

Group-7

Capstone Project

Report

DoConnect

Mentor

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ACKNOWLEDGEMENT

We have taken a lot of effort into this project. However, completing this project would not have been possible without the support and guidance of a lot of individuals. We would like to extend our sincere thanks to all of them.

We are highly indebted to **Mr. Javeed Muhammad Husnuddin** for their guidance and supervision. We would like to thank him for providing the necessary information and resources for this project.

We would like to express our gratitude towards our parents & our friends for their kind cooperation and encouragement which help us a lot in completing this project.

Our thanks and appreciations also go to our colleague in developing the project. Thank you to all the people who have willingly helped us out with their abilities.

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Introduction

Do Connect is a social is question-and-answer platform that allows users to engage in dialogue with experts in their field. It has become a go-to source for information on a wide range of topics. It is a great resource for learning about new things, finding answers to your questions, and building relationships with other people who share your interests. It's also a great way to stay up-to-date on the latest trends and developments in your field.

To do the above web applications there are two users:-

- 1. User
- 2. Admin

Project definition

DoConnect is a popular Question and Answer (Q & A) form in which techniques questions was asked and answered.

There are 2 users on the application: -

- 1. User
- 2. Admin

User Stories -

- 1. As a user I should be able to login, Logout and Register into the application.
- 2. As a user I should be able to ask any question under any topic
- 3. As a user I should be able to search the question on any string written in search box
- 4. As a user I should be able to Answer any question asked
- 5. As a user I should be able to answer more than one question and more than one time
- 6. As a user I should be able to chat with other users.
- 7. As a user I should be able to upload images to refer

Admin Stories -

- 1. As an Admin I should be able to login, Logout and Register into the application.
- 2. As an Admin I should be able to get mail as soon as any new Question is asked or any Answers given.
- 3. As an Admin I should be able to approve the question and Answer. Any Question or Answer will be visible on the platform only if it is approved.
- 4. 4. As an Admin I should be able to delete inappropriate Questions or Answers.

Technologies Used:

Frontend -

- AngularJs
- Material UI (Sweetaleat2, MatCard, MatTable etc.)
- HTML, CSS
- Bootstrap Grid

Backend -

- Java
- Spring Boot
- Data JPA
- Microservices

Database -

MySQL

Design and development environment:

Front-end:

The frontend of a website describes the part that the visitor can see. It includes all displayed content that is visible to public or logged-in users. The frontend is often called the GUI (Graphical User Interface) because it is the interface that the visitors can see and use. The frontend is mainly used to display various types of content and make the user's input available to the backend. The displayed content includes the basic structure of the website, such as the navigation. The frontend includes texts, graphics, videos, and other media.

Html5:

The Hypertext Markup Language or HTML is the standard markup language for documents designed to be displayed in a web browser. It can be assisted by technologies such as Cascading Style Sheets (CSS) and scripting languages such as JavaScript.

Web browsers receive HTML documents from a web server or from local storage and render the documents into multimedia web pages. HTML describes the structure of a web page semantically and originally included cues for the appearance of the document.

HTML elements are the building blocks of HTML pages. With HTML constructs, images and other objects such as interactive forms may be embedded into the rendered page. HTML provides a means to create structured documents by denoting structural semantics for text such as headings, paragraphs, lists, links, quotes, and other items. HTML elements are delineated by tags, written using angle brackets. Tags such as directly introduce content into the page. Other tags such as

surround and provide information about document text and may include other tags as subelements. Browsers do not display the HTML tags but use them to interpret the content of the page.

CSS:

Cascading Style Sheets (CSS) is a style sheet language used for describing the presentation of a document written in a markup language such as HTML or XML (including XML dialects such as SVG, MathML or XHTML). CSS is a cornerstone technology of the World Wide Web, alongside HTML and JavaScript. CSS is designed to enable the separation of presentation and content, including layout, colours, and fonts. This separation can improve content accessibility; provide more flexibility and control in the specification of presentation characteristics; enable multiple web pages to share formatting by specifying the relevant CSS in a separate .CSS file, which reduces complexity and repetition in the structural content; and enable the .CSS file to be cached to improve the page load speed between the pages that share the file and its formatting.

Angular JS:

AngularJS was a JavaScript-based open-source front-end web framework for developing single-page applications. It was maintained mainly by Google and a community of individuals and corporations. It aimed to simplify both the development and the testing of such applications by providing a framework for client-side model—view— controller (MVC) and model—view—view model (MVVM) architectures, along with components commonly used in web applications and progressive web applications. AngularJS was used as the frontend of the MEAN stack, that consisted of MongoDB database, Express.js web application server framework, AngularJS itself (or Angular), and Node.js server runtime environment.

Back-end:

The backend to a website is pretty much everything the user can't see. Generally, this means the programming that generates pages that the user views, creating the "server-side" content of the site. This could be scripts, directives, databases, and other automated functions the server performs. Back-end development includes the server implementation and it more on the logical interaction of data, how it is stored, and transmitted.

Java:

Java is a high-level, class-based, object-oriented programming language that is designed to have as few implementation dependencies as possible. It is a general-purpose programming language intended to let programmers write once, run anywhere (WORA), meaning that compiled Java code can run on all platforms that support Java without the need to recompile. Java applications are typically compiled to bytecode that can run on any Java virtual machine (JVM) regardless of the underlying computer architecture. The syntax of Java is similar to C and C++ but has fewer low-level facilities than either of them.

The Java runtime provides dynamic capabilities (such as reflection and runtime code modification) that are typically not available in traditional compiled languages. As of 2019, Java was one of the most popular programming languages in use according to GitHub, particularly for client—server web applications, with a reported 9 million developers. Java was originally developed by James Gosling at Sun Microsystems and released in May 1995 as a core component of Sun Microsystems' Java platform.

The original and reference implementation Java compilers, virtual machines, and class libraries were originally released by Sun under proprietary licenses. As of May 2007, in compliance with the specifications of the Java Community Process, Sun had relicensed most of its Java technologies under the GPL-2.0-only license. Oracle offers its own Hotspot Java Virtual Machine, however the official reference implementation is the OpenJDK JVM which is free open-source software and used by most developers and is the default JVM for almost all Linux distributions.

Database:

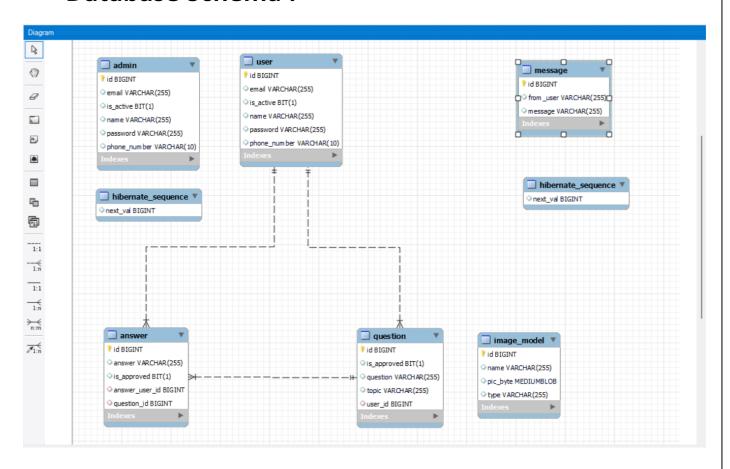
In computing, a database is an organized collection of data stored and accessed electronically. Small databases can be stored on a file system, while large databases are hosted on computer clusters or cloud storage. The design of databases spans formal techniques and practical considerations including data modelling, efficient data representation and storage, query languages, security and privacy of sensitive data, and distributed computing issues including supporting concurrent access and fault tolerance. A database management system (DBMS) is the software that interacts with end users, applications, and the database itself to capture and analyse the data. The DBMS software additionally encompasses the core facilities provided to administer the database. The total sum of the database, the DBMS and the associated applications can be referred to as a database system. Often the term "database" is also used loosely to refer to any of the DBMS, the database system or an application associated with the database.

MySQL:

MySQL is a relational database management system based on the Structured Query Language, which is the popular language for accessing and managing the records in the database. MySQL is open-source and free software under the GNU license. It is supported by **Oracle Company**.

MySQL is currently the most popular database management system software used for managing the relational database. It is open-source database software, which is supported by Oracle Company. It is fast, scalable, and easy to use database management system in comparison with Microsoft SQL Server and Oracle Database.

Database Schema:



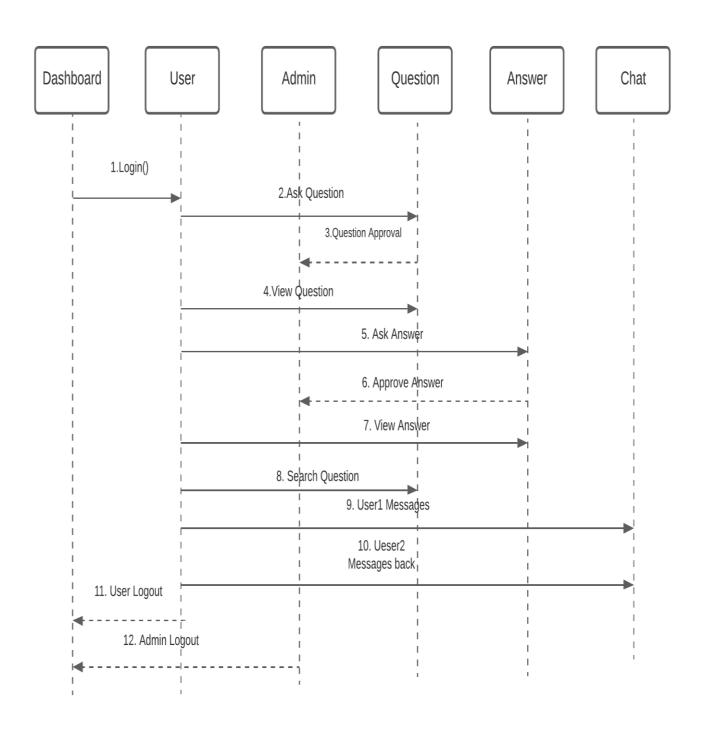
Class Diagram

<<Java Class> <Java Class> GAnswer AdminServiceImpl **⊕** User ServiceImpl **⊕** ImageModel a id: Long a id: Long a id: Long adminRepo: AdminRepo userRepo: IUserRepo name: String name: String answer: String guestionRepo: QuestionRepo guestionRepo: QuestionRepo a type: String password: String answ erRepo: Answ erRepo answ erRepo: Answ erRepo a isApproved: Bo picByte: bytef a email: String userRepo: IUserRepo ntityManager: EntityManager @ getId():Long a phoneNumber: String □ imageModelRepo: limageModelRepo emailSenderService: EmailSenderService €ImageModel() getAnswer():String a isActive: Boolea restTemplate: RestTemplate FilmageModel(String,String,byte[]) @ getAnsw erUser():User [€]AdminServiceImpl() ©UserServiceImpl() @ getId():Long @ getId():Long getQuestion():Question adminLogin(String,String):Admin getName():String getName():String getlsApproved():Boolean adminLogout(Long):String userLogin(String,String):User @ getType():String @ getPassw ord():String @ setId(Long):void adminRegister(Admin):Admin userLogout(Long):String getPicByte():byte[] getEmail():String setAnswer(String):void getUnApprovedQuestions():List<Question userRegister(User):User setId(Long):void getPhoneNumber():String o setAnsw erUser(User):void getUnApprovedAnswers():List<Answer> askQuestion(AskQuestionDTO);Question @ getlsActive():Boolean setQuestion(Question):void approveQuestion(Long):Question giveAnsw er(PostAnsw erDTO):Answ er setName(String):void approveAnswer(Long):Answer setType(String):void setlsApproved(Boolean):void searchQuestion(String):List<Question setPicByte(byte[]):void o setName(String):void @ equals(Object):boolean deleteQuestion(Long):ResponseDTO @ getAnsw ers(Long):List<Answ er> o setPassw ord(String):void canEqual(Object):boolean deleteAnsw er(Long):ResponseDTO getQuestions(String):List<Question> equals(Object):boolean canEqual(Object):boolean setEmail(String):void hashCode():int sendMail(String,String):Boolean uplaodimage(MultipartFile):BodyBuilder hashCode():int setPhoneNumber(String):void toString():String getUser(String):User getlmage(String):lmageModel o toString():String setIsActive(Boolean):void CAnswer() ScompressBytes(byte[]):byte[] getAllUser():List<User </p> ©ImageModel(Long,String,String,byte[] o equals(Object):boolean &Answer(Long, String, User, Question, Boolean SdecompressBytes(byte[]):byte[] canEqual(Object):boolean sendMessage(Message):Message o hashCode():int toString():String & Admin(Long, String, String, String, Boolean) «Java Class» Java Interface **Question ⊕**IAdminService **1** IUser Service a id: Long adminLogin(String,String):Admin userLogin(String,String):User p question: String a topic: String adminRegister(Admin):Admin userRegister(User):User n isApproved: Boolean getUnApprovedQuestions():List<Question askQuestion(AskQuestionDTO):Questi getId():Long getUnApprovedAnswers():List<Answer> giveAnswer(PostAnswerDTO):Answer @ getQuestion():String approveQuestion(Long):Question searchQuestion(String):List<Question</p> ⊚ getUser():User approveAnswer(Long):Answer getAnsw ers(Long):List<Answ er> @ getTopic():String deleteQuestion(Long):ResponseDTO getQuestions(String):List<Question:</p> @ getlsApproved():Boolean o deleteAnswer(Long):ResponseDTO uplaodlmage(MultipartFile):BodyBuilder setId(Long):void getUser(String):User getImage(String):ImageModel setQuestion(String):void getAllUser():List<User </p> sendMessage(Message):Message setUser(User):void setTopic(String);void o setlsApproved(Boolean):void o equals(Object):boolean o canEqual(Object):boolean hashCode():int o toString():String CQuestion() Question(Long, String, User, String, Boolean -answerUser 0.1 **O**User a id: Long name: String password: String a email: String phoneNumber: String n isActive: Boolean @ getId():Long getName():String @ getPassw ord():String getEmail():String ⊚ getPhoneNumber():String getlsActive():Boolean setId(Long):void @ setName(String):void o setPassw ord(String):void setEmail(String):void setPhoneNumber(String):void setIsActive(Boolean):void @ equals(Object):boolean

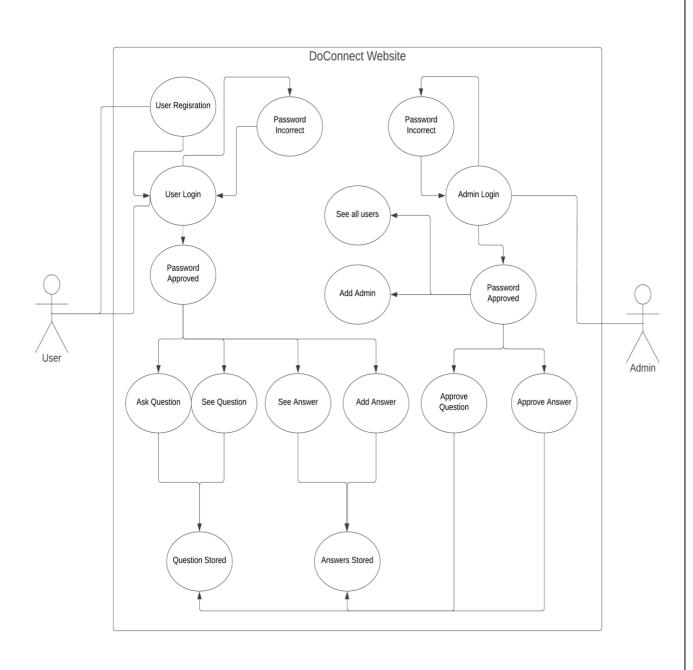
canEqual(Object):boolean
 hashCode():int
 toString():String
 User()

[€]User(Long, String, String, String, Boole)

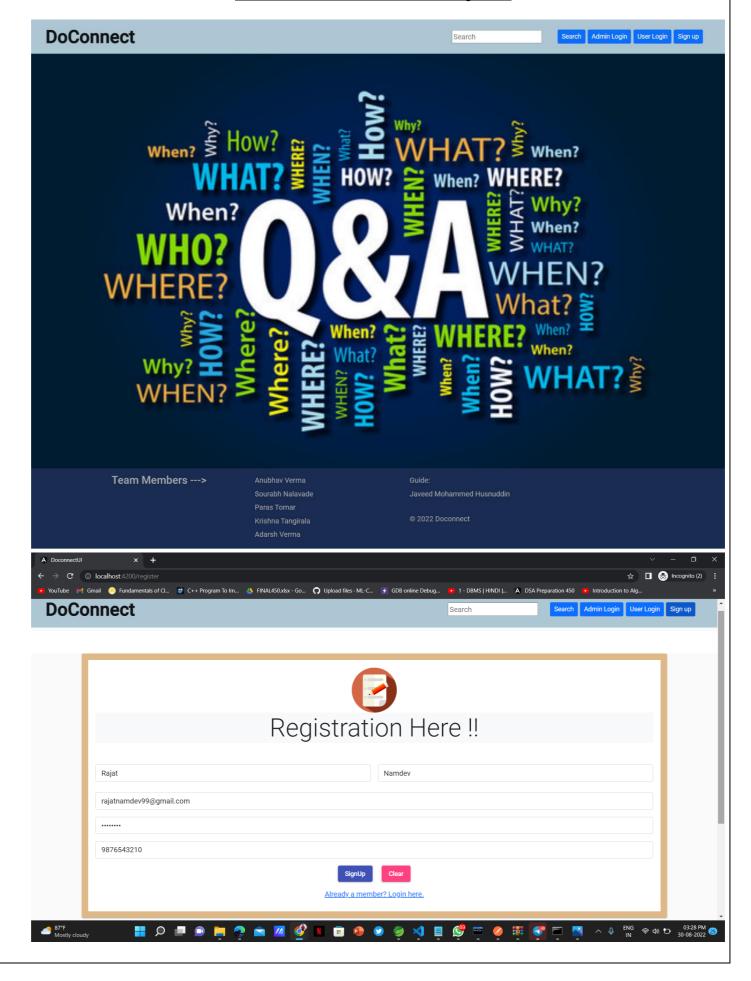
Sequence Diagram

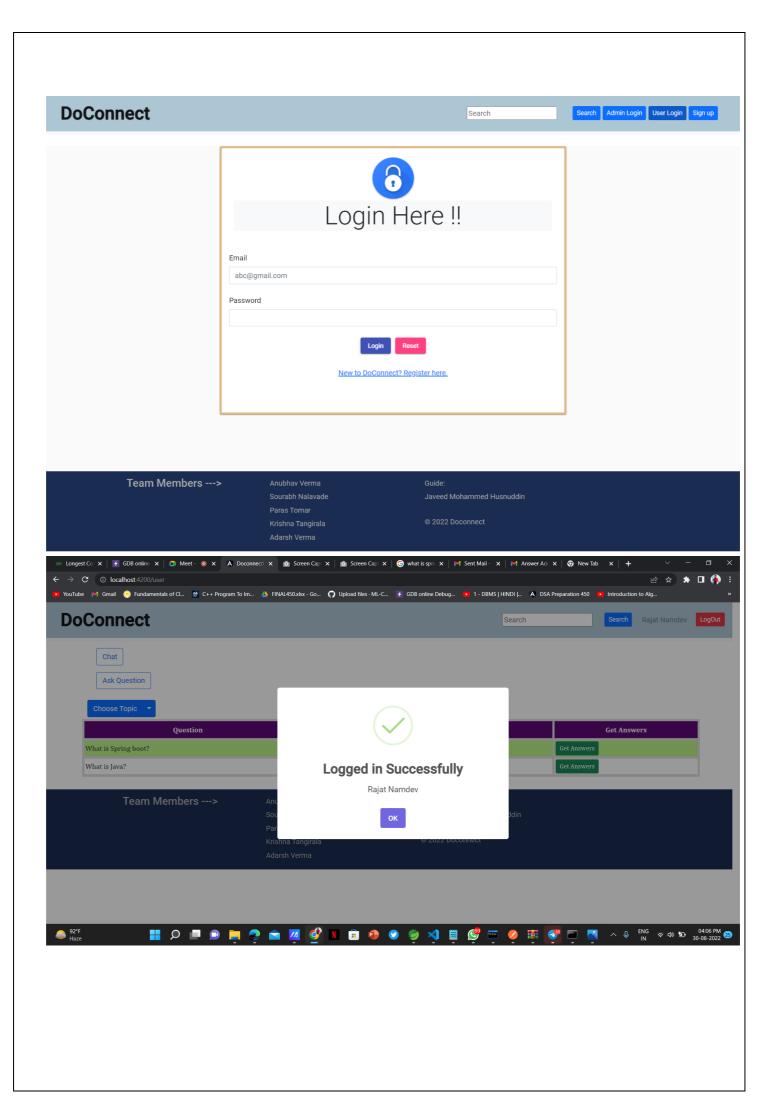


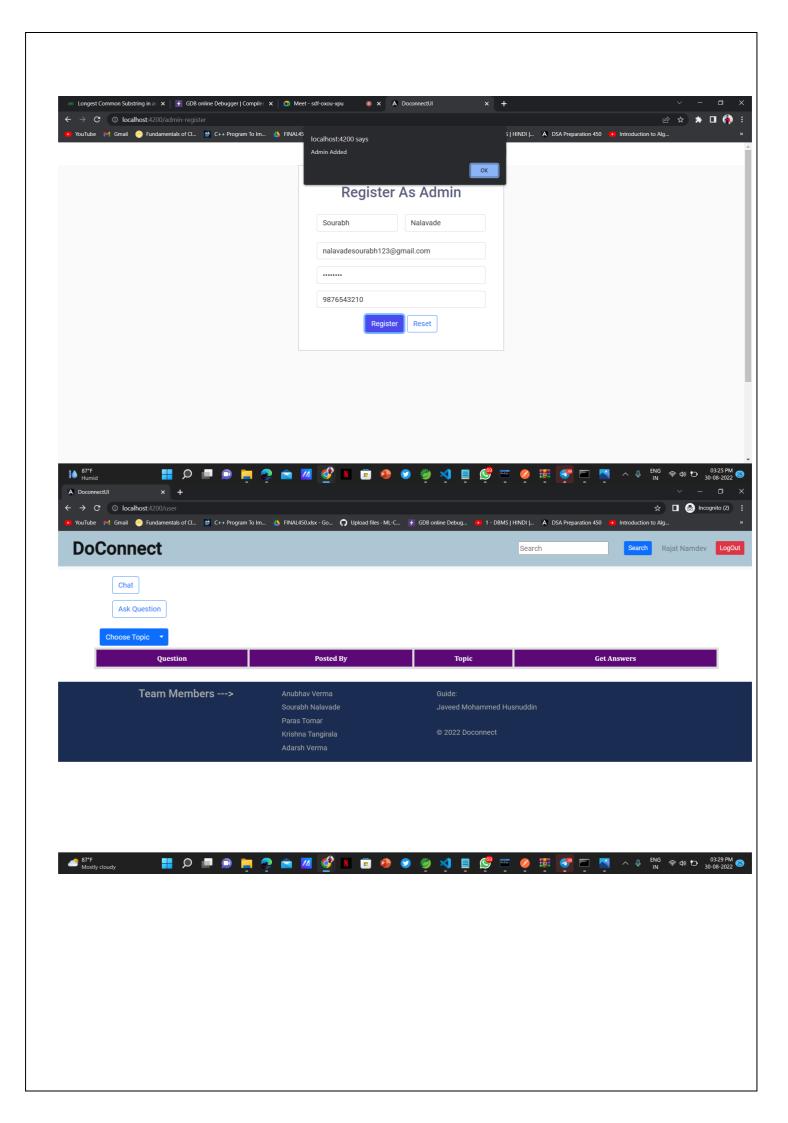
Use Case Diagram

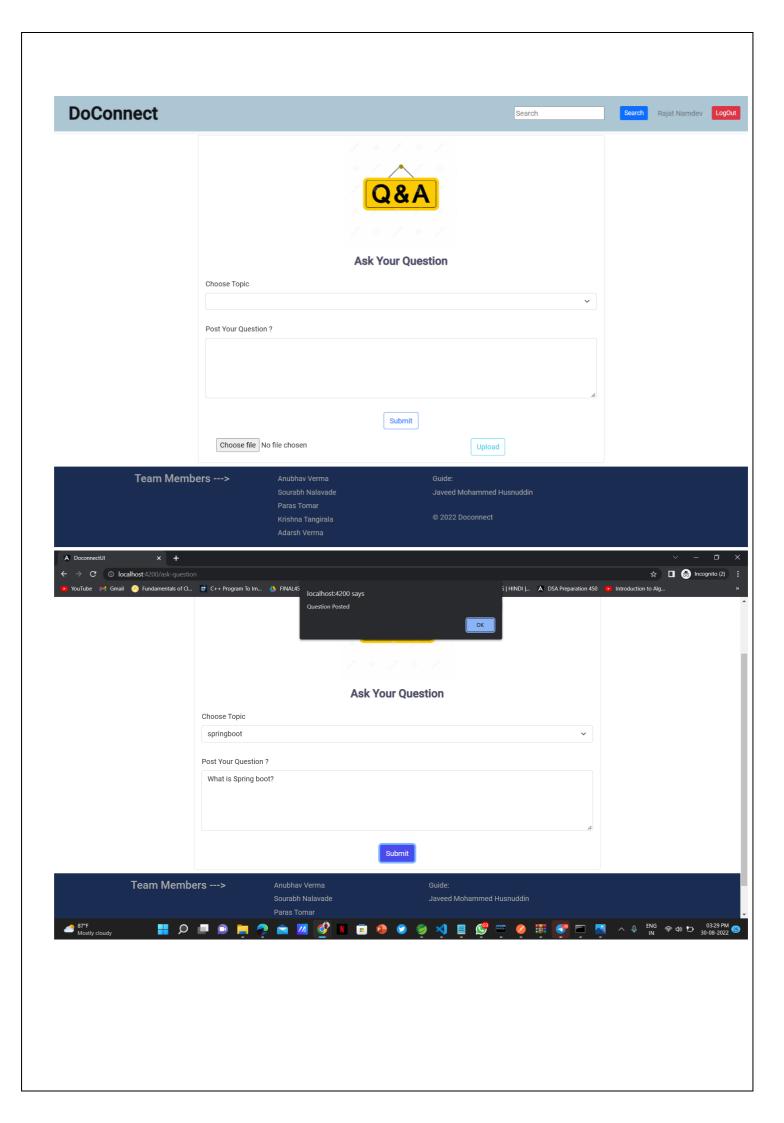


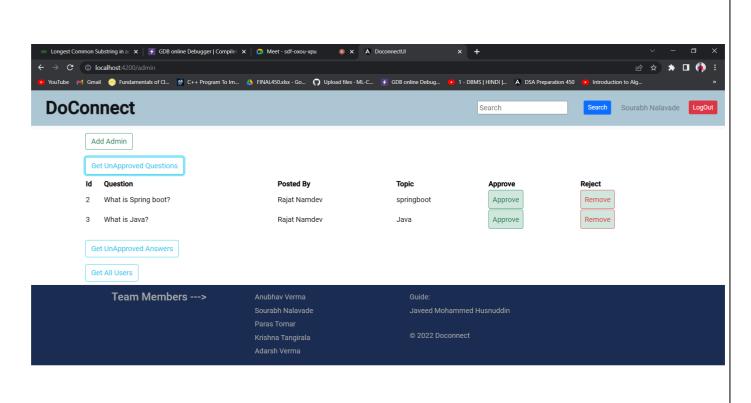
Screenshots Of Project

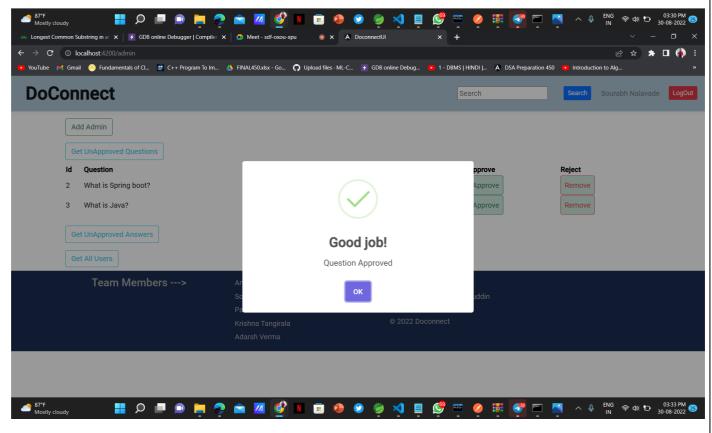


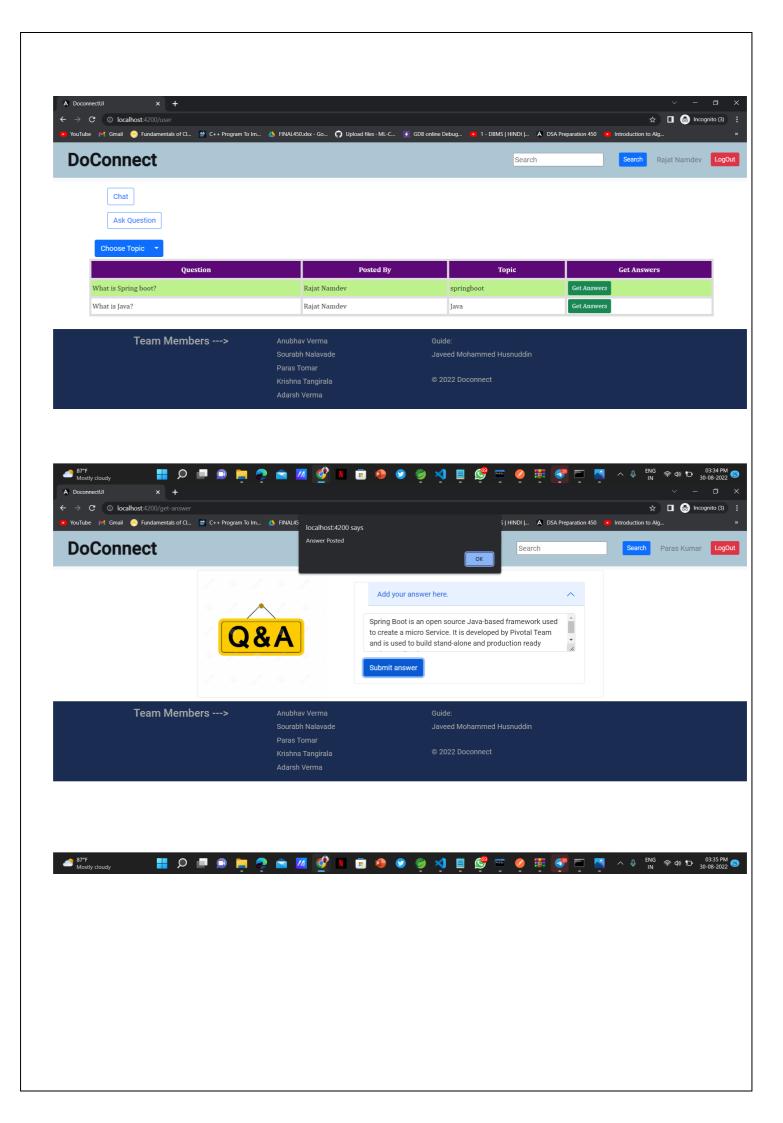


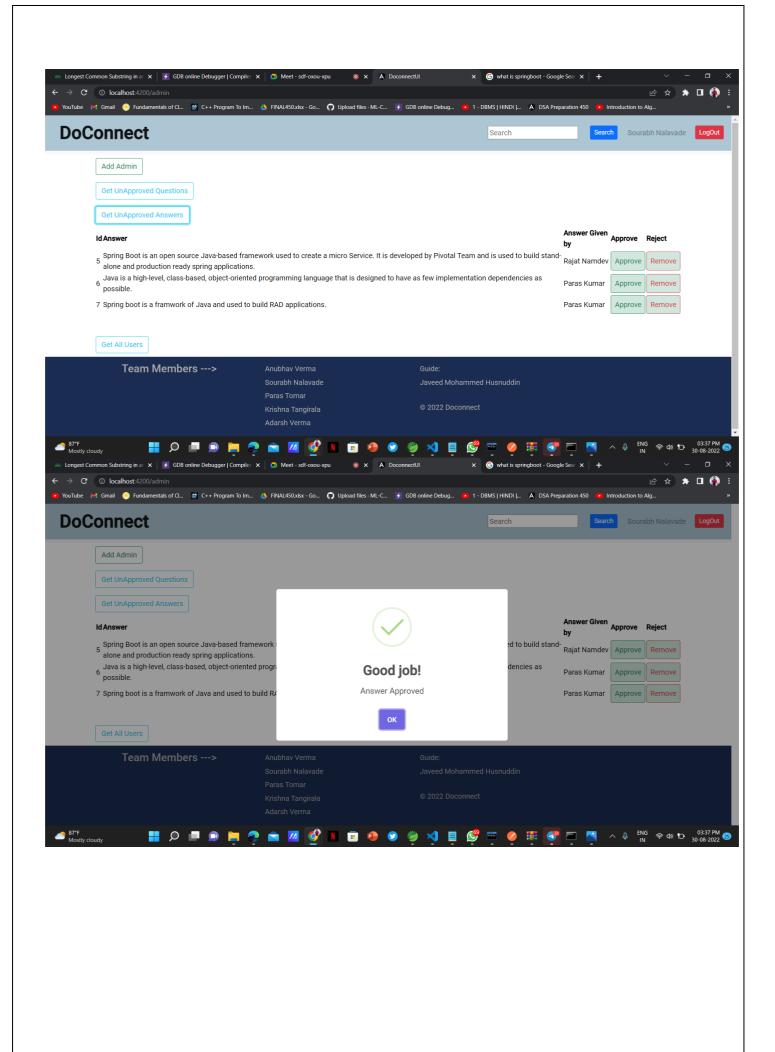


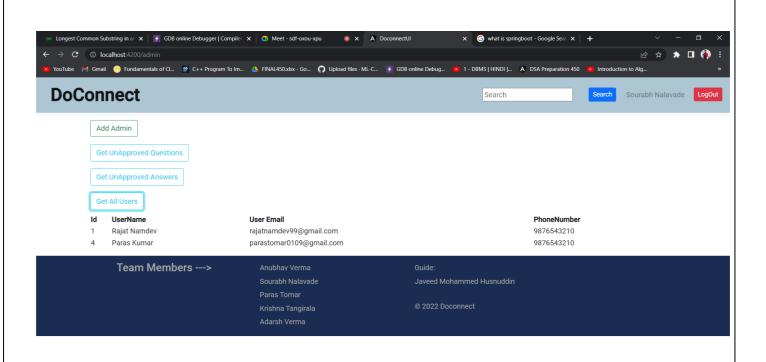


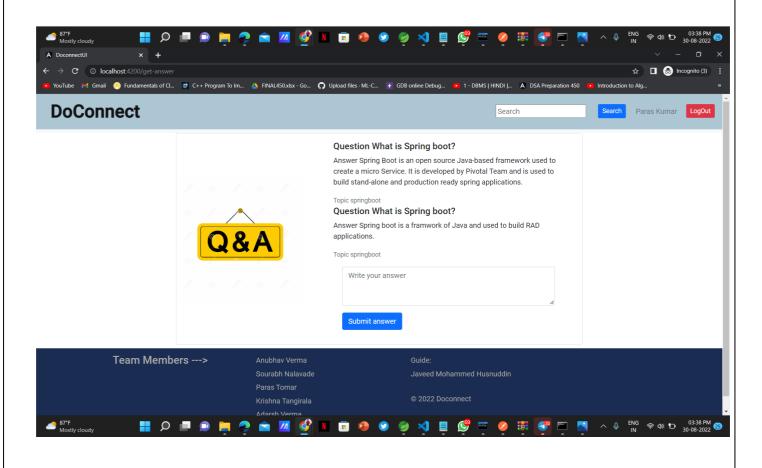


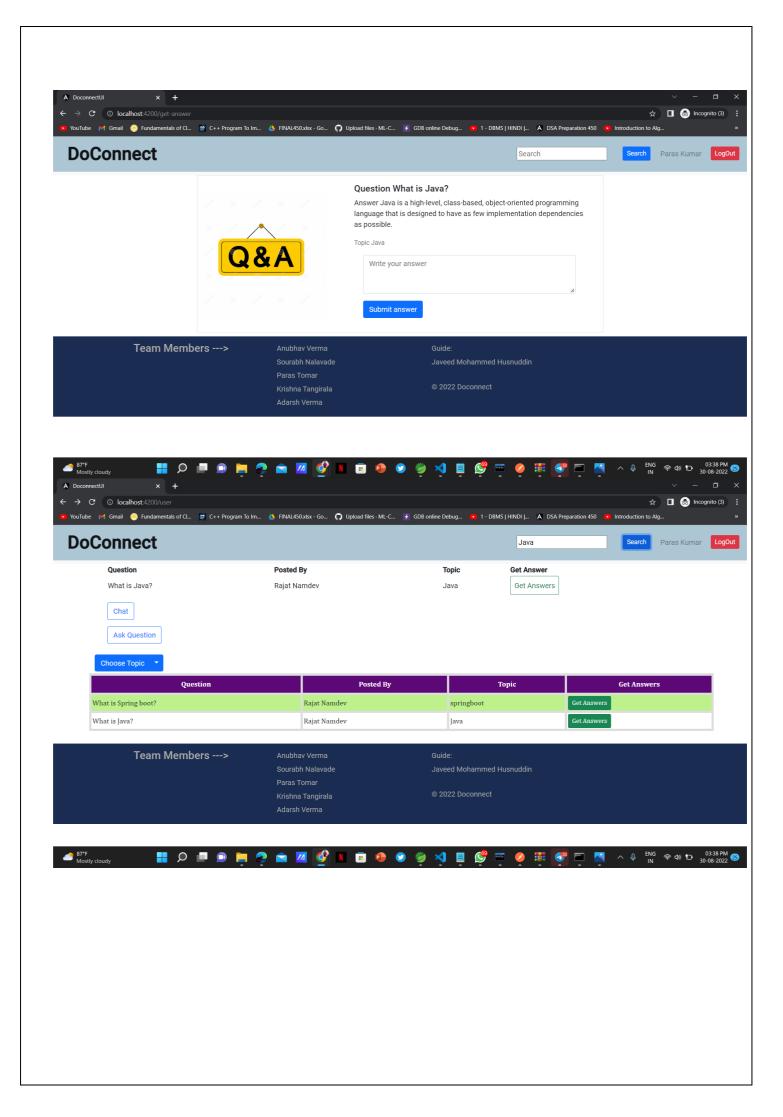


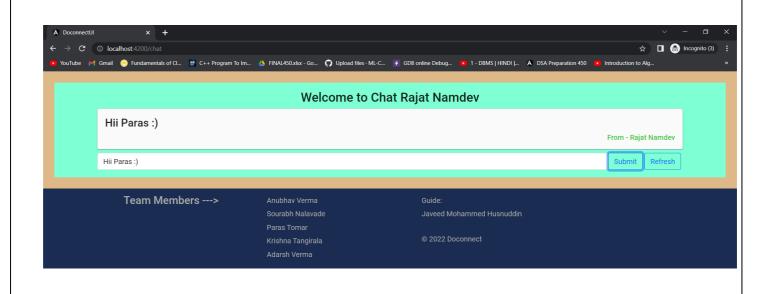


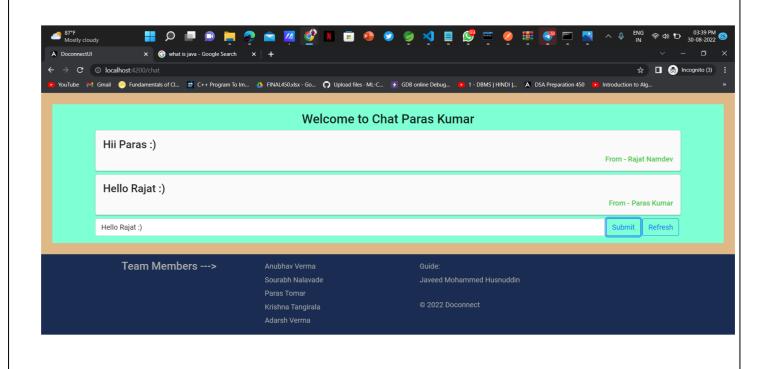




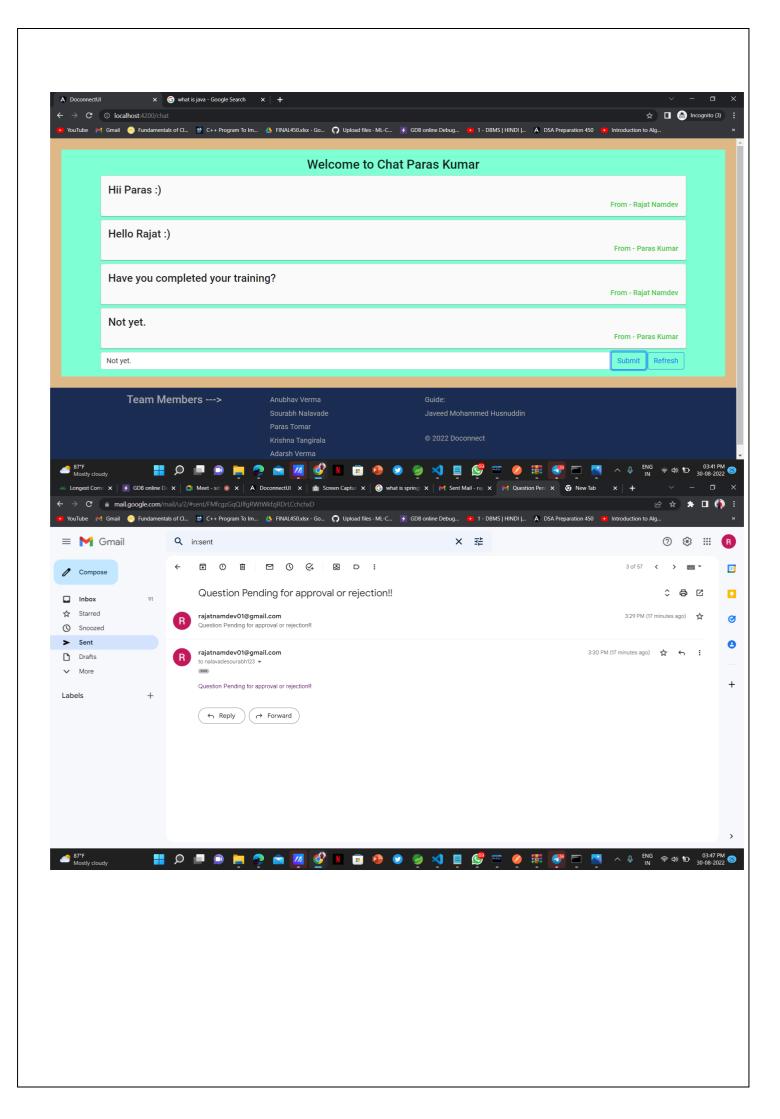


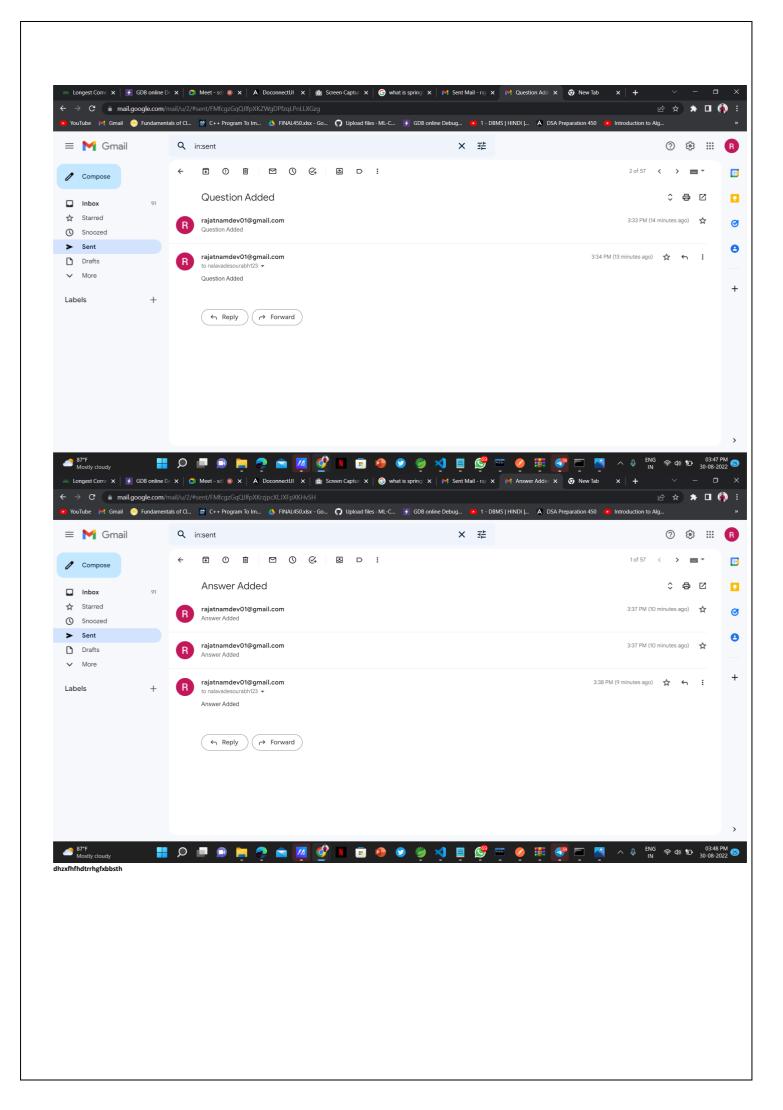


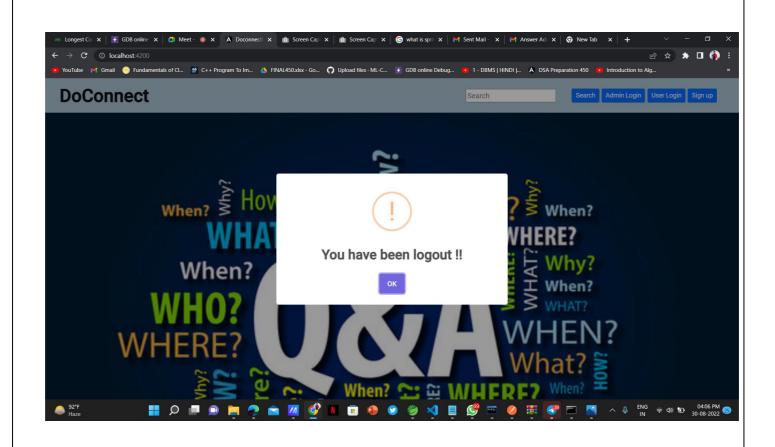












Conclusion:

Technology has made significant progress over the years to provide user a better online Question and Answer Forum sites and will continue to do so for years to come.

Q&A site's community of users focus to improve the knowledge and wisdom of people by clearing their doubts and providing them high explanations answers on the forum sites.

Q&A site's also try to connect the world into a better future.