Tools and Standards

In our project we designed and website to provide the facility for the university students to chat within them. In the process of making this application, we used many tools and standard techniques to achieve the final output. Below is the list of tools and standards that came in handy to us.

Programming Languages:

It’s an open fact that Java Script is one of the highly used languages with huge library support for web development. So, we used JS as the main programming language and HTML as the language for front-end development. JS along with Node i.e. Node JS is used along with Express layer i.e. Express JS to make JS work for the backend. JS language directly cannot be used for the backend development directly, so it’s combined with Node and Express layers to made it work. We used MongoDB database which is a NoSQL database which works on direct query method unlike SQL. So, we used the inbuilt methods for setting up the DB. We also used Socket.io for the implementation of the real time chat system, providing a 2-way communication channel between a client and server.

Keywords: JS, NodeJS, Express JS, HTML, Mongo DB, Socket.io.

Editor and IDE:

In this project we used Visual Studio Code as an IDE and also as an editor as it’s one of the versatile IDEs we have in the field for web development which is best suitable for web development. It also has the inbuilt feature of adding extensions which help in supporting the project to work and test at a faster pace. We also used Sublime Text Editor. For making the software architecture, use case diagram, org chart, and Gantt chart, we used Canva, a free design too that allows you to make diagrams.

Keywords: Visual Studio Code, Sublime Text, Canva, IDE.

Standards followed:

Development is like the art of cooking which needs the right things to be added to get the perfect recipe we anticipate. And to add the right things we need the ingredients to be in the right place i.e. in an organized manner. An organized way of coding helps us to decode, upgrade, add, delete the features needed for the project so that the right features can be added to get the best output for the project.

* We followed the method of clean code architecture, so we separated files which serve different purposes in our project and also given them names accordingly.
* Index.js file is the main entry point for the server in our project and to set up connection between the DB and the server we designed a schema which contains the fields of data we need to be keep it precise and organized.
* Also, we are using environment variables where the secret values shouldn’t be used directly to avoid data and security breach for keys like JWT token secret.
* And we are also following sessions i.e. using JWT token to verify whether the user is previously logged in or not, to skip the login process if he is logged within a certain range of time for avoiding repeating login and better user experience.
* We commented on our code, so it was easier for other members to understand what’s the line or portion of code meant.
* For the documentation process, we split it among each group member so each of us documents a part of the project including requirements documentation, user documentation, and testing documentation.