    }
],
"questionType": {
    "id": 1,
    "name": "Multiple Choice",
    "isActive": true
}
}
]
}

```

Javascript.json:

```

{
    "id": 1,
    "name": "JavaScript Quiz",
    "description": "JavaScript Quiz (Basic Multiple Choice Questions for JavaScript Developers)",
    "questions": [
        {
            "id": 1010,
            "name": "Javascript is an _____ language?",
            "questionTypeId": 1,
            "options": [
                {
                    "id": 1055,
                    "questionId": 1010,
                    "name": "Object - Based",
                    "isAnswer": false
                },
                {

```

```

        "id": 1056,
        "questionId": 1010,
        "name": "Object -oriented",
        "isAnswer": true
    },
    {
        "id": 1057,
        "questionId": 1010,
        "name": "Procedural",
        "isAnswer": false
    },
    {
        "id": 1058,
        "questionId": 1010,
        "name": "None of the above",
        "isAnswer": false
    }
],
"questionType": {
    "id": 1,
    "name": "Multiple Choice",
    "isActive": true
}
},
{
    "id": 1011,
    "name": " Upon encountering empty statements, what does the
Javascript Interpreter do?",
    "questionTypeId": 1,
    "options": [
        {
            "id": 1055,
            "questionId": 1010,
            "name": "Throws an error",
            "isAnswer": false
        },
        {
            "id": 1057,
            "questionId": 1010,
            "name": "Gives a warning",
            "isAnswer": false
        },
        {
            "id": 1056,
            "questionId": 1010,
            "name": "Ignores the statement",
            "isAnswer": true
        }
    ],

```

```

        {
            "id": 1058,
            "questionId": 1010,
            "name": "None of the above",
            "isAnswer": false
        }
    ],
    "questionType": {
        "id": 1,
        "name": "Multiple Choice",
        "isActive": true
    }
},
{
    "id": 1012,
    "name": "Which of the following is correct about JavaScript?",
    "questionTypeId": 1,
    "options": [
        {
            "id": 1055,
            "questionId": 1010,
            "name": " JavaScript is an Object-Based language",
            "isAnswer": true
        },
        {
            "id": 1057,
            "questionId": 1010,
            "name": " JavaScript is Assembly-language",
            "isAnswer": false
        },
        {
            "id": 1056,
            "questionId": 1010,
            "name": "JavaScript is an Object-Oriented language",
            "isAnswer": false
        },
        {
            "id": 1058,
            "questionId": 1010,
            "name": "JavaScript is a High-level language",
            "isAnswer": false
        }
    ],
    "questionType": {
        "id": 1,
        "name": "Multiple Choice",
        "isActive": true
    }
}

```

```
    },
    {
        "id": 1013,
        "name": "Which of the following object is the main entry point to
all client-side JavaScript features and APIs?",
        "questionTypeId": 1,
        "options": [
            {
                "id": 1055,
                "questionId": 1010,
                "name": " Position",
                "isAnswer": true
            },
            {
                "id": 1057,
                "questionId": 1010,
                "name": "Window",
                "isAnswer": false
            },
            {
                "id": 1056,
                "questionId": 1010,
                "name": "Standard",
                "isAnswer": false
            },
            {
                "id": 1058,
                "questionId": 1010,
                "name": " Location",
                "isAnswer": false
            }
        ],
        "questionType": {
            "id": 1,
            "name": "Multiple Choice",
            "isActive": true
        }
    },
    {
        "id": 1014,
        "name": "Which of the following can be used to call a JavaScript
Code Snippet?",
        "questionTypeId": 1,
        "options": [
            {
                "id": 1055,
                "questionId": 1010,
                "name": "RMI",
```

```

        "isAnswer": false
    },
    {
        "id": 1057,
        "questionId": 1010,
        "name": "Triggering Event",
        "isAnswer": false
    },
    {
        "id": 1056,
        "questionId": 1010,
        "name": "Preprocessor",
        "isAnswer": false
    },
    {
        "id": 1058,
        "questionId": 1010,
        "name": "Function/Method",
        "isAnswer": true
    }
],
"questionType": {
    "id": 1,
    "name": "Multiple Choice",
    "isActive": true
}
},
{
    "id": 1015,
    "name": "Which of the following explains correctly what happens
when a JavaScript program is developed on a Unix Machine?",
    "questionTypeId": 1,
    "options": [
        {
            "id": 1055,
            "questionId": 1010,
            "name": "must be restricted to a Unix Machine only",
            "isAnswer": false
        },
        {
            "id": 1057,
            "questionId": 1010,
            "name": "will throw errors and exceptions",
            "isAnswer": false
        },
        {
            "id": 1056,
            "questionId": 1010,

```



```

        "name": "will work perfectly well on a Windows Machine",
        "isAnswer": true
    },
    {
        "id": 1058,
        "questionId": 1010,
        "name": " will be displayed as JavaScript text on the
browser",
        "isAnswer": false
    }
],
"questionType": {
    "id": 1,
    "name": "Multiple Choice",
    "isActive": true
}
},
{
    "id": 1016,
    "name": " Why JavaScript Engine is needed?",
    "questionTypeId": 1,
    "options": [
        {
            "id": 1055,
            "questionId": 1010,
            "name": " Both Compiling & Interpreting the JavaScript",
            "isAnswer": false
        },
        {
            "id": 1056,
            "questionId": 1010,
            "name": "Interpreting the JavaScript",
            "isAnswer": true
        },
        {
            "id": 1057,
            "questionId": 1010,
            "name": " Parsing the javascript",
            "isAnswer": false
        },
        {
            "id": 1058,
            "questionId": 1010,
            "name": "Compiling the JavaScript",
            "isAnswer": false
        }
    ],
    "questionType": {

```

```

        "id": 1,
        "name": "Multiple Choice",
        "isActive": true
    }
},
{
    "id": 1017,
    "name": "Why event handlers is needed in JS?",
    "questionTypeId": 1,
    "options": [
        {
            "id": 1055,
            "questionId": 1010,
            "name": "Adds innerHTML page to the code",
            "isAnswer": false
        },
        {
            "id": 1056,
            "questionId": 1010,
            "name": "Allows JavaScript code to alter the behaviour of
windows",
            "isAnswer": true
        },
        {
            "id": 1057,
            "questionId": 1010,
            "name": "Change the server location",
            "isAnswer": false
        },
        {
            "id": 1058,
            "questionId": 1010,
            "name": "Performs handling of exceptions and occurrences",
            "isAnswer": false
        }
    ],
    "questionType": {
        "id": 1,
        "name": "Multiple Choice",
        "isActive": true
    }
},
{
    "id": 1018,
    "name": "Which of the following is not a framework?",
    "questionTypeId": 1,
    "options": [
        {

```

```

        "id": 1055,
        "questionId": 1010,
        "name": " JavaScript .NET",
        "isAnswer": false
    },
    {
        "id": 1057,
        "questionId": 1010,
        "name": "Cocoa JS",
        "isAnswer": false
    },
    {
        "id": 1056,
        "questionId": 1010,
        "name": " JavaScript",
        "isAnswer": true
    },
    {
        "id": 1058,
        "questionId": 1010,
        "name": " jQuery",
        "isAnswer": false
    }
],
"questionType": {
    "id": 1,
    "name": "Multiple Choice",
    "isActive": true
}
},
{
    "id": 1019,
    "name": "Which of the following is not an error in JavaScript?",
    "questionTypeId": 1,
    "options": [
        {
            "id": 1055,
            "questionId": 1010,
            "name": "Division by zero",
            "isAnswer": true
        },
        {
            "id": 1056,
            "questionId": 1010,
            "name": "Missing of Bracket",
            "isAnswer": false
        }
    ]
}

```

```

        "id": 1057,
        "questionId": 1010,
        "name": "Syntax error",
        "isAnswer": false
      },
      {
        "id": 1058,
        "questionId": 1010,
        "name": "Missing of semicolons",
        "isAnswer": false
      }
    ],
    "questionType": {
      "id": 1,
      "name": "Multiple Choice",
      "isActive": true
    }
  }
]
}

```

Index.html:

```

<!doctype html>
<html lang="en">
<head>
  <meta charset="utf-8">
  <title>OnlineTestApplication</title>
  <base href="/">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link rel="icon" type="image/x-icon" href="favicon.ico">
</head>
<body>
  <app-root></app-root>
</body>
</html>

```

Step 4. Use npm install to install all the dependencies used in the Project.

```
> online-test-application@0.0.0 start
> ng serve

✓ Browser application bundle generation complete.

Initial Chunk Files | Names | Size
vendor.js | vendor | 3.08 MB
styles.css, styles.js | styles | 537.57 kB
polyfills.js | polyfills | 475.09 kB
scripts.js | scripts | 290.20 kB
main.js | main | 51.29 kB
runtime.js | runtime | 6.15 kB

| Initial Total | 4.41 MB

Build at: 2022-04-21T02:45:16.063Z - Hash: 63dc1419e3e9426a473f - Time: 11460ms

** Angular Live Development Server is listening on localhost:4200, open your browser on http://localhost:4200/ **

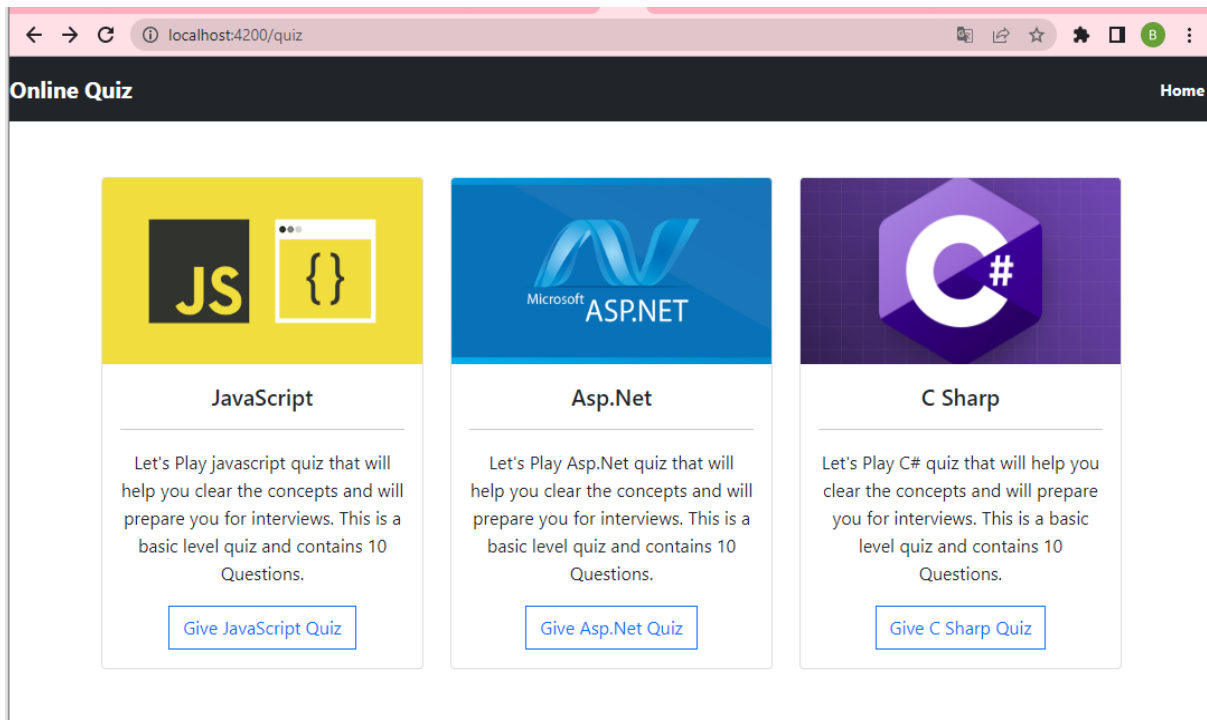
✓ Compiled successfully.

Session contents restored from 4/21/2022 at 9:18:13 AM
```

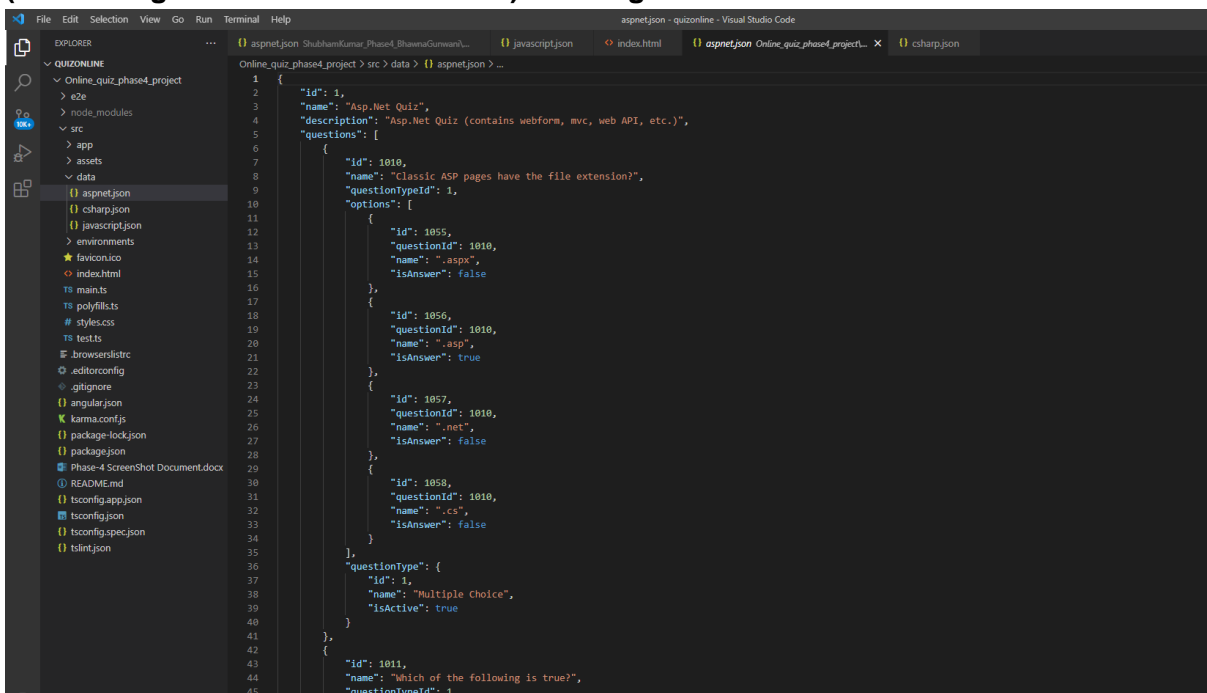
5. Run the Application in Visual Studio Code.
6. Home page will be displayed. Home page contains list of quizzes that user can choose from.
7. Based on User's Choice, Quiz is rendered in the Client Side by fetching data from Quiz Server or JSON file with Questions and Answers.
8. User can select option for a question, Users also have the option to navigate through the questions using Navigation Button (First , Last , Next and Prev).
9. Users can directly go to First and Last Questions by clicking on Navigation Buttons (First and Last).
10. Users have the option to review their Quiz by clicking on Review button. Here user can see details of answered and not answered questions and navigate directly to the question which they want to Answer.
11. After completing the quiz, User can submit the quiz where the Quiz Score is displayed on the Results page. As well as user can see their responses are right or wrong.
12. There is timer set for quiz, If user exceeds quiz time then the quiz is automatically submitted and results are displayed to User.

SCREENSHOTS:

Home Page Contains Quiz options user can take: (There are three quiz options now – Javascript, Asp.Net and C# (C Sharp)).



The Quiz Names and Description are fetched dynamically using JSON data (Containing Questions and Answers) and Angular Framework.



1. When User Selects JavaScript Quiz, they are redirected to JavaScript quiz page where they can see all the questions with their options rendered from JSON file.

← → localhost:4200/quiz/Javascript

Online Quiz

JAVASCRIPT QUIZ

Question 1 of 10. Time: 00:22 / 05:00

1. Javascript is an _____ language?

<input type="checkbox"/> Object - Based	<input type="checkbox"/> Object -oriented
<input type="checkbox"/> Procedural	<input type="checkbox"/> None of the above

First Prev Next Last

Quiz Review Submit Quiz

User also have the option to navigate through questions using navigation links (First, Last , Prev and Next). There is also timer for quiz, after completion of allotted time the quiz submits automatically or User can submit their quiz before time using Submit Quiz button.

← → localhost:4200/quiz/Javascript

Online Quiz

JAVASCRIPT QUIZ

Question 1 of 10. Time: 02:12 / 05:00

1. Javascript is an _____ language?

<input type="checkbox"/> Object - Based	<input checked="" type="checkbox"/> Object -oriented
<input type="checkbox"/> Procedural	<input type="checkbox"/> None of the above

First Prev Next Last

Quiz Review Submit Quiz

User can select an option for the question and move to next question by clicking next navigation button

← → localhost:4200/quiz/Javascript

Online Quiz

JAVASCRIPT QUIZ

Question 2 of 10. Time: 00:32 / 05:00

2. Upon encountering empty statements, what does the Javascript Interpreter do?

<input type="checkbox"/> Throws an error	<input checked="" type="checkbox"/> Gives a warning
<input type="checkbox"/> Ignores the statement	<input type="checkbox"/> None of the above

First Prev Next Last

Quiz Review Submit Quiz

Similarly, User can Answer all the questions asked

← → ↻ localhost:4200/quiz/Javascript

Online Quiz

JAVASCRIPT QUIZ

Question 3 of 10. Time: 00:27 / 05:00

3. Which of the following is correct about JavaScript?

<input checked="" type="checkbox"/> JavaScript is an Object-Based language	<input type="checkbox"/> JavaScript is Assembly-language
<input type="checkbox"/> JavaScript is an Object-Oriented language	<input type="checkbox"/> JavaScript is a High-level language

[First](#) [Prev](#) [Next](#) [Last](#)

[Quiz](#) [Review](#) [Submit Quiz](#)

← → ↻ localhost:4200/quiz/Javascript

Online Quiz

JAVASCRIPT QUIZ

Question 4 of 10. Time: 00:19 / 05:00

4. Which of the following object is the main entry point to all client-side JavaScript features and APIs?

<input type="checkbox"/> Position	<input type="checkbox"/> Window
<input type="checkbox"/> Standard	<input type="checkbox"/> Location

[First](#) [Prev](#) [Next](#) [Last](#)

[Quiz](#) [Review](#) [Submit Quiz](#)

User can also navigate to last or First question directly from First and Last Nav Links

← → ↻ localhost:4200/quiz/Javascript

Online Quiz

JAVASCRIPT QUIZ

Question 10 of 10. Time: 00:33 / 05:00

10. Which of the following is not an error in JavaScript?

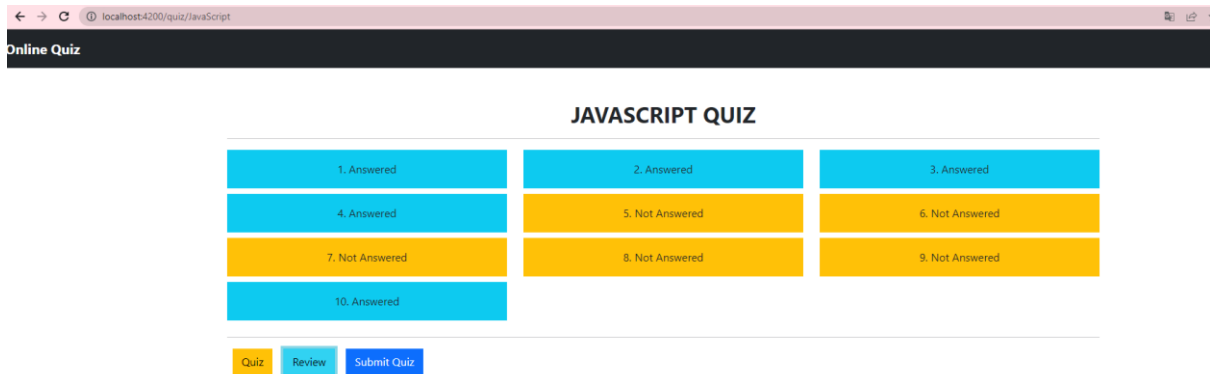
<input type="checkbox"/> Division by zero	<input checked="" type="checkbox"/> Missing of Bracket
<input type="checkbox"/> Syntax error	<input type="checkbox"/> Missing of semicolons

[First](#) [Prev](#) [Next](#) [Last](#)

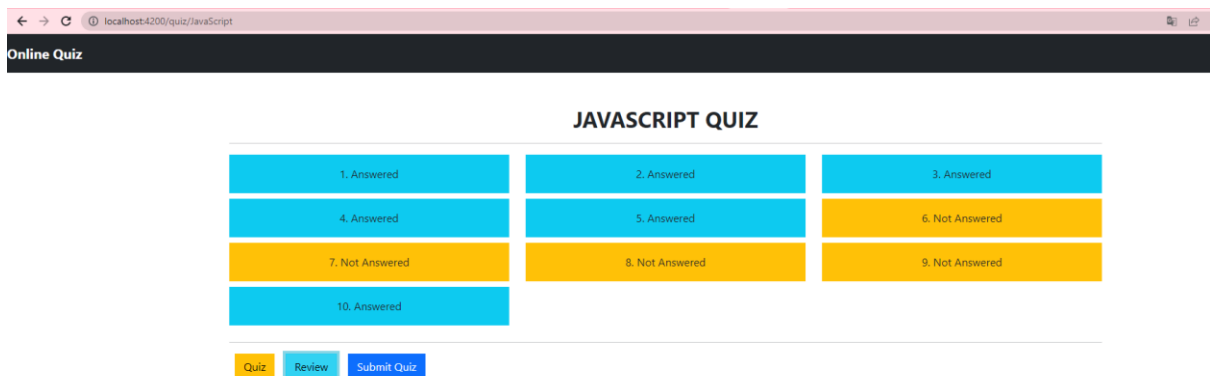
[Quiz](#) [Review](#) [Submit Quiz](#)

User can Review All the Answered and Not Answered Questions by Clicking on Review Nav Link.

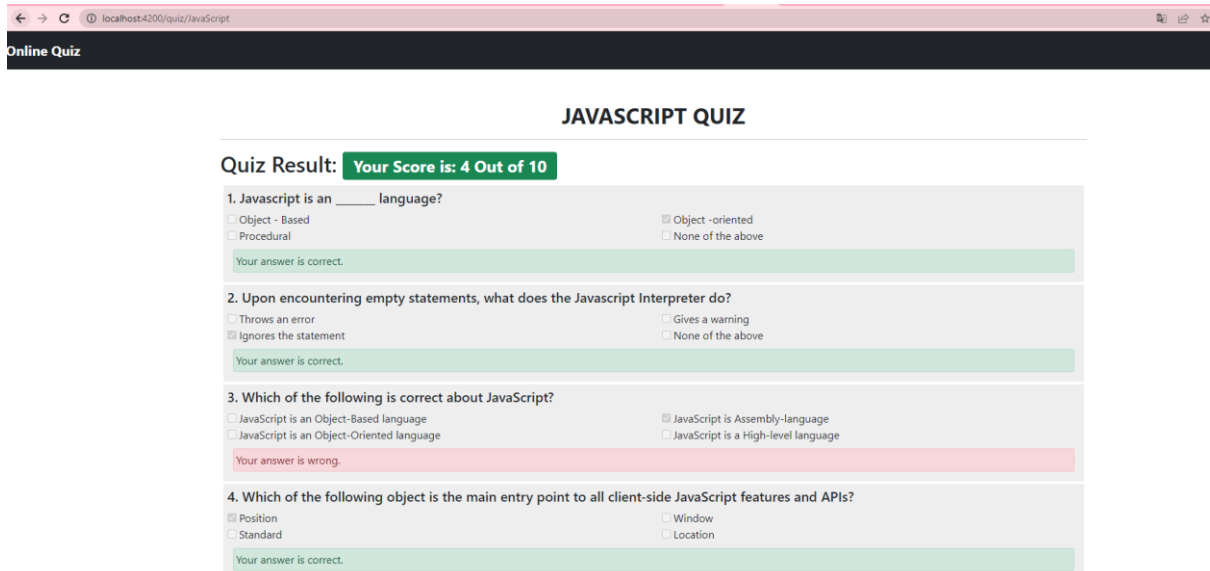
Also user can go to specific question to answer by clicking on any of the Question Blocks.



User wanted to answer the 5th Not Answered Question:



When The user clicks on Submit button, they can see their result along with Questions and Options they have selected:



← → localhost:4200/quiz/javascript

5. Which of the following can be used to call a JavaScript Code Snippet?

☐ RMI ☐ Triggering Event

☐ Preprocessor ☒ Function/Method

Your answer is correct.

6. Which of the following explains correctly what happens when a JavaScript program is developed on a Unix Machine?

☐ must be restricted to a Unix Machine only ☐ will throw errors and exceptions

☐ will work perfectly well on a Windows Machine ☐ will be displayed as JavaScript text on the browser

Your answer is wrong.

7. Why JavaScript Engine is needed?

☐ Both Compiling & Interpreting the JavaScript ☐ Interpreting the JavaScript

☐ Parsing the javascript ☐ Compiling the JavaScript

Your answer is wrong.

8. Why event handlers is needed in JS?

☐ Adds innerHTML page to the code ☐ Allows JavaScript code to alter the behaviour of windows

☐ Change the server location ☐ Performs handling of exceptions and occurrences

Your answer is wrong.

9. Which of the following is not a framework?

☐ JavaScript .NET ☐ Cocoa JS

☐ JavaScript ☐ jQuery

Your answer is wrong.

10. Which of the following is not an error in JavaScript?

☐ Division by zero ☐ Missing of Bracket

☐ Syntax error ☒ Missing of semicolons


Your answer is wrong.

You may close this window now.

2. User Selects to give Asp.Net Quiz

← → localhost:4200/quiz


Online Quiz



JavaScript

Let's Play javascript quiz that will help you clear the concepts and will prepare you for interviews. This is a basic level quiz and contains 10 Questions.


[Give JavaScript Quiz](#)



Asp.Net

Let's Play Asp.Net quiz that will help you clear the concepts and will prepare you for interviews. This is a basic level quiz and contains 10 Questions.

[Give Asp.Net Quiz](#)



C Sharp

Let's Play C# quiz that will help you clear the concepts and will prepare you for interviews. This is a basic level quiz and contains 10 Questions.

[Give C Sharp Quiz](#)

When User Selects Asp.Net Quiz, they are redirected to Asp.Net quiz page where they can see all the questions with their options rendered from JSON file.

← → 🔄 localhost:4200/quiz/AspNet

Online Quiz

ASP.NET QUIZ

Question 1 of 10 Time: 01:16 / 05:00

1. Which of the following utilities can be used to compile managed assemblies into processor-specific native code?

<input type="checkbox"/> gacutil	<input checked="" type="checkbox"/> ngen
<input type="checkbox"/> sn	<input type="checkbox"/> dumpbin

First Prev Next Last

Quiz Review Submit Quiz

User can select an option for the question and move to next question by clicking next navigation button

← → 🔄 localhost:4200/quiz/AspNet

Online Quiz

ASP.NET QUIZ

Question 2 of 10 Time: 02:30 / 05:00

2. Which of the following .NET components can be used to remove unused references from the managed heap?

<input checked="" type="checkbox"/> Common Language Infrastructure	<input type="checkbox"/> CLR
<input type="checkbox"/> Garbage Collector	<input type="checkbox"/> Class Loader

First Prev Next Last

Quiz Review Submit Quiz

Similarly, User can Answer all the questions asked

← → 🔄 localhost:4200/quiz/AspNet

Online Quiz

ASP.NET QUIZ

Question 3 of 10 Time: 03:20 / 05:00

3. Which of the following assemblies can be stored in Global Assembly Cache?

<input checked="" type="checkbox"/> Shared Assemblies	<input type="checkbox"/> Private Assemblies
<input type="checkbox"/> Public Assemblies	<input type="checkbox"/> Protected Assemblies

First Prev Next Last

Quiz Review Submit Quiz

← → 🔄 localhost:4200/quiz/AspNet

Online Quiz

ASP.NET QUIZ

Question 10 of 10.

Time: 03:58 / 05:00

10. Which of the following is not a member of ADODBCommand object?

<input checked="" type="checkbox"/> ExecuteScalar	<input type="checkbox"/> ExecuteStream
<input type="checkbox"/> Open	<input type="checkbox"/> ExecuteReader

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Quiz

Review

Submit Quiz

Similarly, User can Answer all the questions asked

← → 🔄 localhost:4200/quiz/AspNet

Online Quiz

ASP.NET QUIZ

Question 4 of 10.

Time: 04:56 / 05:00

4. Code that targets the Common Language Runtime is known as

<input type="checkbox"/> Managed Code	<input type="checkbox"/> Unmanaged
<input type="checkbox"/> Distributed	<input checked="" type="checkbox"/> Legacy

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Quiz

Review

Submit Quiz

User can also navigate to last or First question directly from First and Last Nav Links

← → 🔄 localhost:4200/quiz/AspNet

Online Quiz

ASP.NET QUIZ

1. Answered	2. Answered	3. Answered
4. Answered	5. Not Answered	6. Not Answered
7. Not Answered	8. Not Answered	9. Not Answered
10. Answered		

Quiz

Review

Submit Quiz

User wanted to answer the 9th Not Answered Question:

← → localhost:4200/quiz/AspNet

Online Quiz

ASP.NET QUIZ

Question 9 of 10. Time: 01:48 / 05:00

9. How do you get information from a form that is submitted using the ?

<input type="checkbox"/> Request.QueryString	<input type="checkbox"/> Response.write
<input type="checkbox"/> Request.Form	<input type="checkbox"/> Response.WriteLine

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[Quiz](#) [Review](#) [Submit Quiz](#)

← → localhost:4200/quiz/AspNet

Online Quiz

ASP.NET QUIZ

Question 9 of 10. Time: 02:22 / 05:00

9. How do you get information from a form that is submitted using the ?

<input type="checkbox"/> Request.QueryString	<input type="checkbox"/> Response.write
<input checked="" type="checkbox"/> Request.Form	<input type="checkbox"/> Response.WriteLine

[First](#) [Prev](#) [Next](#) [Last](#)

[Quiz](#) [Review](#) [Submit Quiz](#)

9th Question is Answered Now:

← → localhost:4200/quiz/AspNet

Online Quiz

ASP.NET QUIZ

1. Answered	2. Answered	3. Answered
4. Answered	5. Not Answered	6. Not Answered
7. Not Answered	8. Not Answered	9. Answered
10. Answered		

[Quiz](#) [Review](#) [Submit Quiz](#)

When The user clicks on Submit button, they can see their result along with Questions and Options they have selected:

ASP.NET QUIZ

Quiz Result: **Your Score is: 3 Out of 10**

1. Which of the following utilities can be used to compile managed assemblies into processor-specific native code?

- ☐ gacutil ☒ ngen
☐ sn ☐ dumpbin

Your answer is correct.

2. Which of the following .NET components can be used to remove unused references from the managed heap?

- ☐ Common Language Infrastructure ☐ CLR
☒ Garbage Collector ☐ Class Loader

Your answer is correct.

3. Which of the following assemblies can be stored in Global Assembly Cache?

- ☐ Shared Assemblies ☐ Private Assemblies
☐ Public Assemblies ☒ Protected Assemblies

Your answer is wrong.

4. Code that targets the Common Language Runtime is known as

- ☐ Managed Code ☒ Unmanaged
☐ Distributed ☐ Legacy

Your answer is wrong.

5. Which of the following is the root of the .NET type hierarchy?

- ☐ System.Root ☐ System.Parent
☐ System.Type ☐ System.Object

Your answer is wrong.

6. An alternative way of displaying text on web page using?

- ☐ asp:listitem ☐ asp:button
☐ asp:label ☐ None of the above

Your answer is wrong.

7. Which of the following object is not an ASP component?

- ☐ Counter ☐ LinkCounter
☐ AdRotator ☐ File Access

Your answer is wrong.

8. Which of the following control is used to validate that two fields are equal?

- ☐ CompareValidator ☐ equals() method
☐ RegularExpressionValidator ☐ RequiredFieldValidator

Your answer is wrong.

9. How do you get information from a form that is submitted using the ?

- ☐ Request.QueryString ☐ Response.write
☒ Request.Form ☐ Response.WriteLine

Your answer is correct.


10. Which of the following is not a member of ADODBCommand object?

- ☐ ExecuteScalar ☒ ExecuteStream
☐ Open ☐ ExecuteReader

Your answer is wrong.

You may close this window now.


3. User Selects to give C Sharp Quiz



JavaScript

Let's Play javascript quiz that will help you clear the concepts and will prepare you for interviews. This is a basic level quiz and contains 10 Questions.


[Give JavaScript Quiz](#)



Asp.Net

Let's Play Asp.Net quiz that will help you clear the concepts and will prepare you for interviews. This is a basic level quiz and contains 10 Questions.

[Give Asp.Net Quiz](#)



C Sharp

Let's Play C# quiz that will help you clear the concepts and will prepare you for interviews. This is a basic level quiz and contains 10 Questions.

[Give C Sharp Quiz](#)

C# AND .NET FRAMEWORK

Question 1 of 10.

Time: 00:09 / 05:00

1. Which of the following converts a type to a 64-bit integer in C#?

☐ ToSbyte

☐ ToInt32

☐ ToSingle

☒ ToInt64

[First](#) [Prev](#) [Next](#) [Last](#)

[Quiz](#) [Review](#) [Submit Quiz](#)

C# AND .NET FRAMEWORK

Question 2 of 10.

Time: 01:43 / 05:00

2. Which of the following preprocessor directive allows to create a compound conditional directive, along with #if in C#?

☒ elif

☐ define

☐ if

☐ CLR

☐ else

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[Quiz](#) [Review](#) [Submit Quiz](#)

← → 🔄 📄 localhost:4200/quiz/C%20Sharp

Online Quiz

C# AND .NET FRAMEWORK

Question 3 of 10

Time: 02:17 / 05:00

3. Which of the following can be used to define the member of a class externally?

☒ :

☐ #

☐ ::

☐ none of the mentioned

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Quiz

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Submit Quiz

← → 🔄 📄 localhost:4200/quiz/C%20Sharp

Online Quiz

C# AND .NET FRAMEWORK

Question 10 of 10

Time: 04:18 / 05:00

10. How many number of pointer (*) does C have against a pointer variable declaration?

☒ No limits

☐ 127

☐ 7

☐ 255

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Quiz

Review

Submit Quiz

← → 🔄 📄 localhost:4200/quiz/C%20Sharp

Online Quiz

C# AND .NET FRAMEWORK

1. Answered

2. Answered

3. Answered

4. Not Answered

5. Not Answered

6. Not Answered

7. Not Answered

8. Not Answered

9. Answered

10. Answered

Quiz

Review

Submit Quiz

C# AND .NET FRAMEWORK

Question 8 of 10.

Time: 00:43 / 05:00

8. scanf() is a predefined function in ____ header file?

☒ stdlib. h

☐ stdio. h

☐ ctype. h

☐ stdarg. h

[First](#) [Prev](#) [Next](#) [Last](#)

[Quiz](#) [Review](#) [Submit Quiz](#)

C# AND .NET FRAMEWORK

Quiz Result: **Your Score is: 2 Out of 10**

1. Which of the following converts a type to a 64-bit integer in C#?

- ☐ ToSbyte
☒ ToInt32

- ☐ ToSingle
☐ ToInt64

Your answer is wrong.

2. Which of the following preprocessor directive allows to create a compound conditional directive, along with #if in C#?

- ☐ elif
☐ define
☒ if

- ☐ CLR
☒ else

Your answer is wrong.

3. Which of the following can be used to define the member of a class externally?

- ☐ :
☒ #

- ☐ ::
☐ none of the mentioned

Your answer is wrong.

4. Which of the following gives the correct count of the constructors that a class can define?

- ☐ Any number
☒ 2

- ☒ 1
☐ None of the above

Your answer is wrong.

5. What is the correct name of a method which has the same name as that of class and used to destroy objects?

- ☒ Destructor
☐ Finalize()

- ☐ Constructor.
☐ End

Your answer is correct.

6. What is #include <stdio.h>?

- ☐ Inclusion directive
☐ File inclusion directive

- ☐ Preprocessor directive
☐ None of the above

Your answer is wrong.

7. The C-preprocessors are specified with ____ symbol.

- ☐ \$
☒ #

- ☐ #
☐ &

Your answer is wrong.

8. scanf() is a predefined function in ____ header file?

- ☒ stdlib. h
☐ ctype. h

- ☐ stdio. h
☐ stdarg. h

Your answer is wrong.

9. When a C program is started, O.S environment is responsible for opening file and providing pointer for that file?

- ☐ Standard input.
☐ Standard error.

- ☐ Standard output.
☐ All of the mentioned

Your answer is wrong.

10. How many number of pointer (*) does C have against a pointer variable declaration?

- ☒ No limits
☐ 127

- ☐ 7
☐ 255

Your answer is correct.

You may close this window now.

Step 5: Pushing the code to GitHub repository

- Open your command prompt and navigate to the folder where you have created your files.

```
cd <folder path>
```

- Initialize repository using the following command:

```
git init
```

- Add all the files to your git repository using the following command:

```
git add .
```

- Commit the changes using the following command:

```
git commit . -m <commit message>
```

- Push the files to the folder you initially created using the following command:

```
git push -u origin master
```

Unique Selling Points of the Application

- Admin can manage the quiz topics, number of questions in the quiz.
- Admin can be able to set the timer for the quiz.
- User can able to review the solutions for the attempted questions once if they have submitted the user can able to see the final solutions there itself.

Conclusions

In the program an application has been developed with a duration of two spirits. This application makes handling the data of the Online test application. All the data about the number of various topics in the quiz, number of questions, timer, review of the attempted questions are maintained. The admin can able to change the questions in the test applications and also admin can be able to change the number of questions and topics in quiz and also able to either increase or decrease the time duration.

