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| --- | --- | --- | --- |
| Type | Name | Version | Details |
| Programming language | * HTML * JavaScript * J Query * AJAX * Node JS | * 5.0 * N/A * 3.3.1 * N/A * 9.11.2 | * Mark-up language for our web pages * Scripting language for form validations, page navigations etc. * JavaScript library for easy use of JS * For all API calls and loading the data onto the page * Server-side language for API’s |
| Framework | * Laravel * Tailwind | * 6.0 * 1.1.4 | * Framework for building web applications * Front end framework for styling webpages |
| Database | MongoDB | 4.0.10 | * cross-platform document-oriented database program |
| IDE | Visual studio code | 1.27.0 | * source-code editor developed by Microsoft for Windows, Linux and macOS |
| Version Control | GIT | 2.5 | * Git is a distributed version-control system for tracking changes in source code |

**Visual studio code:**

In these days where many developers use different IDE’s for developing, Visual studio code stands at top for developing web-based applications

It provides many extensions for fast developing and coding by highlighting errors or accessibility errors while typing as these thing small things make huge change at the end and unable to point out them as the project scale increases day by day

For writing HTML and CSS visual studio code is the best option as it has inbuilt features like closing tags, picking colours, selecting properties, selectors and folding the blocks of code.

More information for using visual studio code for web developing can be found here(https://code.visualstudio.com/docs/languages/overview).

**NodeJS:**

In this project we use NodeJS for backend language for developing API’s, which are application programming interface, in our project, these are the interfaces for collecting student’s response and submitting them in a database and then also bring back them by admin for running a matching algorithm

**RESTful Web Services**

“A web service is a collection of open protocols and standards used for exchanging data between applications or systems. Software applications written in various programming languages and running on various platforms can use web services to exchange data over computer networks like the Internet in a manner similar to inter-process communication on a single computer. This interoperability (e.g., communication between Java and Python, or Windows and Linux applications) is due to the use of open standards.

Web services based on REST Architecture are known as RESTful web services. These webservices uses HTTP methods to implement the concept of REST architecture. A RESTful web service usually defines a URI, Uniform Resource Identifier a service, which provides resource representation such as JSON and set of HTTP Methods.” [<https://www.tutorialspoint.com/nodejs/nodejs_restful_api.htm>]

MongoDB:

“MongoDB is an open, non-tabular database developed by MongoDB, Inc. MongoDB stores data as documents in a binary representation called BSON (Binary JSON). Related information is stored together for fast query access through the MongoDB query language. Fields can vary from document to document; there is no need to declare the structure of documents to the system, as documents are self-describing. If a new field needs to be added to a document, then the field can be created without affecting all other documents in the collection, without updating a central system catalog, and without taking the system offline. Optionally, schema validation can be used to enforce data governance controls over each collection.” [ <https://www.mongodb.com/compare/mongodb-mysql>]